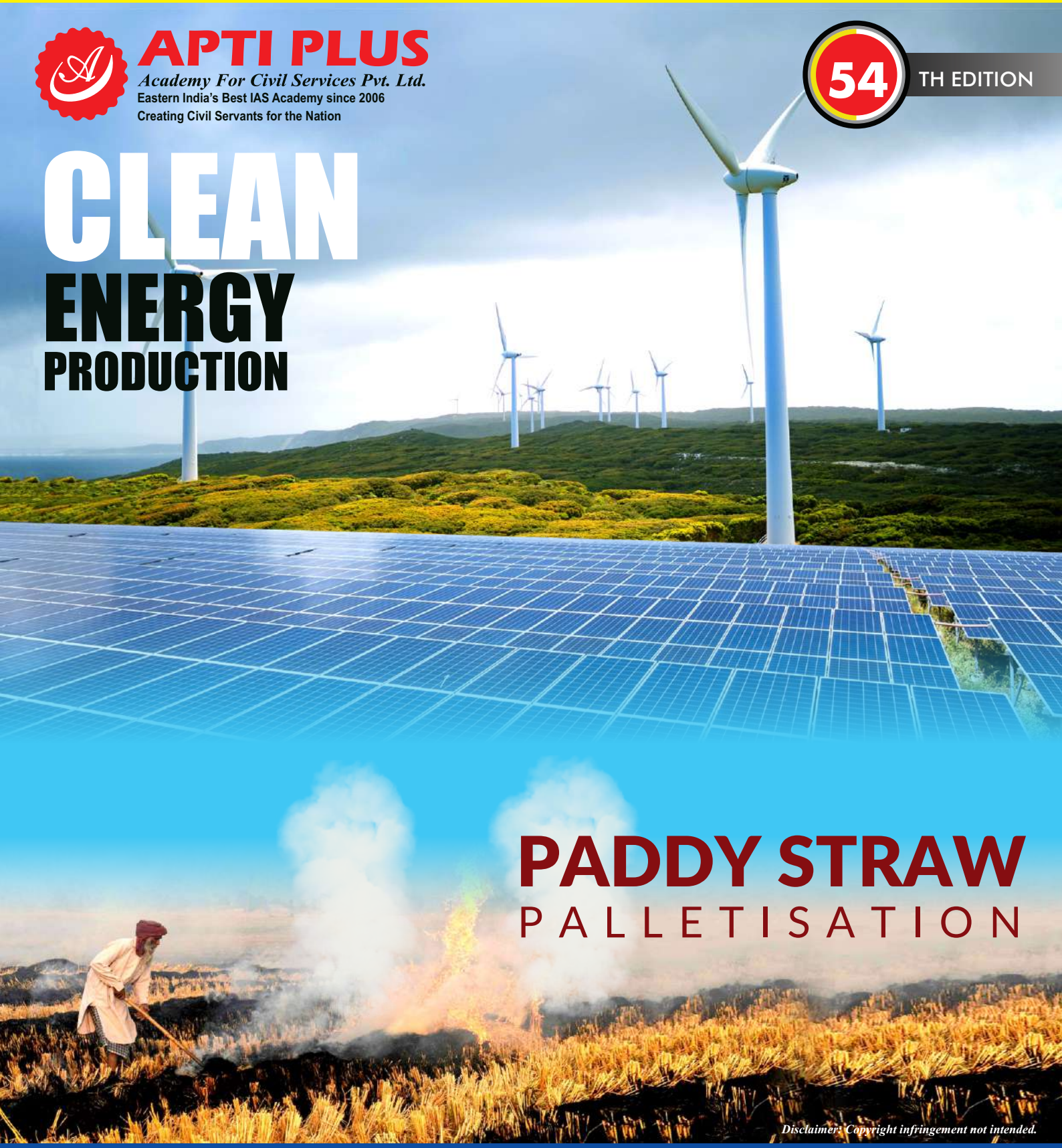
THE IAS GAZETTE

A House Journal of **APTI PLUS**

NOVEMBER 2022



APTI PLUS
Academy For Civil Services Pvt. Ltd.
Eastern India's Best IAS Academy since 2006
Creating Civil Servants for the Nation

54 TH EDITION

CLEAN ENERGY PRODUCTION

PADDY STRAW PALLETISATION

Disclaimer: Copyright infringement not intended.

A **MONTHLY PERIODICAL** FOR ASPIRANTS OF UPSC EXAMINATION

CONTENTS

GS-I 6-11

CULTURE & HISTORY

SHRI MAHAKAL LOK CORRIDOR 6
LOTHAL 7
ANTIQUITIES 7
KUSHANAS 8

GEOGRAPHY

SOLAR ECLIPSE 10
GLOBAL WARMING OCEAN CURRENTS 10

Note : Society covered under Social Justice (GS II) since topics are overlapping

GS-II 13-56

POLITY

PARLIAMENTARY COMMITTEES 13
NOPEC BILL 14
ELECTION SYMBOL 14
DRAFT INDIAN TELECOMMUNICATION BILL, 2022 16
APPOINTMENT OF CHIEF JUSTICE OF INDIA 17
UNIFORM CIVIL CODE 18
DEMOCRATISATION OF INDIA 20
COMPETITION COMMISSION OF INDIA (CCI) 22
OFFICE OF PROFIT 23
FOREIGN CONTRIBUTION REGULATION ACT (FCRA) 24
GOVERNMENT APPELLATE COMMITTEES FOR SOCIAL MEDIA 25
NEWS BROADCASTING and DIGITAL STANDARDS AUTHORITY 27
HATE SPEECH 28

GOVERNANCE

CORPORATE SOCIAL RESPONSIBILITY 30
PM-DevINE 31
REGULATION OF ONLINE GAMING 32

GS-II 13-56

WORLD BANK'S REPORT ON GLOBAL POVERTY 34

SOCIAL JUSTICE

BETI BACHAO BETI PADHAO SCHEME 36
CHILD MARRIAGE FREE INDIA CAMPAIGN 37
GLOBAL HUNGER INDEX 2022 39
PALLIATIVE CARE 40
ANTI-SUPERSTITIONS LAWS IN INDIA 41

INTERNATIONAL RELATIONS

INDIA- U.S TIES 42
INDIA-UK RELATIONS 43
NORD STREAM PIPELINE LEAKS 44
INDIA'S DEFENCE PRODUCTION 45
CLEAN ENERGY PRODUCTION 46
UN PEACEKEEPING FORCES 47
INDIA-UK JOINT WORKING GROUP 49
INDIA AFRICA DEFENCE DIALOGUE 50
FATF'S GREY LIST 51

HEALTH

LEAD POISONING 53
WORLD HEALTH SUMMIT 54
GLOBAL TB REPORT, 2022 55

GS-III 58-100

ECONOMY

TOKENIZATION 58
REGIONAL RURAL BANKS 59
DIRECT TAX COLLECTIONS 61
WORLD ECONOMIC OUTLOOK: IMF 64
LEADS SURVEY REPORT 2022 64
DIGITAL BANK UNITS 67
GLOBAL MULTIDIMENSIONAL POVERTY INDEX 68

Sources

THE HINDU, The Indian EXPRESS, livemint, ET, PRS, NITI Aayog, BusinessLine, Government Reports

Disclaimer:
The views and opinions expressed in the journal are the authors' and do not necessarily reflect the views of the Government or the organization they work for.

Disclaimer: Copyright infringement not intended.

GS-III 58-100

MINIMUM SUPPORT PRICES 70
PROMPT CORRECTIVE ACTION (PCA) 72

AGRICULTURE
PARBOILED RICE 75
PADDY STRAW PALLETISATION 76
ONE NATION ONE FERTILISER SCHEME 78
ODISHA'S MILLET MISSION 79
GM MUSTARD 80

SCIENCE & TECHNOLOGY
NOBEL PRIZE 81
GENETICALLY MODIFIED MOSQUITOES 83
INDIAN SPACE ECONOMY 83
INDIA STRATEGIC FUND 86

DEFENCE & SECURITY
ARMED FORCES (SPECIAL POWER) ACT (AFSPA) 88
INS ARIHANT 89

ENVIRONMENT & ECOLOGY
GRADED RESPONSE ACTION PLAN (GRAP) 91
LIVING PLANET REPORT 2022 92
VULTURES 94
ECO-SENSITIVE ZONE 95
COMPRESSED BIO GAS 96
MISSION LIFE 97
GREAT INDIAN BUSTARDS 98
BLUE FLAG BEACHES 99

PLACES IN NEWS 101

KERCH STRAIT 101
TIGRAY 101

SHORT NEWS ARTICLES 102-131

GS-I

CULTURE & HISTORY
SHYAMJI KRISHNA VARMA 103
KASHI-TAMIL SANGAM 103
TULU AND KODAVA 104
CHOLA DYNASTY 104
NATIONAL CONFERENCE ON PROJECT MAUSAM 105
MODHERA SUN TEMPLE 105

GEOGRAPHY
SUKAPAIKA RIVER 106
MELTING OF ARCTIC ICE 106
OCTOBER STORM 106

GS-II

POLITY
'GENERAL CONSENT' FOR CBI 107
NATIONAL CREDIT FRAMEWORK 107

GOVERNANCE
VIABILITY OF POLL PROMISES 108
YUVA 2.0 109
RUBBER BOARD 110
ONLINE NEWS DISSEMINATION 110
ONE NATION ONE POLICE UNIFORM 111

SOCIAL JUSTICE
PROJECT SALT 111
SINGLE INTEGRATED PENSIONERS PORTAL 112
PASMANDA MUSLIMS 112
HATTI COMMUNITY 113

INTERNATIONAL RELATIONS
EAST ASIA SUMMIT 113
INTERPOL GENERAL ASSEMBLY 114

HEALTH
LASSA FEVER 114
HYPERACTIVITY DISORDER 115

SHORT NEWS ARTICLES 102-131

GS-III

ECONOMY

MONETARY POLICY COMMITTEE 115
TELECOM TECHNOLOGY DEVELOPMENT FUND SCHEME 116
GLOBAL ENERGY MONITOR REPORT 116
DOOM LOOP 117

AGRICULTURE

POKKALI RICE 117
SUGAR PRODUCTION IN INDIA 118
RYTHU BHAROSA KENDRAS 118

SCIENCE & TECHNOLOGY

BLACK COCAINE 119
GREEN CRACKERS 119
MICROBIAL INTERACTIONS IN ISS 119
SUPERMASSIVE BLACK HOLE 120
OVERHAUSER MAGNETOMETER 120
MISSION DEFSPACE 121
MEDICINAL FUNGI 121
SASTRA RAMANUJAN PRIZE 122
PROGRAMMING LANGUAGES RUNNING THE CRYPTO- ECONOMY 122
LIQUID WATER ON MARS 123
LAUNCH VEHICLE MARK 3 (LVM3) 123

DEFENCE & SECURITY

KAMIKAZE DRONES 123
HAWK AIR DEFENCE 124
DIRTY BOMB 124
LIGHT COMBAT HELICOPTER 124
JOINT ANTI-TERROR EXERCISE 125
AGNI PRIME 125
INDIA-BRAZIL-SOUTH AFRICA MARITIME (IBSAMAR) 126
POWEREX-2022 126

ENVIRONMENT & ECOLOGY

PANGASIU ICARIA 126
INDIA'S IMPACT ON GLOBAL WARMING 126
BANNERMAN'S TURACO 127
LAND DEGRADATION AND DESERTIFICATION 127
NEELAKURINJI 128
SLENDER LORIS 128

SHORT NEWS ARTICLES 102-131

KOALAS 129
HEALTH IMPACT OF CLIMATE CHANGE 129
EMISSION GAP REPORT 2022 130
VIRAL SPILLOVER 131

DISASTER MANAGEMENT

CYCLONE SITRANG 131

MIND MAPS 132-139

IASGYAN
PREDICT THE UNPREDICTABLE

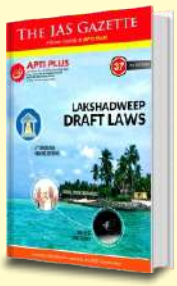
PROG-1

UPSC CSE
PRELIMS TEST SERIES 2023

60 HIGH QUALITY TESTS
Online ₹7900 Offline ₹9999

- Detailed explanation
- Designed as per latest UPSC Patterns
- 24X7X365 availability
- 360°coverage of Static & Current Affairs syllabus

+ 12 months subscription of
THE IAS GAZETTE



PROG-2

STEP UP PROGRAMME 2023
SUBJECT-WISE SECTIONAL TESTS

GEOGRAPHY | SCIENCE & TECHNOLOGY | ENVIRONMENT & ECOLOGY
ECONOMY | HISTORY | POLITY

Tests Coverage:

- 60 All India Level Tests in Total
- 31 Sectional Tests covering old and new NCERTs + standard books
- 5 PYQ Based Tests as UPSC repeats its questions many times (directly/indirectly)
- 7 Current Affairs Tests covering 1 year of complete current affairs
- 10 GS Full Length Tests
- 7 CSAT Tests

Each Test Price: ₹749

Other Unique Features

- Appear in any test anytime and anywhere before UPSC CSE Prelims exam.
- Option to take the same test twice
- Covers all major standard books, newspapers, magazines & Govt. sources.
- Subject wise & topic wise questions based on latest pattern
- Systematic assessment & feedback of student's performance
- Compete nationally and find where you stand amongst the real competition.
- Tests prepared by pool of India's most adroit professionals
- Free counseling

UPSC CSE 2022
MOCK INTERVIEW PROGRAMME

STARTS FROM JANUARY 2023
[BOTH ONLINE & OFFLINE]
VENUE: NEW DELHI

SPECIAL ATTENTION TO ASPIRANTS OF
WEST BENGAL & ODISHA

To get questionnaire on DAF send DAF to: info@aptiplus.in

Powered by:
APTI PLUS
Academy for Civil Services Pvt. Ltd.
www.aptiplus.in

- BEST FACULTY MEMBERS FROM DELHI
- ONLINE, OFFLINE & DISTANCE LEARNING
- BATCHES FOR UG, GRADUATES & PROFESSIONALS
- OFFLINE TEST SERIES FOR PRELIMS & MAINS

KOLKATA & BHUBANESWAR
iasgyan@aptiplus.in

GENERAL STUDIES - I

SHRI MAHAKAL LOK CORRIDOR

GS-I CULTURE & HERITAGE

Context

- Prime Minister inaugurated the Mahakaleshwar Corridor, constructed in Madhya Pradesh's Ujjain at a cost of Rs 350 crore, on October 11.

Details

- **Mahakal Maharaj Mandir Parisar Vistar Yojna is a plan for the expansion, beautification, and decongestion of the Mahakaleshwar temple and its adjoining area in Ujjain district.**
- Under the plan, the Mahakaleshwar temple premises of around 2.82 hectares is being increased to 47 hectares, which will be **developed in two phases by the Ujjain district administration**.
- This will include the 17 hectares of Rudrasagar lake. The project is expected to increase annual footfall in the city from the current 1.50 crore to nearly three crore.
- One of the aspects of the Vistar Yojna's first phase is a visitor plaza with two entrances or Dwaars — the Nandi Dwaar and the Pinaki Dwaar.
- **The first phase is complete and will be inaugurated by PM Modi on October 11.**
- The second phase, pegged at Rs 310.22 crore, includes expansion of the eastern and northern fronts of the temple. It also includes development of various areas of Ujjain city, such as Maharajwada, Mahal Gate, Hari Phatak Bridge, Ramghat façade, and Begam Bagh Road.

About the temple

- Mahakaleshwar, which means the 'Lord of time', refers to Lord Shiva. **As per Hindy mythology, the temple was constructed by Lord Brahma and is presently located alongside the holy river Kshipra.**
- **Mahakaleshwar Jyotirlinga in Ujjain is one of the 12 jyotirlingas considered the most sacred abodes of Shiva.**
- As per records, the temple's Mahakal Lingam is believed to be Swayambhu (self-manifested)**.**
- The shrine is revered as **one the 18 Maha Shaktia Peeth in India.**
- The temple **in its present form was built by the Maratha general Ranoji Shinde in 1734 CE**.
- Before Independence, the Dev Sthan Trust used to look after the temple. This was replaced by the municipal corporation of Ujjain post-Independence**. The collectorate office of Ujjain district now manages the administration of the temple.**
- A local legend says that there once was a king called Chandrasena who ruled Ujjain and was a Shiva devotee. The Lord appeared in his Mahakal form and destroyed his enemies. Upon the request of his devotees, Shiva agreed to reside in the city and become its chief deity.
- In the early part of the Meghadutam (Purva Megha) composed in the 4th century, Kalidasa gives a description of the Mahakal temple. It is described as one with a stone foundation, with the ceiling on wooden pillars. There would be no shikharas or spires on the temples prior to the Gupta period.

Jyotirlingas in India

- Puranas say that Lord Shiva pierced the world as an endless pillar of light, called the jyotirlinga.
- **There are 12 jyotirlinga sites in India, considered a manifestation of Shiva. Besides Mahakal, these include Somnath and Nageshwar in Gujarat, Mallikarjuna in Andhra Pradesh, Omkareshwar in Madhya Pradesh, Kedarnath in Uttarakhand, Bhimashankar, Triyambakeshwar and Grishneshwar in Maharashtra, Viswanath at Varanasi, Baidyanath in Jharkhand, and Rameshwar in Tamil Nadu.**
- **Mahakal is the only jyotirlinga facing the south, while all the other jyotirlingas face east.** This is because the direction of death is believed to be the south. In fact, people worship Mahakaleshwar to prevent an untimely death.
- In the 13th century, **the temple complex was destroyed by Turk ruler Shams-ud-din Iltutmish during his raid on Ujjain.**
- The present five-storeyed structure was built by the Maratha general Ranoji Shinde in1734, in the Bhumija, Chalukya and Maratha styles of architecture. A century later, its marble walkways were restored by the Scindias.

Ujjain-Historical significance

- **The city of Ujjain was also one of the primary centres of learning for Hindu scriptures, called Avantika in the 6th and 7th centuries BC.**
- **Later, astronomers and mathematicians such as Brahmagupta and Bhaskaracharya made Ujjain their home**.
- Also, as per the Surya Siddhanta, one of the earliest available texts on Indian astronomy dating back to the 4th century, **Ujjain is geographically situated at a spot where the zero meridian of longitude and the Tropic of Cancer intersect**.

- In keeping with this theory, many of Ujjain temples are in some way connected to time and space, and the main Shiva temple is dedicated to Mahakal, the lord of time.
- **In the 18th century, an observatory was built here by Maharaja Jai Singh II, known as the Vedh Shala or Jantar Mantar, comprising 13 architectural instruments to measure astronomical phenomena.**

LOTHAL

GS-I CULTURE & HERITAGE

Context

- Prime Minister Shri Narendra Modi will review the site work progress of the National Maritime Heritage Complex at Lothal, Gujarat on 18th October 2022 at around 5 PM via video conferencing.

Details

National Maritime Heritage Complex

- **National Maritime Heritage Complex (NMHC) at Lothal is being developed as a one of its kind project to not only display India's rich and diverse maritime heritage and also help Lothal to emerge as a world class international tourist destination**
- The complex, work on which started in March 2022, is being developed at a cost of around Rs 3500 crore.
- It will have several innovative and unique features such as Lothal mini recreation to recreate Harappan architecture and lifestyle; four theme parks - Memorial theme park, Maritime and Navy theme park, Climate theme park and Adventure and Amusement theme park; world's tallest lighthouse museum; fourteen galleries highlighting India's maritime heritage starting from the Harappan times till now; Coastal states pavilion displaying diverse maritime heritage of states and UTs; among others.
- **It is one of the major projects under Sagarmala scheme of MoPSW which has an edutainment approach.**

About Lothal

- Lothal was one of the southernmost sites of the ancient Indus Valley civilization, located in the Bhil region of the modern state of Gujarat.
- Construction of the city is believed to have begun around 2200 BCE.
- The Archaeological Survey of India (ASI), discovered Lothal in 1954.
- It had the world's earliest known dock, which connected the city to an ancient course of the Sabarmati river on the trade route between Harappan cities in Sindh and the peninsula of Saurashtra.
- It was a vital and thriving trade Centre in ancient times, with its trade of beads, gems, and valuable ornaments reaching the far corners of West Asia and Africa.
- The techniques and tools they pioneered for bead-making and in metallurgy have stood the test of time for over 4000 years.
- Lothal Findings: Dockyard, Port Town, Evidence of Rice, Fire Altar, Ivory weight balance, Copper dog

Indus Valley Civilization

- Also known as Harappan Civilization that flourished around 2,500 BC, in the western part of South Asia, in contemporary Pakistan and Western India.
- **It was home to the largest of the four ancient urban civilizations of Egypt, Mesopotamia, India and China.**
- It was basically an urban civilization and the people lived in well-planned and well-built towns, which were also the centers for trade.
- They had wide roads and a well-developed drainage system.
- The houses were made of baked bricks and had two or more storeys.
- The highly civilized Harappans knew the art of growing cereals, and wheat and barley constituted their staple food.
- By 1500 BC, the Harappan culture came to an end. Among various causes ascribed to the decay of Indus Valley Civilization are the recurrent floods and other natural causes like earthquakes, etc.

Must read:
https://www.iasgyan.in/blogs/indus-valley-civilization

ANTIQUITIES

GS-I CULTURE & HERITAGE

Context

- **The U.S. authorities formally handed over 307 antiquities, estimated to be worth nearly $4 million to Indian officials.**

Details

- **Antiquities returned include** Vishnu and Lakshmi with Garuda, dating to the 11th century C.E., which was allegedly stolen from a temple in Central India.
- A Chola-era Sambandar bronze idol, a Chola-era Devi idol in stone, bronze idols of Vinayaga, Narasimha with Lakshmi, a wooden idol of Muruga and wooden chauri bearers are other items that had been taken from Tamil Nadu.

- "Antiquity" is an article or object that is at least 100 years old. It could be a coin, sculpture, painting or epigraph, or any object or article taken from a building or a cave, or anything that illustrates the science, art, crafts or customs or religion or literature of a bygone age, or anything of historical interest.
- If it is a manuscript or record of any scientific, historical, literary or aesthetic value, it should be at least 75 years' old.
- Antiquities in India are governed by **The Antiquities and Art Treasures Act, 1972 which falls within the purview of the Archaeological Survey of India ("ASI"), Union Ministry of Culture.**
- Possession of an unregistered antiquity is a punishable offence under law.
- **Section 14(3)** of the Act makes it mandatory for "every person who owns, controls or is in possession of any antiquity" to register it before a registering officer within 15 days of its coming into his control or possession and obtain a certificate of registration.
- Antiquities can be sold, but only by a licensed person. However, Section 3 of the Act prohibits export of an antiquity by anyone other than the Centre or its agencies.
- A jail term of **six months**, or with fine, or both. Besides, the antiquity is also liable to be confiscated.
- **Article 49 (Protection of monuments and places and objects of national importance)**: It shall be the obligation of the State to protect every monument or place or object of artistic or historic interest, declared by or under law made by Parliament to be of national importance, from spoliation, disfigurement, destruction, removal, disposal or export, as the case may be.
- To facilitate Custom Authorities in allowing non-antiquities to be exported, the Archaeological Survey of India (ASI) has established **Expert Advisory Committees to issue non-antiquity certificates.**
- An **Antique Cell** has been opened in Central Bureau of Investigation (CBI) for investigation into cases of thefts and losses of antique
- **National Mission on Monuments and Antiquities (2007)** aims to prepare a National Register on Antiquities by documenting antiquities from different sources in a uniform format.

KUSHANAS

GS-I CULTURE & HERITAGE

Context

- A specimen is now in the British Museum repository for which the info-document says: "Aware that visual elements on coins were fundamental to their acceptance and success as currency, he (Mohammed bin Sam) issued coins which maintained a visual tradition begun in India 1,000 years previously, on the coinage of Kushan king Kanishka II."

Details

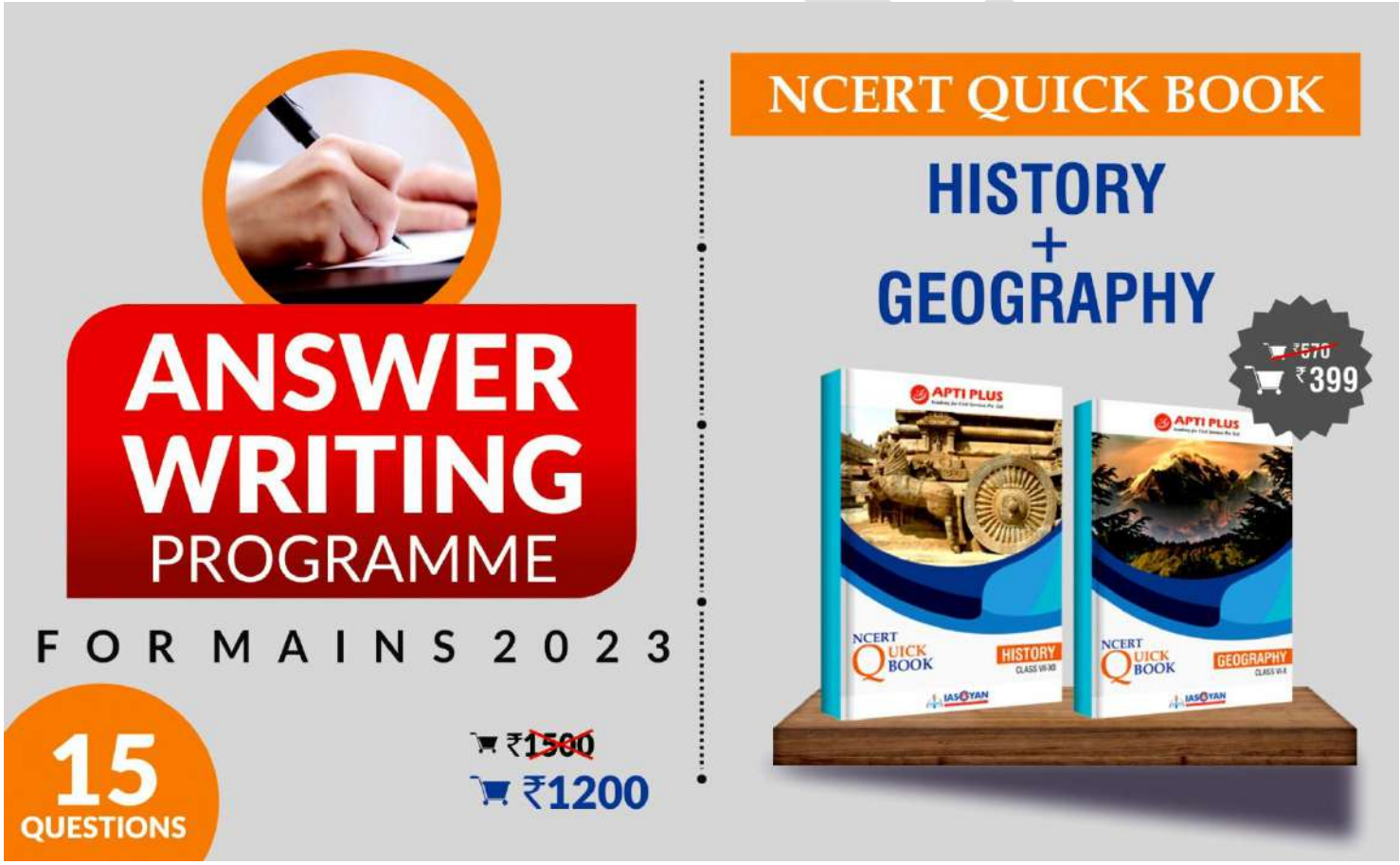
Coins under various dynasties

- India has a long tradition of coinage with images of gods and goddesses.
- According to historians, the **Kushans, who hailed from the Central Asian region and ruled till 3rd century AD, were the first to use the image of Goddess Lakshmi on their coins, along with Ardochsho, the Iranic Goddess of wealth.**
- The Kushans also **depicted Oesho (Shiva), moon deity Miro and Buddha** in their coinage.
- Closer home, the Vijayanagara kings used coinage with Hindu idols. Harihara –II (1377-1404) introduced coins that had Brahma-Saraswati, Vishnu-Lakshmi and Shiva-Parvati. Some of these coins can be seen in the museum set up in Hampi by the Archaeological Survey of India (ASI) at Kamalapur.
- The Vijayanagara coins continued in circulation even after the kingdom was snuffed out in 1565 and commanded a premium when French traveller Tavernier visited the region.
- The British East India Co. at Madras Presidency minted coins labelled as the Three Swamy Pagoda, which depicts Lord Balaji flanked by Sridevi and Bhudevi on either side.
- Not all the coins were freshly minted. Some were repurposed.
- Some were issued to show continuity. About the coins with Goddess Lakshmi issued by Mohammed bin Sam, known to us as Mohammed Ghori after defeating Prithviraj Chauhan in the battle of Terrain in 1192 AD.
- The tradition of minting coins to win the confidence of local people continued when the French and Dutch minted coins showing Vishnu between 1715 and 1774 and Goddess Kali in the late 17th century.

Kushanas

- **Kushan dynasty's ruling line descended from the Yuezhi, a people that ruled over most of the northern Indian subcontinent, Afghanistan, and parts of Central Asia during the first three centuries of the Common Era.**
- The Kushans were instrumental in spreading Buddhism in Central Asia and China and in developing Mahayana Buddhism and the Gandhara and Mathura schools of art.
- The Kushans became affluent through trade, particularly with Rome, as their large issues of gold coins show.
- After the rise of the Sāsānian dynasty in Iran and of local powers in northern India, Kushan rule declined.
- Under the rule of the Kushans, northwest India and adjoining regions participated both in seagoing trade and in commerce along the Silk Road to China.

- Around 135 B.C. Kujula Kadphises united the disparate tribes in the first century B.C. Gradually wresting control of the area from the Scytho-Parthians, the Yuezhi moved south into the northwest Indian region traditionally known as Gandhara (now parts of Pakistan and Afghanistan) and established a capital near Kabul.
- They had learned to use a form of the Greek alphabet, and Kujula's son was the first Indian ruler to strike gold coins in imitation of the Roman aureus exchanged along the caravan routes.
- **The rule of Kanishka, the third Kushan emperor who flourished from the late first to the early/mid-second century A.D., was administered from two capitals: Purushapura (now Peshawar) near the Khyber Pass, and Mathura in northern India.**
- Under Kanishka's rule, at the height of the dynasty, Kushan controlled a large territory ranging from the Aral Sea through areas that include present-day Uzbekistan, Afghanistan, and Pakistan into northern India as far east as Benares and as far south as Sanchi. .
- **It was acknowledged as one of the four great Eurasian powers of its time (the others being China, Rome, and Parthia).**
- It was also a period of great wealth marked by extensive mercantile activities and a flourishing of urban life, Buddhist thought, and the visual arts.
- **The Gandhara region at the core of the Kushan empire was home to a multiethnic society tolerant of religious differences.**
- The melding of peoples produced an eclectic culture, vividly expressed in the visual arts produced during the Kushan period. Themes derived from Greek and Roman mythologies were common initially, while later, Buddhist imagery dominated: some of the first representations of the Buddha in human form date to the Kushan era, as do the earliest depictions of bodhisattvas.



SOLAR ECLIPSE

GS-I GEOGRAPHY

Context

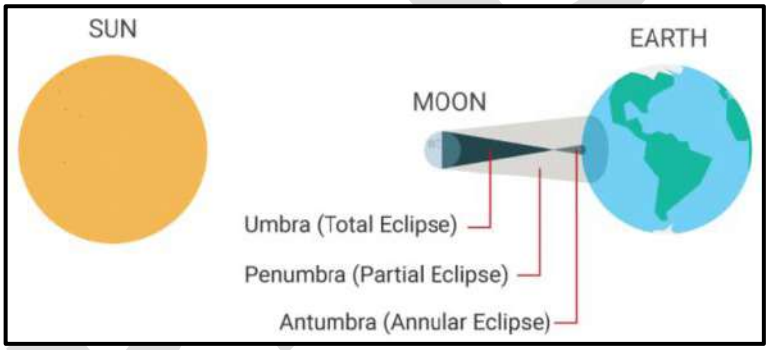
- Recently, people in India saw a partial solar eclipse.

What is a solar eclipse?

- A solar eclipse occurs when the Moon is positioned in between the Sun and the Earth for a few minutes. Under certain-alignment, the Moon partially or fully blocks the Sun's light and instead casts its shadow on Earth. That is why, there can be a partial or a total solar eclipse, depending on how much portion of the Sun's disc gets hidden by the Moon.

Types of Solar Eclipses

- There are 4 different types of solar eclipses. How much of the Sun's disk is eclipsed, the eclipse magnitude, depends on which part of the Moon's shadow falls on Earth.
  1. **Partial solar eclipses** occur when the Moon only partially obscures the Sun's disk and casts only its penumbra on Earth.
  2. **Annular solar eclipses** take place when the Moon's disk is not big enough to cover the entire disk of the Sun, and the Sun's outer edges remain visible to form a ring of fire in the sky. An annular eclipse of the Sun takes place when the Moon is near apogee, and the Moon's antumbra falls on Earth.
  3. **Total solar eclipses** happen when the Moon completely covers the Sun, and it can only take place when the Moon is near perigee, the point of the Moon's orbit closest to Earth. You can only see a total solar eclipse if you're in the path where the Moon casts its darkest shadow, the umbra.
  4. **Hybrid Solar Eclipses**: They occur when the same eclipse changes from an annular to a total solar eclipse, and/or vice versa, along the eclipse's path.



GLOBAL WARMING OCEAN CURRENTS

GS-I GEOGRAPHY

Context

- Cold ocean currents have sheltered the Galápagos Islands from global warming, according to a recent study.

Details

- The islands are protected from an otherwise warming Pacific Ocean by a cold, eastward equatorial ocean current.
- And this current has been gaining strength for decades, noted the study published in the journal PLOS Climate.
- The temperatures in waters along the west coast of the Galápagos have dropped by 0.5 degrees Celsius since the early 1990s, the researchers from the University of Colorado Boulder observed.
- **There's a tug of war between global warming and the cold ocean current. Right now, the ocean current is winning — it's getting cooler year after year**.
- **This phenomenon is a cause for cautious optimism for the second-largest marine reserve in the world. The island is a biodiverse ecosystem — home to several endangered species. It is designated as a UNESCO World Heritage Site.**
- Flora and fauna of the Galápagos could assist reseed failing ecosystems and maintain the region's fisheries.
- Corals do not bleach and die in these waters off the west coast of Ecuador. So, the marine food chain does not suffer, unlike in the warm waters nearby.
- But, the island group is certainly in need of greater protection from overfishing as well as the pressures of growing eco-tourism.

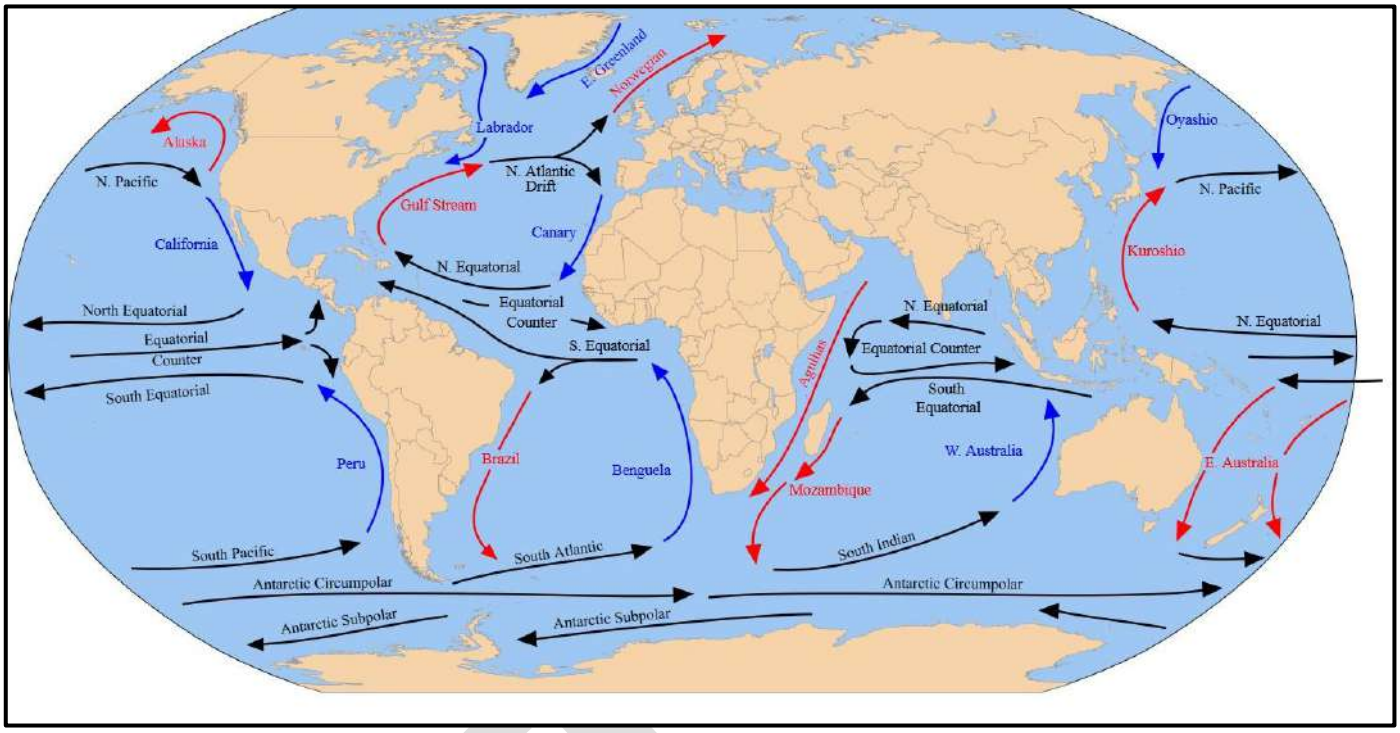
Galapagos Islands

- Galapagos Islands are an archipelago of volcanic islands distributed on either side of the equator in the Pacific Ocean surrounding the centre of the Western Hemisphere. (off the west coast of South America.)
- The group consists of 18 main islands, 3 smaller islands, and 107 rocks and islets.
- Archipelago is a chain, cluster or collection of islands.

- The islands are known for their large number of endemic species.
- Volcanism has been continuous on the Galápagos Islands.
- Located at the confluence of three ocean currents, the Galápagos are melting pot' of marine species.
- Ecuador designated part of the Galapagos a wildlife sanctuary in 1935, and in 1959 the sanctuary became the

Ocean Currents

- Ocean currents are the continuous, predictable, directional movement of seawater driven by gravity, wind (Coriolis Effect), and water density.
- Ocean water moves in two directions: horizontally and vertically.
- Horizontal movements are referred to as currents, while vertical changes are called upwellings or downwellings.



List of Warm Warm Ocean Current	Region	Important or Additional Facts
North Equatorial Current	Pacific Ocean & Atlantic Ocean	• Flows east to west between 10° N to 20°N. • It forms the southern side of the clockwise sub-tropical gyre. • It has no relation with the equator despite the term "equatorial" being used in its name.
South Equatorial Current	Atlantic Ocean, Pacific Ocean, and the Indian Ocean	• Directly driven by trade winds blowing from east to west. • Southern hemisphere counter-part of North Equatorial countercurrent.

APTI PLUS
Academy for Civil Services Pvt. Ltd.

HEARTIEST
congratulations

OUR IAS 2021 TOPPERS

PREETAM KUMAR
AIR 9

BHAVISHYA
AIR 29

SHUBHAM SHUKLA
AIR 43

ANJALI SHROTRIYA
AIR 44

ABHIJIT RAY
AIR 50

DEEPESH KUMARI
AIR 93

ADMISSIONS OPEN FOR
UPSC & STATE PSC
2023

- Best Faculty Members from Delhi
- Prelims and Mains Mock Tests (Hybrid)
- Answer Writing Programme with Self Assessment
- Ex-Bureaucrats for Interview Guidance

IASGYAN
PREDICT THE UNPREDICTABLE

GENERAL STUDIES - II

PARLIAMENTARY COMMITTEES

GS-II POLITY

In News

- Recently a **controversy erupted after the announcement of the chairperson for 22 Parliamentary committees, as the main opposition party has the post of chairperson in only one, and the ruling party has the chairmanship of the important committees** on Home, Finance, IT, Defense and External Affairs.

Details

- A **Parliamentary Committee is a panel of Members of Parliament (MPs) that are appointed or elected by the House or nominated** by the Speaker/Chairman and work under the direction of the Speaker/Chairman.
- There are **generally two types of legislative committees—standing committees and ad-hoc committees**. The former is permanent and operates continuously (constituted each year or periodically) while the latter is temporary and ceases to exist at the end of the mission assigned to them.
- Important parliamentary committees are mentioned below.

Public Accounts Committee

- It **was formed in 1921 and is in operation under the provisions of the Government of India Act of 1919.**
- It is currently made up of **22 members (15 from the Lok Sabha and 7 from the Rajya Sabha).** The representatives have a one-year term of office.
- Every year, the members are elected by the Parliament from among its members using a single transferable vote under the concept of proportional representation.
- **A minister cannot be a member of the committee.**
- The Speaker appoints the chairman of the committee from among its members.
- The committee's chairman is chosen from the opposition.
- The committee's job is to **look over the Comptroller and Auditor General of India's annual audit reports (CAG).**
- The committee investigates public spending not just from a legal and formal standpoint to uncover technological anomalies, but also from the standpoints of economy, prudence, wisdom, and propriety to uncover instances of waste, loss, corruption, extravagance, inefficiency, and nugatory expenditures.
- Its proposals are merely suggestions and not binding on the ministries.

Estimates Committee

- The origins of this committee can be traced back to the 1921 establishment of a standing finance committee.
- It has a **total of 30 members. The Lok Sabha is represented by all 30 members.**
- The Speaker appoints the committee's chairman from among its members, and he is invariably from the governing party.
- Their role is for one year. Every year, it discusses only a few chosen ministries and departments. As a result, it will rotate through all of them over years.
- Its proposals are merely suggestions and do not bind the ministries.
- Its function resembles that of a post-mortem.

Committee on Public Undertakings

- The Krishna Menon Committee recommended that this committee be established in 1964.
- It is made up of **22 people (15 from the Lok Sabha and 7 from the Rajya Sabha).**
- Its members are chosen using a single transferable vote under the concept of proportional representation.
- The representatives have a one-year term of office.
- The Speaker appoints the committee's chairman from among its members, who must all be Lok Sabha members.
- They look at the Comptroller and Auditor General's reports on public undertakings.

Departmental Standing Committees

- Departmentally-Related Standing Committees (DRSCs) were formed in Parliament in 1993 on the recommendation of the Lok Sabha Rules Committee.
- The key goal of the standing committees is to ensure that the Executive is more accountable to Parliament, especially in terms of financial transparency.
- The 24 standing committees have authority over all of the Central Government's ministries and departments.
- **Each standing committee is made up of 31 people (21 from Lok Sabha and 10 from Rajya Sabha).**

- **The Rajya Sabha has 8 standing committees, while the Lok Sabha has 16.**
- Before they are debated and voted on in the Lok Sabha, they consider the requests for grants made by the relevant ministries and departments.
- Its study does not include any information about cut motions.
- They do not think about the day-to-day operations of the relevant ministries/departments.

NOPEC BILL

GS-II POLITY

In News

- **United States (US) passed the No Oil Producing and Exporting Cartels (NOPEC) bill** to protect U.S. consumers and businesses from planned oil spikes.

Details

- The grouping of the world's largest oil-producing countries, the Organisation of the Petroleum Exporting Countries (OPEC) and its allies, together known as **OPEC+, decided to cut oil production by 2 million barrels per day.**
  - After the decision, the US to reduce the OPEC group's control over energy prices passed NOPEC.
- The bill would withdraw the immunity that has protected OPEC+ members and their national oil companies from lawsuits in the US.
  - If it became law, then the U.S. attorney general would sue the oil cartel or its members, such as Saudi Arabia, in the federal court of the US.
- The US is also facing criticism for its attempts to manipulate oil markets.

What is OPEC+

- **Established in 1960** by founding members Iran, Iraq, Kuwait, Saudi Arabia and Venezuela, OPEC has since expanded and now has 13 member states.
- With the addition of another **11 allied major oil-producing countries that include Russia, the grouping is known as OPEC+.**
- The **objective of the organization** is to "coordinate and unify the petroleum policies of its Member Countries and ensure the stabilization of oil markets to secure an efficient, economic and regular supply of petroleum to consumers, a steady income to producers and a fair return on capital for those investing in the petroleum industry," according to the OPEC website.
- Previously controlled by western-dominated multinational oil companies known as the "Seven Sisters," OPEC sought to give the oil-producing nations greater influence over the global petroleum market.
- **They account for roughly 40% of the world's crude oil and 80 per cent of the globe's oil reserves**, according to estimates from 2018. They usually meet every month to determine how much oil the member states will produce.
- However, many allege that OPEC behaves like a cartel, determining the supply of oil and influencing its price in the world market.

Why are they slashing production?

- **Oil prices skyrocketed after Russia invaded Ukraine** in February, and have since begun to soften over the past few months, before dropping sharply to under $90 in September due to fears of a recession in Europe and reduced demands from China because of its lockdown measures.
- The **reductions would boost prices and be extremely beneficial for the Middle Eastern member states**, to which Europe has turned for oil after levelling sanctions against Russia since it invaded Ukraine.
- OPEC+ members are concerned that a faltering global economy would reduce the oil demand, and the cuts are seen as a way to protect profits.
- Increased oil prices, which first occurred during the invasion of Ukraine, have helped Saudi Arabia, one of the founding members of OPEC, become one of the world's fastest-growing economies
- The New York Times raised the possibility that Moscow might be influencing OPEC, to make it more expensive for the West to extend energy sanctions on Russia.

ELECTION SYMBOL

GS-II POLITY

In News

- The **Election Commission of India has banned both the groups** led by former Maharastra Chief Minister Uddhav Thackeray and State Chief Minister Eknath Shinde **from using the Shiv Sena party name and symbol in the upcoming Bye-elections till the final decision.**
- The Commission said that both groups may choose symbols from the list of free symbols notified by the Election Commission for the current bye-elections.

APTI PLUS

Election Symbols

- The **Election Commission of India is authorized to recognize political parties and allot symbols to them under the Election Symbols (Reservation and Allotment) Order 1968**.
- Electoral symbols were i**ntroduced to encourage voting, as illiterate people** can't read the party name, but they can easily identify the party with their symbols.
- Electoral symbols allocated to political parties are **used by them during election campaigning** and are present on **Electronic Voting Machines (EVMs)**.
- The Election Commission of India grants the status of National or state parties based on the party's electoral performance.
  - They are known as R**ecognized political parties and they enjoy certain privileges** like allocation of the party symbols, provision of time for political broadcasts on television and access to electoral rolls.
  - **A Political Party is called a Recognized Political Party** if it meets certain conditions.
    - ✓ **Won a certain percentage of valid votes or a certain number of seats** in the State legislative assembly or the Lok Sabha in the last election.
- There are **2,360 political parties registered** with the **Election Commission of India** and about **97.50% of them are unrecognized parties.**
- Unrecognized Political Parties are those n**ewly registered parties which have not secured enough percentage of votes in the assembly or general elections** to become a state party, or **which have never contested elections** since registered.
  - They **don't enjoy the benefits extended to the recognized parties.**
- The **Election Commission is the only authority to decide issues** on a dispute related to electoral symbols.

Election Commission of India

- It is a permanent constitutional body.
- **Article 324** of the constitution establishes the Election Commission of India.
- It was established on 25th January 1950.
- It supervises the conduct of elections to Parliament and Legislature of every State and elections to the offices of President and Vice-President of India.
- It consists of the Chief Election Commissioner and two Election Commissioners.
  - **Originally, there was only Chief Election Commissioner**, there were no Election Commissioners.

Appointment of Election Commissioners

- The President appoints Chief Election Commissioner and Election Commissioners.
- Tenure of 6 years, or up to the age of 65 years, whichever is earlier.
- The status, salary and perks of election commissioners are equivalent to Judges of the Supreme Court of India.
- The Chief Election Commissioner can be removed from office only through impeachment by Parliament.
  - Other members can be removed by the President in consultation with the Chief Election Commissioner.
- The President may appoint Regional Election Commissioners in consultation with the CEC before elections to the Parliament or Assemblies.
- The Chief Election Commissioner **cannot hold any office of profit after retirement**.
- The Commissioner **cannot be reappointed to the post.**

Powers of the Election Commission

- The EC enjoys complete **autonomy and is insulated from any interference from the Executive**.
- It also functions as a **quasi-judicial body** regarding matters related to elections and electoral disputes.
- Its recommendations are binding on the President of India.
- However, its **decisions are subject to judicial review by High Courts and the Supreme Court** acting on electoral petitions.
- During the election process, the entire Central and state government machinery (including paramilitary and police forces) is deemed to be on deputation to the Commission.
- The Commission takes effective control of government personnel and movable and immovable property for the successful conduct of elections.

Functions of the Election Commission

- Demarcation of constituencies.
- Preparation of electoral rolls.
- Issue notification of election dates and schedules.
- Establish and enforce a code of conduct.
- Scrutiny of nomination papers of candidates.
- Scrutiny of election expenses.

- Allot symbols and accord recognition to political parties.
- Render advice to the President and Governors regarding the disqualification of MPs and MLAs.
- Allot schedules for broadcast and telecast of party campaigns.
- Grant exemptions to persons from disqualifications imposed by judicial decisions.

DRAFT INDIAN TELECOMMUNICATION BILL, 2022

GS-II POLITY

In News

- The Department of Telecom, Ministry of Communications has released the draft Indian Telecommunication Bill, 2022.

Objective

- The **Bill is aimed at reforming existing telecom laws and regulations, and making them 'future ready'**.
- Through the Indian Telecommunication Bill, 2022, the **Centre aims to consolidate and amend the existing laws** governing the provision, development, expansion and operation of telecommunication services, telecom networks and infrastructure, in addition to the assignment of spectrum.

Background

- Key policy interventions and technological advancements have made **India the second-largest telecom market in the world.**
- The sector is one of the highest contributors to India's GDP. In the last few years, the **government has allowed 100% FDI in the Telecom Sector**, largely deregulated BPOs and call centres, enabled in-flight Wi-Fi, and allowed deferred payments from telecom operators due to their strained financial conditions. Now, the Department of Telecom has released the draft Indian Telecommunication Bill, 2022.

Provisions in the Bill

- **Clarity on Spectrum Assignment**
  - The Bill reaffirms the government's authority to assign spectrum, with or without auction, and declares common good and access to telecom services as the objective for spectrum assignment.
  - This may put to rest the old debate on whether spectrum assignment should maximise the government's revenue or enhance access to telecom services, and enable smoother and optimum assignment of the spectrum (e.g., administrative assignment of backhaul spectrum).
- **Easing criminal penalties**
  - The **Bill removes several redundant penalties** (e.g., trespass in telegraph office); imposes a quantum of penalties based on severity; and introduces settlement of offences by payment of fines, and voluntary undertaking.
  - This would augment the ease of doing business and considerably reduce the threat of criminal prosecution for operational issues telecom operators face.
  - Provisions on notification (not approval) for M&A deals, and having a statutory basis and guidelines for Right of Way while laying down infrastructure would further enable ease of business in the sector.
- **Licensing Internet-based apps:**
  - The Bill requires OTT communication services – which are essentially Internet-based apps/ software – to obtain telecom licenses and thereby bring them under the telecom framework.
  - Given the dynamic and multifaceted nature of Internet-based services, subjecting them to a telecom licensing regime with criminal penalties could stifle innovation or even isolate the Indian market (e.g., an interactive gaming service may choose to stop offering the interactive feature, or the game itself in India due to threat of criminal penalties for not having a license).
- **Wide expanse of shutdown and surveillance powers**
  - The Bill **allows the government to direct suspension of transmission of messages or provision of telecom networks or services.**
  - These powers are much wider than the currently existing framework on internet shutdowns and interception, and include directions for interception and disclosure of data, and suspension/ surveillance of messages "relating to any particular subject".
  - The latter is an onerous obligation on telecom operators and risks mass surveillance of the people.
- **Coordination with other agencies**
  - The Bill dilutes TRAI's powers, granting the government the power to deal with unwanted ads and promotional messages.
  - It also requires broadcasting licenses to be granted under the same telecom framework, thus far handled by MIB.
  - While streamlining multiple provisions proves helpful for the industry, relevant inter-departmental consultations should be concluded to remove overlap in laws and achieve the Government's objectives without internal constraints.

- This is particularly important as telecom operators are also subject to other frameworks in the pipeline by other agencies, such as the Digital India and Data Protection Bills.

Telecom Regulatory Authority of India

- In 1997, the TRAI Act was enacted to regulate the telecommunications sector in India.
- It also provided for a mechanism of dispute resolution among the stakeholders of the telecom sector.
- It was amended in 2000, establishing a Telecom Disputes Settlement and Appellate Tribunal (TDSAT) to take over the adjudicatory and dispute functions from TRAI.

APPOINTMENT OF CHIEF JUSTICE OF INDIA

GS-II POLITY

In News

- The President of India has appointed Justice Dhanajaya Yeshwant Chandrachud as the 50th Chief Justice of India (CJI).
  - It is mentioned in the **Article 124 that CJI appointment by the President is to be done "after consultation" with judges of the Supreme Court, as the President may "deem necessary".**
- He will succeed CJI Uday Umesh Lalit, who will retire on November 8.
- He practiced law at the Bombay High Court and Supreme Court and was designated a senior advocate by the Bombay High Court in 1998.
- He served as Additional Solicitor General from 1998 until he was appointed a judge of the Bombay High Court in 2000.
- He took over as the Chief Justice of Allahabad High Court in 2013 and was appointed a judge of the Supreme Court in 2016.
- During his tenure in Supreme Court, he wrote crucial judgments, including recognising privacy as a fundamental right, decriminalizing homosexuality, and decriminalising adultery, among others.

Chief Justice of India

- The Chief Justice of India and the Judges of the Supreme Court are **appointed by the President under Article 124 of the Indian Constitution**.
- The **outgoing Chief Justice of India recommends his successor.**
  - The Union Law Minister forwards the recommendation to the Prime Minister who, in turn, advises the President.
- CJI exercises the power of allocating cases to particular benches.
- CJI also decides the number of judges that will hear a case.
- The Supreme Court collegium is headed by the Chief Justice of India and comprises four other senior-most judges of the court.
- Supreme Court in the **Second Judges Case** ruled that the seniormost judge of the Supreme Court should alone be appointed to the office of the CJI.

Supreme Court

- **Articles 124 to 147** deal with the independence, jurisdiction, powers, procedures, etc of the Supreme Court **under part V** of the Indian Constitution.
- Currently, the Supreme Court of India can maximums have **34 judges (1 chief justice and 33 other judges).**
  - The Union government has increased the number of Supreme Court judges from 31 to 34, including the Chief Justice of India in 2019.
- A person shall be qualified for appointment as a Judge of the Supreme only if he/she meets all the following criteria:
  - Is a citizen of India.
  - Has been for at least five years a judge of a High Court or two such Courts in succession; or
  - Has been for at least ten years an advocate of a High Court or two or more such Courts in succession or is, in the opinion of the President, a distinguished jurist.
- Every person appointed to be a Judge of the Supreme Court shall make an oath or affirmation according to the form set out in the 3rd Schedule of the Constitution.
- **The Indian Constitution does not specify a minimum age limit for a judge to occupy his/her office**.
  - A Supreme Court judge continues to hold the office till he/she attains the age of 65 yrs.
- A Judge of the Supreme Court may tender his/her resignation to the President even before he/she reaches the age of 65 years.
- After retirement, the Supreme Court Judge **shall not do legal practice in any court in the Indian Territory.**
- The retired chief justice and judges are qualified to **50 % of their last drawn salary as a monthly pension.**

Qualifications for Supreme Court Judges

- **A person shall not be qualified for appointment as a Judge of the Supreme Court unless he/she;**
  - Is a citizen of India, and
  - Has been for at least five years a judge of a High Court or two such Courts in succession; or

- Has been for at least ten years an advocate of a High Court or two or more such Courts in succession or is, in the opinion of the President, a distinguished jurist.
- Every person appointed to be a Judge of the Supreme Court shall, before he/she enters upon his/ her office, make and subscribe before the President an oath or affirmation according to the form set out in the Third Schedule of the Constitution.
- **The Constitution does not prescribe a minimum age limit for a judge to occupy his/her office.**
- **A Judge of the Supreme Court continues to hold the office till he/she attains the age of 65 yrs**.
- A Judge of the Supreme Court may tender their resignation to the President even before he/she reaches the age of 65 years.
- A Judge of the Supreme Court, after retirement, shall not do legal practice in any court in the territory of India and shall not plead before any authority under the Government.

Collegium System for the appointment of Judges

- **Under the Collegium System, appointments/elevation of judges/lawyers to the Supreme Court and transfers of judges of High Courts and Apex Court are decided by a panel of the Chief Justice of India and the four senior-most judges of the Supreme Court.'**
- **The word 'Collegium' is nowhere mentioned in the Indian Constitution**, it has come into force as per Judicial Pronouncement.

Evolution of Collegium System

- **Under the Constitution, The Judges of the Supreme Court are appointed by the president**. The president appoints the chief justice after consultation with such judges of the Supreme Court and high courts as he deems necessary.
  - The president appoints the other judges after consultation with the chief justice and other judges of the Supreme Court and the high court as he deems necessary.
  - Consultation with the chief justice is obligatory in the case of the appointment of a judge other than the Chief justice
- **First judges case (1982):** The Supreme court held that consultation does not mean agreement and it only means an exchange of views.
- **Second judges case (1993):** The court changed its earlier ruling and changed the meaning of the word consultation to consensus.
  - It ruled that the advice tendered by the CJI is binding on the President in matters of appointment of SC judges. But any such advice would be tendered after CJI consults with two of his most senior judges.
- **Third judges case (1998):** The consultation process should be based on the plurality of judges.
  - **CJI should consult a Collegium of four senior-most judges** before making a recommendation to the President and even if two judges give an unfavourable opinion, he should not send the proposal to the President.

UNIFORM CIVIL CODE

GS-II POLITY

In News

- The Union Government has informed the Supreme Court that **the matter of the Uniform Civil Code (UCC) will be placed before the 22nd Law Commission.**
- The government highlighted that "**Part IV of the Indian Constitution creates an obligation upon the State to secure for citizens a Uniform Civil Code throughout the country under its Article 44".**

About Uniform Civil Code

- **Uniform Civil Code comes under Article 44 of the Indian Constitution, which lays down that the state shall aspire to secure a Uniform Civil Code for the citizens throughout the territory of India**.
- It calls for the formulation of one law for India, which would apply to all religious communities in matters such as marriage, divorce, inheritance, and adoption.

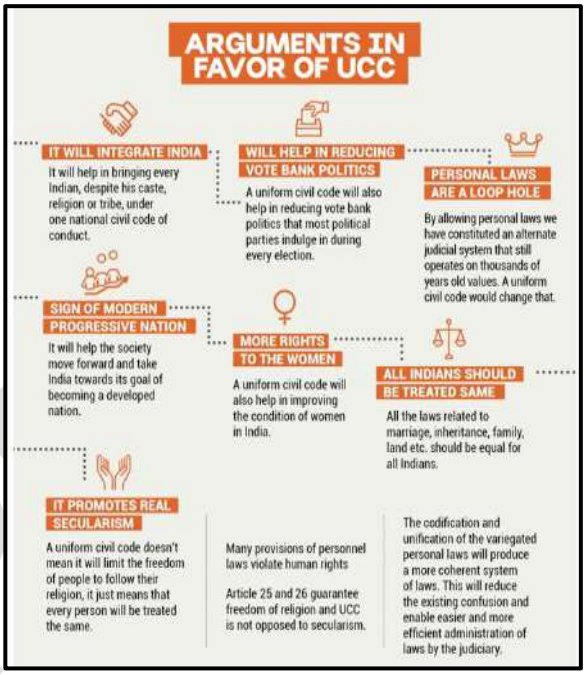
Origin of Uniform Civil Code

- The origin of the **Uniform Civil Code (UCC)** dates back to the colonial period when the British government submitted its report in 1835 stressing the need for uniformity in the codification of Indian law relating to crimes, evidence, and contracts, specifically recommending that the personal laws of Hindus and Muslims be kept outside such codification.
- **An increase in legislation dealing with personal issues at the far end of British rule forced the government to form the B N Rau Committee to codify Hindu law in 1941.**
  - The Hindu Law Committee was formed to examine the question of the necessity of common Hindu laws.
  - The committee, in accordance with scriptures, recommended a codified Hindu law, which would give equal rights to women.
  - The committee recommended a civil code of marriage and succession for Hindus.
- **The Hindu Code Bill**

- **The draft of the Rau Committee report was submitted to a select committee chaired by B.R Ambedkar that came up for discussion in 1951 after the adoption of the Indian Constitution**.
- While discussions continued, the Hindu Code Bill lapsed and was resubmitted in 1952.
- **The bill was then adopted in 1956 as the Hindu Succession Act to amend and codify the law relating to intestate or unwilled succession, among Hindus, Buddhists, Jains, and Sikhs.**
- The Act reformed the Hindu personal law and gave women greater property rights, and ownership.
- **It gave women property rights in their father's estate. The daughter is allotted the same share as is allotted to a son.**

Arguments in favour of the Uniform Civil Code

- **A Secular republic needs a Common law for all Citizens rather than differentiated rules based on religious Practices**.
- Courts also Suggested in their judgements that the government should move toward a uniform civil code including the judgment in the Shah Bano Case.
- It will address the discrimination against vulnerable groups and harmonise diverse cultural groups across the country.
- Ensure gender justice, and promote women's empowerment.
- **The code will simplify the complex laws around marriage ceremonies, inheritance, succession, and adoptions making them one for all. The same civil law will then apply to all citizens irrespective of their faith.**
- Dr B R Ambedkar, while formulating the Constitution had said that a UCC is desirable but for the moment it should remain voluntary, and thus it was added as a part of the Directive Principles of the State Policy in part IV of the Constitution of India as Article 44.

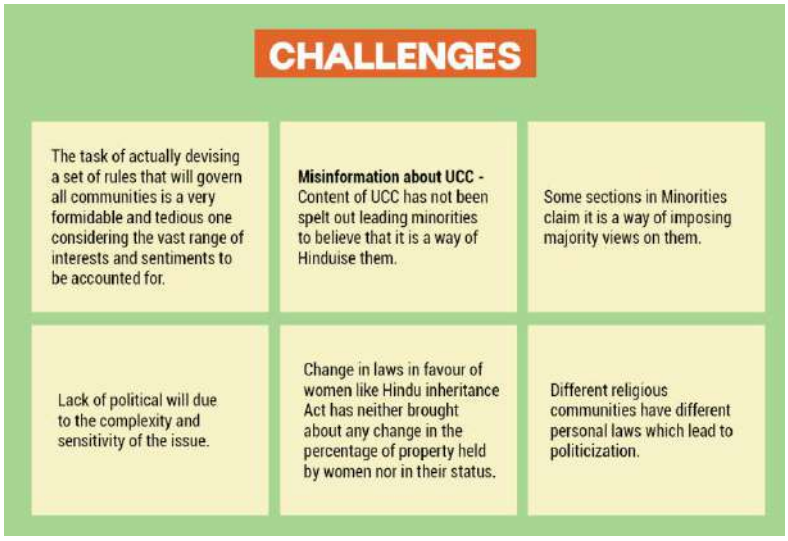


Arguments against Uniform Civil Code

- **Cultural diversity cannot be compromised to the extent that our urge for uniformity itself becomes a reason for a threat to the territorial integrity of the nation.**
- Diversity, both religious and regional, Should not get subsumed under the louder voice of the majority.
- Article 25 of the Indian constitution preserves the freedom to practise and propagate any religion that gets into conflict with the concepts of UCC.
  - **Fundamental Rights v/s DPSPs:** Fundamental rights are justiciable whereas DPSPs are non-justiciable and optional for the state.
- **The demand for a uniform civil code has been framed in the context of communal politics. A large section of society sees it as majoritarianism under the garb of social reform.**

21st Law Commission on Personal Law

- Uniform Civil Code is neither necessary nor desirable at this stage.
- Cultural diversity Cannot be Compromised to the extent that our urge for uniformity itself becomes a reason for threat to the territorial integrity of the nation.
- The difference does not always imply discrimination.
- Diversity, both religious and regional Should not get Subsumed under the louder voice of the majority.
- Codification of all personal laws so that prejudices and Stereotypes in every religion would Come to light.
- Certain measures in marriage and divorce should be uniformly accepted in the personal laws of all religions.



- 18 years be the minimum legal age for men and women to get married, and different ages of marriage between adults must be

abolished as it contributes to the Stereotype that wives must be younger than their husbands.

- Need to recognise the role of women in a household. Women Should get an equal part of the property gained after marriage in the event of divorce.

Way Forward

- Discriminatory practices within a religion should be eliminated.
- The achievement of a uniform civil code becomes more desirable when it comes to the diversity of the matrimonial laws, simplifying the Indian legal system and making Indian society more homogeneous. The uniform civil code will envisage uniform provisions that will apply to everyone and will be based on social justice and gender equality in family matters.
- By Codification of different Personal laws, we can arrive at Certain universal Principles that promote equity.
- **The UCC aims to protect vulnerable sections as envisaged by Ambedkar including women and religious minorities, while also promoting nationalistic fervour through unity.**
- The code will simplify the complex laws around marriage ceremonies, inheritance, succession, and adoptions making them one for all. The same civil law will then apply to all citizens irrespective of their faith.

DEMOCRATISATION OF INDIA

GS-II POLITY

About

- In Modern India, The **social justice discourse can be traced to the initiatives taken by social revolutionaries such as Jyotiba Phule, Savitribai Phule, Sahuji Maharaj and Periyar during colonial rule.**
- With the rise of B.R. Ambedkar on the national scene the "depressed classes" (Dalits) and "tribals" (Adivasis) were listed as Scheduled Castes and Scheduled Tribes, respectively.
  - The **provision of reservations for these social groups in proportion to their population in education and employment was adopted as soon as the Indian Constitution came into force.**
- A large section of the "backward classes" and occupational caste groups remained socially and educationally backward; therefore their presence in the bureaucracy, the judiciary, academia or the media remained low.
- The **Indian Constitution under Article 340 entailed egalitarian possibility that resulted in two Backward Classes commissions, the Kalelkar Commission (1953-1955) and the Mandal Commission (1978-80).**
- The mobilisation campaign for implementing the recommendations of the Mandal Commission led to a "Mandal movement".
  - The announcement of implementing one of its recommendations, of 27% reservation for the Other Backward Classes (OBC) in the central services.
- The 73rd and 74th constitutional Amendments have promoted the idea of social justice by extending reservation benefits to Scheduled Castes, Scheduled Tribes and OBCs in local bodies.

Significance of Democracy

- For long People have struggled for their Rights. It is generally believed that democracy is the best System to give Rights to People.
- Most modern States include People of different religions, languages, and Cultural traditions. But the National identity of a democratic State is Supposed to Provide Citizens with a Political identity that Can be Shared by all the members of the State.
  - The democratic States usually try to define their identity So that it is as inclusive as possible, which allows all Citizens to identify themselves as Part of the Nation.
- **Why Democracy?**
  - It Promotes equality among Citizens.
  - Enhances the dignity of the individual.
  - Improves the quality of decision-making.
  - Provides a method to resolve Conflicts.
  - Allows room to Correct mistakes.
  - The Countries which have formal Constitutions, hold elections and form governments.
  - Guarantee the Rights of Citizens.
  - Solves the Social, Political and Economic Problems of the Country.
- **Ending of Racial Discrimination;**
  - In South Africa, After Several decades of Struggle, the Policy of Racial discrimination toward blacks Came to an end in 1994 with Nelson Mandela being Sworn in as a Black President.
- **Participation;**
  - For a Successful democracy, People need to Participate in its Governance.
  - Participation through voting in elections. Other ways of Participation are Dharna, Rallies, Strikes, Signature Campaigns and other forms of Protests.

- Mass media like TV, Newspapers, Magazines and other agencies also play a major role in highlighting Public issues and moulding Public opinion.

- **Resolve Conflicts;**
  - In any Country, Problems may result in Conflicts and lead to Social Tension.
  - There may arise a situation when two people or two groups feel that they are not being treated fairly or are being discriminated against on grounds of Culture, Region, Religion, Economic background, Caste, Race, etc.
  - It is the Government's responsibility to resolve these Conflicts. EX- Interstate Rivers dispute.
- **Equality and Justice;**
  - Ensure Justice and equality for all, they are two different Sides of the Same Coin and are essential in a democracy.
  - Without Justice and equality democracy would remain meaningless and directionless.
- **Accountable Government;**
  - Democracy is accountable because it is the government of the People and made by the People and for the People.
  - Representatives elected by the People are responsible to them. If the People are not happy, they can change the leaders in the coming elections.
- **Responsive Government;**
  - A Citizen has the right and the means to examine the process of decision-making. This type of transparency is not available in non-Democratic Governments.
  - Ex - In the USA Civil Rights Movement of the 1960s restored the dignity of Afro-Americans based on Color.
- **Legitimate Government;**
  - A democratic government is a legitimate government.
  - It may be slow, less efficient, and not always very responsive or clean. But a democratic Government cannot ignore the needs of the People.

Achievements of Indian Democracy

- The Founding Fathers of our Constitution built Strong Democratic Foundations of Constitutional Democracy.
  - The preamble laid down a clear road map with Fundamental Rights and Duties, Directive Principles, Parliamentary System and Amendment Procedures; Judicial Review and Basic Structure doctrine.
- During 1st general election in 1951, India had 54 Political Parties and now it has grown up to 464 in the 2014 general election as **evidence of the deepening of the democratic Process**.
- In the 1st General election of 1951, nearly 45% Percent of Citizens exercised their franchise. In the 2019 General election, the size of the electorate had increased to nearly 67%.
- Since 2004, votes are recorded through EVMs or Electronic Voting Machines. These are manufactured in India and their accuracy is ensured and Secrecy has been fully tested.
- Our electoral System known as FPTP or First-Past-The-Post System is a Simple Plurality System in which voters Choose a Single representative.
- Since 1989, Citizens were given a chance to elect their representatives at the age of 18.
- **The 73rd and 74th amendments have given a reservation for SC/STs, Women in Local Self-governing bodies like Panchayats, and Municipalities.**
- India's democratic Set up has been able to keep the military out of Political Power.
- The Democratic Process has brought about a Shift of Political Power from the Middle and Higher Castes and Classes of urban Society to backwards Classes.
- **India's institutions like the free Press and an independent Judiciary have ensured that India remains a Society based on Rule of law.**
- Life Expectancy at birth has almost doubled from 36 years to 67 years due to the availability of better health facilities and health Programmes implemented for the well-being of the People.
- Increased Number of Universities Colleges, and Hospitals. The literacy rate increased to 73%.
- India has been able to emerge as a Regional Power in Asia and Super Power in South Asia backed by its Economic, Military and Nuclear Capabilities.
- Post-1991, with New Economic Policy, the Economy has Seen greater Private and foreign Participation and the emergence of a Professional new Middle Class. Technological innovations, Improvement in Education, Health, Improvement in Rural and Urban Infrastructure, Increased network of Banking Sectors.
- **India's Gross National Income has increased, Poverty has declined, Increased in Per Capita income.**
- Food grain Production grew indicating more than a 6 times increase and the fact that India is food Secure now. It was made possible with rapid advances in Agricultural technology.

APTI PLUS

COMPETITION COMMISSION OF INDIA (CCI)

GS-II POLITY

In News

- The competition Commission of India (CCI) has **imposed a provisional penalty** of Rs 1,337.76 crore ($162 million**) on Google for "abusing its dominant position" in multiple categories related to the Android mobile device ecosystem in the country.**

Competition Commission of India

- It is a **statutory body established under the Competition Act, of 2002, tasked with ensuring fair and healthy competition in the economic activities of the country.**
- It is to act as an antitrust watchdog and ensure that there is no abuse of a dominant position by a company in the market.
- **CCI aims to:**
  - Protect against market distortions.
  - Promote a free enterprise system.
  - Ensure no abuse of dominance by big players in the market.
  - Promote domestic industries.
  - Establish regulative control over economic activities.

Composition of CCI

- It is a quasi-judicial body which has **one chairperson and six other members.**
  - **All of them are to be appointed by the Central Government**.
- The Chairperson and members shall be a person of ability, integrity and standing and who, has been, or is qualified to be a judge of a High Court, or, has special knowledge of, and professional experience of not less than fifteen years in international trade, economics, business, commerce, law, finance, accountancy, management, industry, public affairs, administration or in any other matter.

Functions of CCI

- Eliminate practices that hurt competition.
- Secure the interest of consumers and ensure that their welfare is not compromised.
- Undertake competition advocacy, create public awareness and impart training on competition issues.
- Ensure smooth alignment of sectoral regulatory laws and competition laws.
- Ensures that foreign companies abide by the country's competition laws.
- It guarantees that no enterprise abuses its 'dominant position' through the control of supply, manipulating purchase prices, or adopting practices that deny market access to other competing firms.
- Please note: the appeals from CCI go to National Company Law Appellate Tribunal (NCLAT) constituted under the Companies Act, 2013.

Anti-Competitive behaviour by firms and companies

- Foreclosing competitors/ competition.
- Unfair or discriminatory pricing/ conditions.
- Limiting or restricting the production of goods or provision of services.
- Limiting or restricting scientific or technical development to the prejudice of consumers.
- Mutual anti-competitive agreements.
- Predatory pricing.
- Denial of market access to others.
- Making conclusions of contracts subject to the acceptance by other parties of supplementary obligations that are unrelated to the original contract.

Evaluation of the Working of CCI

- The CCI has been fairly successful in its functioning and has been a definite improvement from its predecessor under the Monopolies and Restrictive Trade Practices Act, of 1969.
- It has **prevented the cartelization of cement companies, imposed penalties on the BCCI for the abuse of its dominant position, ordered an anti-trust probe against Google and has prevented cartelization in the telecom sector.**
- It has undertaken several measures to increase public awareness about competition issues and has undertaken competition advocacy too.
- It has ensured that there is proactive engagement with all stakeholders, including consumers, industry, government and international jurisdictions.

APTI PLUS

OFFICE OF PROFIT

In News

- The **Election Commission of India (ECI) expressed its decision to the Governor of Jharkhand in an office-of-profit complaint against the Chief Minister of Jharkhand**.
  - According to the unofficial source, ECI had recommended his disqualification as Minister of the Legislative Assembly (MLA).

Office of Profit

- Members of Parliament (MPs) and Members of the Legislative Assembly (MLA), as members of the legislature, hold the government accountable for its work.
- **Under the Representation of People Act holding an office of profit is grounds for disqualification**.
- The **rationality behind the disqualification under the office of profit law is that if legislators hold an 'office of profit' under the government, they might influence the government, and may not discharge their constitutional duty.**
  - Disqualification under "office of profit" ensures that there should be no conflict between the duties and interests of an elected member.
- Disqualification based on the office of profit **upholds the principle of separation of power between the legislature and the executive**; an essential feature of the Indian Constitution.
- Under Article 102 (1) and Article 191 (1) of the Indian Constitution, an MP or an MLA (or an MLC) is barred from holding any office of profit under the central or state government, but Indian Constitution or any law does not clearly define what constitutes an office of profit, the definition has evolved over the years with various court judgments.
  - **An office of profit is defined as a position that brings to the officeholder some financial gain, advantage, or benefit.**
- The **Supreme Court ruled that Several questions need to be considered in deciding the matter of office of profit:**
  - Whether the government is the appointing authority.
  - Whether the government has the power to terminate the appointment.
  - Whether the government determines the remuneration.
  - What is the source of remuneration.
  - The power that comes with the position.

Other reason for the Disqualification of the member

- If he holds any office of profit under the Union or state government.
- If he is of unsound mind and stands so declared by a court.
- If he is an undercharged insolvent.
- If he is not a citizen of India or has voluntarily acquired the citizenship of a foreign state or is under any acknowledgement of allegiance to a foreign state.
- If he is so disqualified under any law made by Parliament.
- The **Parliament has prescribed several additional disqualifications in the Representation of People Act (1951).**
  - He must not have been found guilty of certain election offences or corrupt practices in the elections.
  - He must not have been convicted for any offence resulting in imprisonment for two or more years. But, the detention of a person under a preventive detention law is not a disqualification.
  - He must not have failed to lodge an account of his election expenses within the time.
  - He must not have any interest in government contracts, works or services.
  - He must not be a director or managing agent nor hold an office of profit in a corporation in which the government has at least a 25% share.
  - He must not have been dismissed from government service for corruption or disloyalty to the state.
  - He must not have been convicted for promoting enmity between different groups or for the offence of bribery.
  - He must not have been punished for preaching and practising social crimes such as untouchability, dowry and sati.
- To decide whether a member has become subject to any of the above disqualifications, **the governor's decision is final.**
  - However, Governor should obtain the opinion of the Election Commission and act accordingly.
- Indian Constitution also lays down that a person shall be disqualified from being a member of either House of state legislature if he is so disqualified on the ground of defection under the provisions of the 10th Schedule.
  - The **question of disqualification under the 10th Schedule is decided by the Chairman, in the case of the legislative council and, Speaker, in the case of the legislative assembly (and not by the governor).**
  - The decision **of the Chairman/Speaker is subject to judicial review.**

APTI PLUS

Way forward

- In modern polity, the concept of separation of power becomes too thin because the government function becomes so wide that the government can't work in its limited power which is given to the government.
- We must bear in mind the objective of the disqualification under 'the office of profit' is to avoid conflict between the different branches of the state.
- The **need of the hour is to enact a comprehensive national law to clearly define the 'office of profit'.**

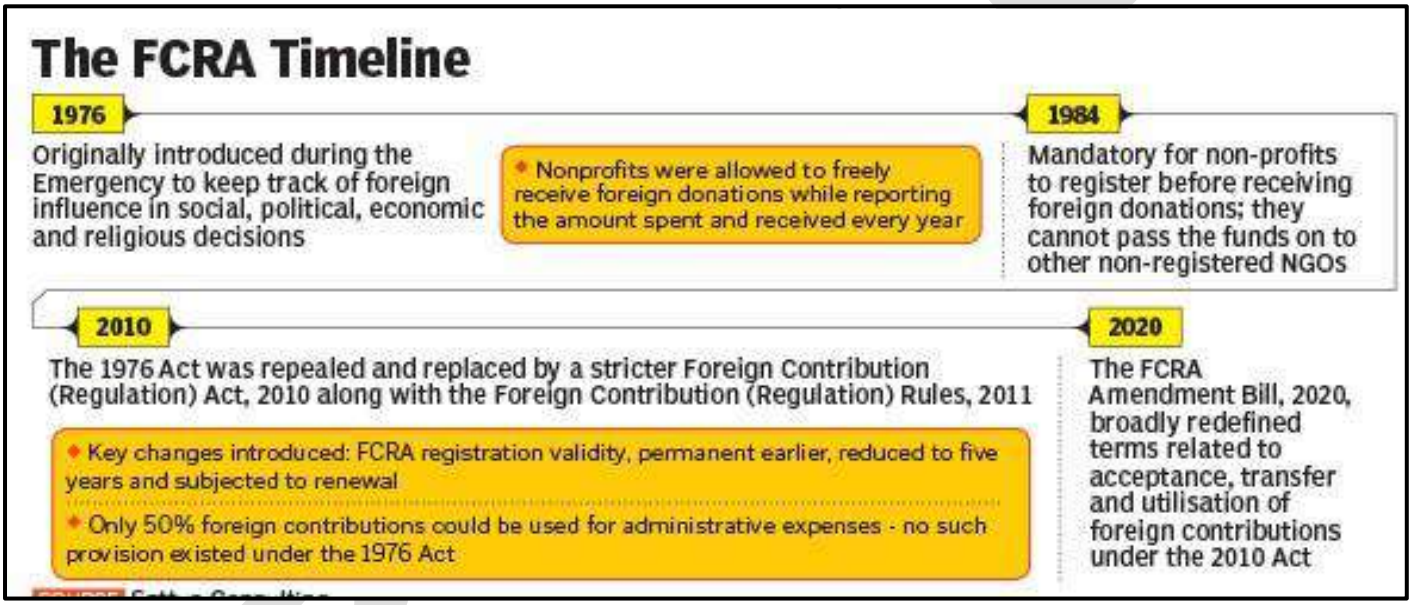
FOREIGN CONTRIBUTION REGULATION ACT (FCRA) — GS-II POLITY

In News

- The **Union Ministry of Home Affairs has cancelled the Foreign Contribution Regulation Act (FCRA) licence** of the Rajiv Gandhi Foundation (RGF) and Rajiv Gandhi Charitable Trust (RGCT) for alleged violations of the provisions of the FCRA Act.

Foreign Contribution Regulation Act

- The **FCRA was enacted in 1976 to regulate foreign money into the country through independent organizations.**
- The Foreign Contribution Regulation Act was amended by the Indian Parliament in 2010.
  - To effectively regulate **the foreign contribution by individuals or associations or companies.**
- The Union Minister of Home Affairs introduced the Foreign Contribution (Regulation) Amendment Bill in 2020, which made several changes.



Foreign Contribution (Regulation) Amendment Act, 2020

- The Act regulates the acceptance and utilization of foreign contributions by individuals, associations and companies.
  - **Foreign contribution is the donation or transfer of any currency, security or article (of beyond a specified value) by a foreign source**.
- **Prohibition to accept foreign Contributions**: Certain persons are prohibited to accept any foreign contribution. These include:
  - **Election candidates, editors or publishers of a newspaper, judges, government servants, members of any legislature, and political parties, among others.**
  - The Bill adds public servants (as defined under the Indian Penal Code) to this list. A public servant includes any person who is in service or paid by the government or remunerated by the government for the performance of any public duty.
- **Transfer of foreign Contributions**
  - Foreign contributions **cannot be transferred to any other person unless such person is also registered to accept foreign contributions (or has obtained prior permission under the Act to obtain foreign contributions).**
  - The Act prohibited the transfer of foreign contributions to any other person. The term 'person' under the Act includes an individual, an association, or a registered company.
- **Aadhar for registration**
  - Any person seeking registration (or renewal of such registration) or prior permission for receiving a foreign contribution must make an application to the central government in the prescribed manner.
  - The Act adds that **any person seeking prior permission, registration or renewal of registration must provide the Aadhar number of all its office bearers,** directors or key functionaries, as an identification document.

- **In the case of a foreigner, they must provide a copy of their passport** or the Overseas Citizen of India card for identification.

- **FCRA Account**
  - **Foreign contributions must be received only in an account designated by the bank as an "FCRA account"** in such a branch of the State Bank of India, New Delhi, as notified by the central government.
  - No funds other than the foreign contribution should be received or deposited in this account.
  - The person may open another FCRA account in any scheduled bank of their choice for keeping or utilizing the received contribution.
- **Restriction in the utilization of foreign contribution**
  - The Government may restrict the usage of unutilized foreign contributions for persons who have been granted prior permission to receive such contributions.
- **Renewal of license**
  - **Every person who has been given a certificate of registration must renew the certificate within 6 months of expiration**.
  - The Act provides that the government may conduct an inquiry before renewing the certificate.
- **Reduction in the use of foreign contributions for administrative purposes**
  - A person who receives a foreign contribution must use it only for the purpose for which the contribution is received.
  - **They must not use more than 20% of the contribution for meeting administrative expenses (earlier it was 50%).**
- **Suspension of Registration**
  - Earlier governments may suspend the registration of a person for a period not exceeding 180 days.
  - **The Act adds that such suspension may be extended up to an additional 180 days.**
- The Union government reserves the right to cancel the FCRA registration of any NGO if it finds it to violate the Act.
  - Registration of the NGO can be cancelled for a range of reasons. Once the registration is cancelled, it is not eligible for re-registration for three years.
  - All orders of the government can be challenged in the High Court.

Way Forward

- NGOs must be made an essential part of the development process by simplifying the regulatory process. They can play a major role in providing a voice to the grievances of the poor, tribals and other marginalized section of society and make them aware of their rights. They could work with the government to achieve socioeconomic development goals.

GOVERNMENT APPELLATE COMMITTEES FOR SOCIAL MEDIA

GS-II POLITY

In News

- The **Union government plans to set up three-member grievance appellate committees to redress users' grievances against how social media platforms** initially addressed their complaints regarding content and other issues.

Details

- The **panels will be constituted by amending the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.**
  - The Amendments may require social media platforms to acknowledge user complaints within 24 hours and resolve them within 15 days.
  - The complaints could vary from child sexual abuse material to nudity to trademark and patent infringements, misinformation, impersonation of another person and content threatening the unity and integrity of the country.
  - Any person aggrieved by a decision of the grievance officer of social media platforms may prefer an appeal to the appellate committee within 30 days.

About Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021

- The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, was notified **by the Central government on February 25, 2021, relates to digital news publishers, including websites, portals and YouTube news channels, and Over The Top (OTT) platforms, which stream online contents such as web series and films.**
- It is **jointly administered by the Ministry of Electronics and IT, and the Ministry of Information and Broadcasting**.
- The Rules provide for a code of ethics to be followed by digital news publishers and OTT platforms; A three-tier grievance redress mechanism, which includes:
  - Self-regulation by publishers at the first level
  - Self-regulation by Self-regulating bodies of the publishers
  - An oversight mechanism by the Central government

Key Features of the Rules

- **Social media intermediaries, with registered users in India above a notified threshold, have been classified as significant social media intermediaries.**
  - They are required to appoint certain personnel for compliance, identification of the first originator of the information on its platform, and identify certain types of content.
  - They need to appoint a **Nodal Contact Person for 24x7 coordination with law enforcement agencies. Such a person shall be a resident of India**.
  - **Appoint a Resident Grievance Officer** who shall perform the functions mentioned under the Grievance Redressal Mechanism. Such a person shall be a resident of India.
  - Publish a monthly compliance report mentioning the details of complaints received and action taken on the complaints.
- The Rules prescribe a framework for the regulation of content by online publishers of news and current affairs content and audio-visual content.
- **A 3-tier Grievance Redressal Mechanism:** Social media intermediaries shall appoint a Grievance Officer to deal with complaints and share the name and contact details of such officers.
  - The grievance officer shall acknowledge the complaint within twenty-four hours and resolve it within 15 days from its receipt.
- **Ensuring Online Safety and Dignity of Users, Especially Women Users:** Intermediaries shall remove or disable access within 24 hours of receipt of complaints of contents that expose the privacy of individuals.
  - Such a complaint can be filed either by the individual or by any other person on his/her behalf.
- **Voluntary User Verification Mechanism:** Users who wish to verify their accounts voluntarily shall be provided with an appropriate mechanism to verify their accounts and provided with a demonstrable and visible mark of verification.
- **Giving Users An Opportunity to Be Heard:** Users must be provided with an adequate and reasonable opportunity to dispute the action taken by the intermediary.
- **Removal of Unlawful Information:** An intermediary upon receiving actual knowledge should not host or publish any information which is prohibited under any law in relation to the interest of the sovereignty and integrity of India, public order, friendly relations with foreign countries etc.
- This Code of Ethics prescribes the guidelines to be followed by OTT platforms and online news and digital media entities.
- **Self-Classification of Content:** The OTT platforms would be required to **self-classify the content into five age-based categories**; U (Universal), U/A 7+, U/A 13+, U/A 16+, and A (Adult).

Concerns

- Intermediaries include telecom service providers, internet service providers, search engines, online marketplaces, payment sites, cyber cafes, messaging services, and social media sites. While many intermediaries are mere storage providers, where they are unaware of the content being transmitted or stored on their platform, other intermediaries may be aware of the user-generated content on their platform. This raises the question that **to what extent intermediaries should be held liable for the user-generated content on their platform.**
- There are growing concerns around the misuse of these platforms for the proliferation of illegal or harmful content such as child sex abuse material, content provoking terrorism, misinformation, hate speech, and voter manipulation.
- **Some platforms have been self-regulating the publication of such content.** However, this has raised concerns about arbitrary actions taken by these platforms which could affect freedom of speech and expression.
- Certain grounds for restricting content may affect freedom of speech, some of these restrictions are subjective and overbroad, and may adversely affect the freedom of speech and expression of users of intermediary platforms.
- **The 2021 Rules do not restrict the extent or type of information that may be sought.** For example, the information sought may be personal data of individuals such as details about their interactions with others. Such powers, without adequate safeguards, may adversely affect the privacy of individuals.
- The Rules require significant social media intermediaries, to enable the identification of the first originator of information within India.
  - Identifying the first originator of information on a messaging platform will require the service provider to permanently store certain additional information:
  - The Rules also do not specify any timeline in terms of how far back in time the messaging service will be required to check for determining the first originator.
- **Overall, this requirement will lead to the retention of more personal data by messaging services which goes against the principle of Privacy and Data minimization.**

Way Forward

- Government can facilitate the Reform Process. The government may pass a law that any violation will face legal action or criminal action, but the media needed a strong policy of Self-regulation and at the same time independent regulation, as

excessive regulation could result in eroding the independency of media and goes against the right to privacy of citizens.

- Privacy is one of the fundamental freedoms of people and it is essential to liberty and human dignity. Therefore government needs to balance our security concerns with Privacy concerns.

NEWS BROADCASTING AND DIGITAL STANDARDS AUTHORITY

GS-II POLITY

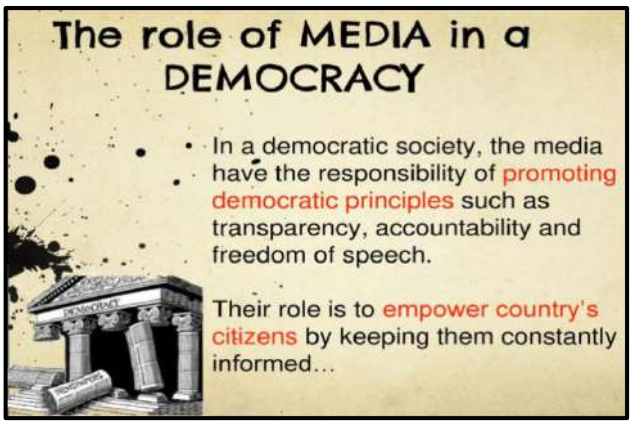
In News

- The **News Broadcasting and Digital Standards Authority (NBDSA), has fined a News channel** for diverting a news debate on hijab into a "communal issue" and not sticking to guidelines.
  - The NBDSA held that **the News programme violated the principles of impartiality, neutrality, fairness and decency.**
  - The NBDSA highlighted that, they did not have any problem with the subject of debate but with the narrative of the debate.
- The issue has raised a debate related to the working of Media in a democracy.

News Broadcasting and Digital Standards Authority (NBDSA)

- The NBDSA is an **independent body set up by the News Broadcasters and Digital Association (NBDA);** it serves as a **representative of private television news, current affairs and digital broadcasters.**
  - It promotes itself as "the collective voice of the news, current affairs and digital broadcasters in India."
- Though it **is not a government or legal organization, its rulings matter within the industry.**
- The NBDA has 26 news and current affairs broadcasters (comprising 119 news and current affairs channels) as its members.
  - It is **funded entirely by its members.**
- It aims **to protect all its members from persons carrying unfair and/or unethical practices or who discredit television news broadcasters, digital news media and other related entities.**
- It carries out activities to promote, protect and secure the interests including the right of freedom of speech and expression of the news broadcasters, digital news media and other related entities.
- **It lay down and fosters high standards, ethics and practices in news broadcasting**, including entertaining and deciding complaints against or in respect of broadcasters.
- It includes a Chairperson who is to be an eminent jurist, and other members such as news editors, and those experienced in the field of law, education, literature, public administration, etc. nominated by a majority of the Board.
- It may **initiate proceedings on its own and issue notice or take action with respect to any matter which falls within its regulations.**
  - It can impose a fine up to Rs. 1 lakh and such a fine shall be recovered from the concerned broadcaster.

Significance of Media



- **Media refers to all means of Communication**, everything ranging from a Phone Call to the news on TV.
  - TV, radio and newspapers are a form of media. Since they reach millions of people across the world they are Called Mass Media.
- **A balanced report is essential in media which has to report independently.**
- Media plays a very important role in providing news and discussing events taking place in the Country and the world.
  - News Stories in the media inform people about important events in the Country.
- Media by focusing on particular issues influences and Shapes our thoughts. It is said the **media sets the agenda for People.**
  - Opinions, attitudes, and Conduct of persons are dependent upon the information available to them.
  - Most of our knowledge of Contemporary events comes from newspapers, Radio, Television and movies.
  - **Our emotions and attitudes are also formed or influenced to a large extent by the media.**
- The media tell us about the working of the Government and create awareness about the welfare programmes.

Concern

- The media is far from being independent. This is because of the Control of the Government over the media Called Censoring and because big business houses Control the media.
- **Corporate Funding -** A lot of money is spent on maintaining People and getting the latest technology. To meet this Cost, it needs money.

- Media, therefore, uses advertising as a tool to raise revenue.
- **Manipulating News for TRPs is not only a financial scam but also morally and ethically wrong.**
- Some Channels are **spreading a hate narrative** which is a violation of the fundamental right of the citizen to know the truth through the media.
- The media has become a source of disinformation, and this is also an ethical issue.
  - Both legal and ethical dimensions are equally serious

Way Forward

- The democratic way of life depends upon the existence of free agencies of mass media.
- The Media must act in a Responsible and Independence manner; they need to promote Sincerity, Truthfulness, Accuracy, and Impartiality in their work.
- **News reporting must be factual and objective**.
- Programs relating to Controversial public issues are needed to give **fair representation to both sides of the issue.**
- Children's programs are to be educative rather than merely entertaining.
- Advertising of hard liquor, and fortune-telling, must be avoided.
- Privacy is one of the fundamental freedoms of people and it is essential to liberty and human dignity.
- **A journalist must be held accountable for the consequences of the reporting.**
- Need to promote a Free and Responsible Press.
- The technique of murder must be presented in a way that will not inspire imitation.
- Brutal killings are not to be presented in detail.
- The **media should not report the glorification of war,** over-sentimentality, unnecessary brutality or killing, passionate love scenes, undue sympathy for immoral or criminal behaviour, or superficiality.
- Government can facilitate the Reform Process. The government may pass a law that any violation will face legal action or criminal action, but the **media needed a strong policy of Self-regulation and at the same time independent regulation.**

HATE SPEECH

GS-II POLITY

In News

- The Supreme **Court of India expressed concern over rising incidents of hate speeches, the Court directed the police to take suomotu action against the culprits by registering criminal cases without waiting for formal complaints.**
  - The court alerted the authorities that "any hesitation to act in accordance with this direction will be viewed as contempt of court and appropriate action shall be taken against the erring officers".

Details

- **The court said that hate speech cases must be dealt with IPC Sections 153A, 153B and 295A and 505, etc.**
  - **IPC Section 153A deals** with promoting enmity between different groups on grounds of religion, race, place of birth, residence, language, etc., and doing acts prejudicial to the maintenance of harmony.
  - **IPC Section 153B** speaks about imputations, and assertions prejudicial to national integration.
  - **IPC Section 295A** refers to deliberate and malicious acts intended to outrage the religious feelings of any class by insulting its religion or religious beliefs.
  - IPC Section 505 deals with statements conducing to public mischief.

Hate Speech

- **Hate speech can be defined as** "Any kind of communication; in speech, writing or behaviour that attacks or uses derogatory or discriminatory language with reference to a person or a group based on their religion, ethnicity, nationality, race, colour, descent, gender or other identity factors."
- It is an act of using threatening words or Signs within the hearing or sight of a person to create fear.
- It has become one of the biggest challenges to the rule of law and our democratic structure.
- **Hate speech is a serious global challenge;** Recently Facebook, in its Transparency Report, disclosed that it ended up taking down 3 million hateful posts from its platform while YouTube removed 25,000 posts in one month alone.

Concern

- **The criminal law or the Constitution does not define hate speech.**
- **Hate Speech is the root of many forms of violence that are being committed.**
- **One of the most visible effects of hate speech is growing electoral mobilization along communal lines.**
- It not only negatively affects human rights values but also affects the socioeconomic development of the nation and also undermines constitutional values.

- **Hate speech has reached a systemic presence in the media and the internet, from electoral campaigns to everyday life.**
- Abusive speech directed against minority communities, disinformation campaigns on TV channels and Social Media, trolling and fake news is becoming the new normal.
- **In 2019, the Supreme Court criticized the Election Commission, dubbing it "toothless" for not taking action against candidates engaging in hate speech during the election campaigns.**

Provisions under Present laws to deal with Hate Speech

- There are many laws to curb hate speech.
- Sections 153A, 295A and 298 of the Indian Penal Code, criminalize the promotion of hostility between different groups of people on grounds of religion and language.
- **Section 125 of the Representation of People Act states** that any person during an election campaign promoting feelings of hostility and hatred on grounds of religion and caste is punishable with imprisonment up to 3 years and a fine or both.

Suggestions to curb the menace of Hate Speech

- **Monitoring and analyzing hate speech trend**
  - **Authorities must recognize, monitor, collect data and analyze hate speech trends.**
- Addressing root causes, drivers and actors of hate speech
  - Government should adopt a common understanding of the root causes and drivers of hate speech to take relevant action to best address and/or mitigate its impact.
  - Government should also identify and support actors who challenge hate speech.
- Engaging and supporting the victims of hate speech
  - Government should show solidarity with the victims of hate speech and enforce human rights-centred measures which aim at countering hate speech and the escalation of violence.
- Promote measures to ensure that the rights of victims are upheld, and their needs addressed, including through advocacy for remedies, access to justice and psychological counselling.
- **The government must also engage private sector actors, including social media companies, to address and counter hate speech, encouraging partnerships between government, industry and civil society**.
- Raise awareness about respect for human rights, non-discrimination, tolerance and understanding of other cultures and religions, as well as gender equality, including in the digital world.
- We should promote intercultural, interfaith and interreligious dialogue and mutual understanding.
- **Citizens' support must be used to address, counter and mitigate the impact of hate speech, as well as counteract its bearing, without restricting the right to freedom of expression**.

Way Forward

- Hate speech must be condemned and the law must take action. It must be treated as a violent act.
- **The Law Commission recommended the introduction of new provisions within the Indian Penal code that specifically punish provocation to violence in addition to the existing ones.**
- **Addressing hate speech requires a coordinated response that tackles the root causes and drivers of hate speech, as well as its impact on victims and societies more broadly**.
- Tackling hate speech is the responsibility of all – governments, societies, and the private sector, starting with individual women and men. All are responsible, all must act.
- **Hate Speech promotes hatred and rift in our society; it hurt the socio-economic development of the country and also goes against the secular spirit of the Indian Constitution.**
- The Indian Constitution envisages Bharat as a secular nation and fraternity assuring the dignity of the individual and unity and integrity of the country is the guiding principle enshrined in the Preamble. There cannot be fraternity unless members of the community drawn from different religions or castes of the country can live in harmony.

APTI PLUS

CORPORATE SOCIAL RESPONSIBILITY

GS-II GOVERNANCE

In News

- Since the establishment of the Corporate Social Responsibility (CSR) rule, **CSR spending in India has increased from Rs. 10,065 crores in 2014-15 to Rs. 24,865 crores in 2020-21.**
  - There is no data to verify whether this increase is the result of the increase in profits of companies.
- There were 2,926 companies in 2020-21 with zero spend on CSR.
- Companies spending less than the prescribed limit of 2% increased from 3,078 in 2015-16 to 3,290 in 2020-21.
- A decline in the number of companies participating in CSR; from 25,103 in FY2019 to 17,007 in FY2021.
- An analysis of CSR spending (2014-18) shows that most CSR spending is in education (37%) and health and sanitation (29%),

Corporate Social Responsibility (CSR)

- Corporate Social Responsibility (CSR); Corporate initiative to take promote Socioeconomic welfare and also promote positive environmental change.
- **India is the first country in the world to enshrine corporate giving into law.**
- Under the Companies Act of 2013; a company need to spend a **minimum of 2% of the** average net profits of the last 3 years on CSR activities as specified in the Schedule VII of the act if the company comes under these categories;
  - Rs 500 crore or more net worth.
  - Rs 1000 crore or more turnover.
  - Rs 5 crore or more net profit.
- The CSR Rules apply to branch and project offices of a foreign company in India.
- **If a company did not spend a specified CSR amount, it has to disclose the reason.**
  - Non-disclosure of the details will be penalised with Rs 50,000 to Rs 25 lakh and imprisonment of up to 3 years.

Related news

- The Corporate Affairs Ministry has amended the rules for Corporate Social Responsibility (CSR) expenditure by Indian companies. Some of the key changes.
- The Corporate Affairs Ministry has amended the rules for Corporate Social Responsibility (CSR) expenditure by India Inc to **allow companies to undertake multi-year projects.**
- It also requires that all CSR implementing agencies be registered with the government.
- All companies with a net worth of Rs 500 crore or more, a turnover of Rs 1,000 crore or more, or a net profit of Rs 5 crore or more, are required to spend 2% of their average profits of the previous three years on CSR activities every year.
  - The amended CSR rules allow companies to **set off CSR expenditure above the required 2% expenditure in any fiscal year against required expenditure for up to three financial years**.
- A large number of companies conduct CSR expenditures through implementing agencies, but the new amendment restricts companies from authorizing either a Section 8 company or a registered public charitable trust to conduct CSR projects on their behalf.
  - A Section 8 company is a company registered to promote charitable causes, applies profits to promoting its objectives and is prohibited from distributing dividends to shareholders.
- The change would impact the CSR programmes of a number of large Indian companies that conduct projects through private trusts.
- The change would mean such private trusts would either have to be converted to registered public trusts or stop acting as CSR implementing agencies "given that a sizeable amount of CSR is being contributed through their private trusts by many companies, including blue-chip companies."
- The **amended rules require that any corporation with a CSR obligation** of Rs 10 crore or more for the three preceding financial years would be required to hire an independent agency to conduct an impact assessment of their entire project with outlays of Rs 1 crore or more.
- Companies will be allowed to count 5% of the CSR expenditure for the year up to Rs 50 lakh on impact assessment towards CSR expenditure.

Concern

- An analysis of CSR spending (2014-18) shows that **only 9% was spent on the environment**.
- The main issue with the present design is that **it focuses mainly on output rather than the quality of the expenditure and its impact.**
- Parliamentary Standing Committee on Finance also observed that the information regarding CSR spending by companies is insufficient and difficult to examine.

Way Forward

- There is a **need to create a national-level centralized platform** where all States could list their potential CSR-admissible projects so that companies can assess where their CSR funds would be most impactful.
- Companies need to **priorities environmental restoration** in the area where they operate.
- CSR projects must be selected and implemented with the involvement of communities, district administration and public representatives.

PM-DevINE

GS-II GOVERNANCE

In News

- The **Union Cabinet has approved Prime Minister's Development Initiative for North East Region (PM-DevINE) for the remaining 4 years of the 15th Finance Commission (2022-23 to 2025-26).**

About Prime Minister's Development Initiative for North East Region (PM-DevINE)

- PM-DevINE initiative was **announced in the Union Budget 2022-23, to address development gaps in the North Eastern Region (NER).**
- It is a **Central Sector Scheme with 100% central funding** and implementation by the Ministry of Development of the North Eastern Region (DoNER).
  - It will be implemented through North Eastern Council or Central Ministries/ agencies.
- The Scheme will have an outlay of Rs.6, 600 crores for the four years from 2022-23 to 2025-26.
- It will **create infrastructure, support industries, social development projects and create livelihood activities for youth and women, thus leading to employment generation and socio-economic development in the North-East region.**

Objectives of PM-DevINE

- To Fund infrastructure and create new economic opportunities.
- Support social development projects based on local needs.
- Provide livelihood activities for youth and women;
- Fill the development gaps in different sectors.
- To ensure that there is no duplication of project support under PM-DevINE with any of the other schemes of MDoNER or those of any other Ministry/Department.

Concern

- **Geographical challenges:** Very high rainfall, shifting river courses, poor drainage systems, and landslides in the North East.
  - Inaccessible Hilly terrain and underdeveloped transport.
- **Low participation of the Private sector** due to geographical and political reasons.
- Large scale Migration from Bangladesh resulted in socioeconomic and socio-Political problems
- Poor financial condition and lack of development increased their dependence on central devolution.
- The poor state of basic infrastructural facilities like roadways, railways, educational institutions, health facilities etc.

Steps taken by the Government

- **The Union Government established the Ministry of Development of North East Region (MDoNER) in 2001.**
  - It deals with matters related to the socio-economic development of the Northeast region.
  - It promotes coordination between Central Ministries/ Departments and the State Governments.
- **NITI Forum for North East** to promote inclusive and sustainable economic growth and to recommend appropriate interventions for the development of the Northeast.
- **North East Special Infrastructure Development Scheme** to create infrastructure to ensure water supply, power connectivity, education and health.
- **North-East Industrial Development Scheme (NEIDS) to promote** MSME Sector.
- **Act East Policy** to connect the Northeast with the East Asian countries to promote development.
- Government **Increased Infrastructure Investment in the region through various schemes.**
- Increase air connectivity to the Northeast Region.

APTI PLUS

REGULATION OF ONLINE GAMING

GS-II GOVERNANCE

In News

- A **task force set up by the Ministry of Electronics and Information Technology has prepared a final report of its recommendations to regulate the online gaming industry in India.**
- For this, it has proposed the **creation of a central regulatory body for the gaming sector**, clearly defining what games of skill and chance are, and bringing online gaming under the purview of the Prevention of Money Laundering Act, 2002, among other things.

What is the need for a Central level Law?

Failure of State Governments

- **Online gaming so far has been a state subject**, but state governments have said they find it extremely difficult to enforce certain rules like geo-blocking certain apps or websites within the territory of their state.
- Also, there is a concern that rules passed in one state are not applicable in another, which has caused inconsistency in how the online gaming industry is regulated in the country.
- **State governments also do not have enough blocking powers** like the Centre to issue blocking orders for offshore betting sites.

Suicides

- Stakeholders have highlighted several societal concerns that can arise from the proliferation of online games in the country. There have **been several reported incidents of people losing large sums of money on online games, leading to suicides in various parts of the country.**

Impact of gaming on health

- Research shows that **gaming disorders can also be linked with anxiety, depression, obesity, sleeping disorders, and stress.**
- People, who remain physically inactive for long periods because of gaming may also be at higher risk of obesity, sleep disorders, and other health-related issues.
- While time spent online is still not as high as in other countries, almost a quarter of adult Indian gamers had missed work while playing games during this pandemic.
- **Gaming addictions cause physical, social and emotional damage, impairing sleep, appetites, careers and social lives.**

Lack of Regulatory Framework

- There is **currently no regulatory framework to govern various aspects of online gaming companies** such as having a grievance redressal mechanism, implementing player protection measures, protecting data and intellectual property rights, and prohibiting misleading advertisements.
- For online gaming businesses, the inconsistency has led to uncertainty. The thinking within the government is to have a nodal agency that will address all issues related to online gaming, including introducing a uniform law to determine what forms of online gaming are legally allowed.

Recommendations of the task force

Central-level law for online gaming

- According to the Task Force's Report, **a central-level law for online gaming should apply to real money and free games of skill**, including e-sports, online fantasy sports contests, and card games among others.
- Casual games with no real money element in the form of stakes may be kept outside the scope of such rules, unless they have a high number of users in India, or permit the publication or transmission of information in the nature of any inappropriate content like violence, nudity, addictive content or misleading content.

The regulatory body for the online gaming industry

- It has also recommended **creating a regulatory body for the online gaming industry, which will determine what qualifies as a game of skill or chance**, and accordingly certify different gaming formats, seek compliance and enforcement.

The three-tier dispute resolution mechanism

- **A three-tier dispute resolution mechanism, similar to that prescribed under the Information Technology Rules, 2021** for online streaming services, consisting of a grievance redressal system at the gaming platform level, a self-regulatory body of the industry, and an oversight committee led by the government should be put in place for online gaming.

'Reporting Entities' under the Prevention of Money Laundering Act, 2002,

- **Any online gaming platform – domestic or foreign– offering real money online games to Indian users will need to be a legal entity incorporated under Indian law**. These platforms will also be treated as 'reporting entities' under the Prevention of Money Laundering Act, 2002, and will be required to report suspicious transactions to the Financial Intelligence Unit-India.

Which ministry will be in charge of the regulation?

- The **task force has suggested that the Ministry of Electronics and Information Technology (MeitY) may act as the nodal ministry to regulate online gaming**, except for the e-sports category on which the Department of Sports can take the lead.
- The scope of the regulation by MeitY should only cover online gaming, that is, games of skill, and the issues of online betting and gambling being games of chance in nature should be excluded from its scope.
- **Certain other aspects of online gaming such as advertisements, code of ethics relating to content classifications etc. could be regulated by the Information and Broadcasting Ministry**, while the Consumer Affairs Ministry can regulate the sector for unfair trade practices.

What did the task force say about offshore betting apps?

- On the aspect of prohibiting games of chance, gambling websites or apps being played online, **the proposed Digital India Act can include it in the list of prohibited user harms that will not be permitted,** the task force has said.
- Many offshore betting and gambling websites which are illegal in India have become popular among Indian users. Despite being based outside India, some of these websites are widely advertised in Indian newspapers and TV channels, and allow users to transact in Indian rupees through popular digital payment modes such as internet banking, UPI and popular wallets," the task force is learnt to have said in its report.

Online Gaming Market in India

- A 2019 survey by the U.S.-based Limelight Networks found that India had the second-largest number of gamers after South Korea.
- The revenue of the Indian mobile gaming industry is expected to exceed $1.5 billion in 2022 and is estimated to reach $5 billion in 2025.
- The industry in the country grew at a CAGR of 38% between 2017-2020, as opposed to 8% in China and 10% in the US.
- It is expected to grow at a CAGR of 15% to reach Rs 153 billion in revenue by 2024. India's percentage of new paying users (NPUs) in gaming has been the fastest growing in the world for two consecutive years, at 40% in 2020 and reaching 50% in 2021.
- According to a report by the Federation of Indian Chambers of Commerce & Industry (FICCI), transaction-based games' revenues grew 26% in India, with the number of paying gamers increasing by 17% from 80 million in 2020 to 95 million in 2021.
- In India, **there has been a rise in the gaming industry, as well as recognition by the government of the benefit of revenue by investing in the gaming industry leading to the development of draft guidelines for the regulation of games such as the "Online fantasy sports platforms" in India.** There are also plans to set up a Center of Excellence for Gaming. However, how these guidelines and centres of excellence will have an impact on problematic Internet use needs to be examined further.
- Government policies restrict the timings children and adolescents indulge online, especially in gaming, for example, the "gamer guard" policy in Thailand, "fatigue system" policy in China, and the "shut down" policy in South Korea.
- Harm reduction initiatives concerning Internet addiction involve displaying warning messages and restrictions on advertisements or gaming, regulation of product development, etc.
- There is also a need for multisectoral coordination – there should be the involvement of public health experts, behavioural addiction experts, and experts from the department of education, information, and technology to promote responsible Internet use.
- The **setting up of a Central Level Regulatory Body as envisaged by the Task Force is a step in the right direction.**

Way Ahead

- **Many countries — including Australia, China, Japan, India, Italy, Japan, Korea and Taiwan— already officially recognize tech addiction as a disorder**, some even going so far as to declare the issue a public health crisis, leading governments and healthcare providers to develop a series of major initiatives to curb the problem. India needs to take a cue from them.
- The live streaming of unauthorized video games was banned in China, signaling stricter enforcement of rules as part of its broad crackdown on the gaming industry aimed at purging content the government does not approve of.
- Awareness needs to be generated among the youth and their parents about internet addiction and educate them about the use of the internet in a responsible manner.

APTI PLUS

WORLD BANK'S REPORT ON GLOBAL POVERTY

GS-II GOVERNANCE

In News

- According to a new World Bank report, titled "Poverty and Shared Prosperity 2022: Correcting Course", the **Covid pandemic has been the biggest setback to global poverty alleviation in decades.**

Details

- The World Bank's Poverty and Shared Prosperity series provide the latest estimates and trends in global poverty and shared prosperity.
- **Poverty and Shared Prosperity is a biennial series that explores a central challenge to poverty reduction and boosting shared prosperity, assessing what works well and what does not in different settings**. By bringing together the latest evidence, this corporate flagship report provides a foundation for informed advocacy around ending extreme poverty and improving the lives of the poorest in every country in the world.
- The 2022 edition provides the first comprehensive look at the landscape of poverty in the aftermath of an extraordinary series of shocks to the global economy.

Findings of the Report

- The **world is unlikely to meet the goal of ending extreme poverty by 2030** absent history-defying rates of economic growth over the remainder of this decade.
- COVID-19 dealt the biggest setback to global poverty-reduction efforts since 1990 and the war in Ukraine threatens to make matters worse.
  - The pandemic pushed about 70 million people into extreme poverty in 2020, the largest one-year increase since global poverty monitoring began in 1990. As a result, an estimated 719 million people subsisted on less than $2.15 a day by the end of 2020.
- **2020 marked a historic turning point**—when the era of global income convergence yielded to divergence. The poorest people bore the steepest costs of the pandemic: income losses averaged 4% for the poorest 40%, double the losses of the wealthiest 20% of the income distribution. Global inequality rose, as a result, for the first time in decades.
- **The new report is the first to provide current and historical data on the new global extreme-poverty line**, which has been adjusted upward to $2.15 a day to reflect the latest 2017 purchasing-power-parity data.
- Extreme poverty fell dramatically across the world from 1990 through 2019, the latest year for which official data are available. But progress slowed after 2014, and policymakers now confront a tougher environment: Extreme poverty is concentrated in parts of the world where it will be hardest to eradicate—in Sub-Saharan Africa, in conflict-affected areas and rural areas.
- **Sub-Saharan Africa now accounts for 60% of all people in extreme poverty—389 million, more than any other region.** The region's poverty rate is about 35%, the world's highest.
- Government spending and emergency support helped avert even bigger increases in poverty rates, the report showed, but the economic recovery had been uneven, with developing economies with fewer resources spending less and achieving less.

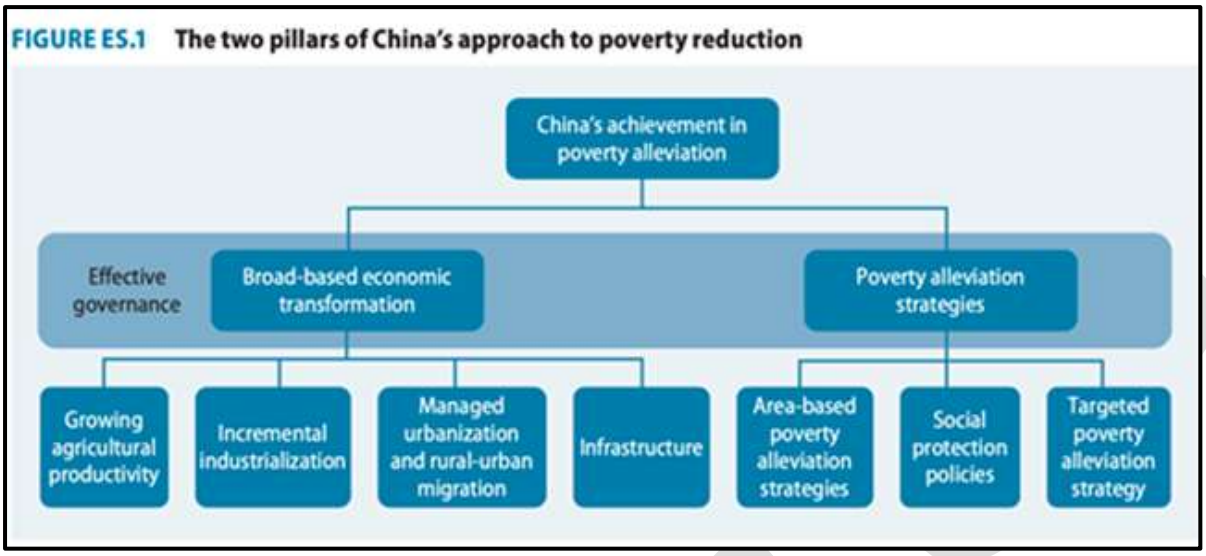
Status of Poverty in India

- The **World Bank in its latest report has used a consumption survey; According to this update on Indian poverty, the new poverty line is $2.15 per day.**
  - In other words, anyone living on less than $2.15 a day is considered to be living in extreme poverty. About 648 million people globally were in this situation in 2019.
  - This international poverty line is revised periodically to account for rising prices of goods and services over time.
  - According to the report, India still has the largest number of poor people worldwide at 22.8 crores, followed by Nigeria at 9.6 crores.
- **Nearly 600 million Indians survive at less than $3.65 (Rs 84) a day level of expenditure.**

Learning from China

- The World Bank found that **between 1978 and 2019, China's poverty headcount dropped from 770 million to 5.5 million people.**
  - China lifted 765 million (76.5 crores) people from extreme poverty in the last four decades.
- **In China, Rapid economic growth, supported by economic transformation, provided new economic opportunities for the poor and raised their average incomes and improved their standard of living**.
  - Reforms introduced in the agricultural sector benefited people directly from productivity improvements.
  - The development of low-skilled, labour-intensive industries provided a source of employment for workers released from agriculture.

- Urbanization helped migrants take advantage of the new opportunities in the cities, and migrants transferred their incomes to the villages.
- Public investment in infrastructure improved living conditions in rural areas and also connected them with urban and export markets.



Way Forward

- **Countries should boost cooperation**, avoids broad subsidies, focus on long-term growth and adopt measures such as property taxes and carbon taxes that could help raise revenue without hurting the poorest people.
- **National policy reforms can help restart progress in reducing** poverty, the report finds. Stepped-up global cooperation will also be necessary. In fiscal policy, governments should act promptly on three fronts:
- **Avoid broad subsidies, and increase targeted cash transfers**: Half of all spending on energy subsidies in low- and middle-income economies go to the richest 20% of the population who consume more energy. Cash transfers are a far more effective mechanism for supporting poor and vulnerable groups.
- **Focus on long-term growth: High-return investments in education, research and development, and infrastructure projects need to be made today**. In a time of scarce resources, more efficient spending and improved preparation for the next crisis will be key.
- **Mobilize domestic revenues without hurting the poor. Property taxes and carbon taxes can help raise revenue without hurting the poorest**. So can broaden the base of personal and corporate income taxes. If sales and excise taxes do need to be raised, governments should minimize economic distortions and negative distributional impacts by simultaneously using targeted cash transfers to offset their effects on the most vulnerable households.

BETI BACHAO BETI PADHAO SCHEME

GS-II SOCIAL JUSTICE

In News

- The Union Government announced the **inclusion of the skilling of girls in non-traditional livelihood (NTL) under the 'Beti Bachao Beti Padhao' scheme.**
- The scheme will now also focus on increasing the enrolment of girls in secondary education, particularly in STEM (Science, Technology, Engineering, Mathematics) subjects.

Background

- The Census of 2011 reflects a declining trend in the Child Sex Ratio (CSR) between 0-6 years with an all-time low at 918.
- **A decline in CSR reflects:**
  - Pre-birth discrimination through gender-biased sex selection.
  - Post-birth discrimination against girls (in form of their health, nutrition, and educational needs).

BetiBachaoBetiPadhao (BBBP) programme

- In 2015, the Union Government has launched the BetiBachaoBetiPadhao (BBBP) programme.
- **It is a tri-ministerial effort of;**
  - Ministry of Women and Child Development.
  - Ministry of Health & Family Welfare.
  - Ministry of Education (Earlier Ministry of Human Resource Development).
- Since 2021 the Ministry of Skill Development and Entrepreneurship and the Ministry of Minority Affairs have also been added as partners.
- The programme **only focuses on awareness campaigns and no provision of individual cash transfers by the Government.**
- The scheme is **now subsumed into Mission Shakti.**
- **Objectives of the Scheme;**
  - Prevent gender-biased sex selective elimination.
  - Ensure the survival and protection of the girl child.
  - Ensure the education and participation of the girl child.
  - Increase girls' participation in the fields of sports.
- **The scheme aims to achieve:**
  - Improvement in the Sex Ratio at Birth (SRB) by 2 points every year,
  - Improvement in the percentage of institutional deliveries sustained at the rate of 95% or above.
  - 1% increase in enrolment at the secondary education level and skilling of girls/women per year.
  - To check the dropout rate among girls at secondary and higher secondary levels.
  - Raising awareness about safe menstrual hygiene management (MHM)
- The Union Government is implementing several schemes/programs to ensure welfare, rehabilitation, empowerment, education and generating employment opportunities for women
- **SwadharGreh Scheme** aims to provide shelter, food, clothing, counselling, training, clinical and legal, and rehabilitation in difficult circumstances; homeless due to family discord, crime, violence, mental stress, social ostracism or being forced into prostitution, etc.
- A Home for widows has been set up in Vrindavan, Uttar Pradesh to provide a safe place to stay, health services, nutritious food, and legal and counselling services.
- **BetiBachaoBetiPadhao,** to address the declining Child Sex Ratio**.**
- **PM MatruVandanaYojana (PMMVY)** Providing Cash incentives for improved health and nutrition to pregnant and nursing mothers**.**
- **Scheme for Adolescent Girls** aims at girls in the age group 11-18, to empower and improve their social status through nutrition, life skills, home skills and vocational training
- **Pradhan MantriMahila Shakti Kendra Scheme** to promote community participation through the involvement of Student Volunteers for the empowerment of rural women
- **National Creche Scheme** to provide daycare facilities to children of the age group of 6 months to 6 years of working women who are employed.
- **RashtriyaMahilaKosh (RMK)** to provide micro-credit to poor women for various livelihood support and income-generating activities at concessional terms.
- **Ujjawala**is a Comprehensive Scheme for the prevention of trafficking and rescue, rehabilitation, reintegration and repatriation of victims of trafficking for commercial sexual exploitation.
- **Working Women Hostels** for ensuring safe accommodation for women working away from their place of residence.

- **One-Stop Centre (OSC) and Women Helpline (WH)** are being implemented to facilitate access to an integrated range of services including medical aid, police assistance, legal aid/ case management, psychosocial counselling and temporary support services to women affected by violence.
- **The gender Budgeting Scheme** is being implemented as a tool for mainstreaming gender perspective at various stages of planning, budgeting, implementation, impact assessment and revisiting of policy/programme objectives and allocations.
- **Panic Button** on Mobile Phones**.**
- **Emergency Response Support System** Set up under Nirbhaya Fund.
- **Mahila Police Volunteers,** to report the incidences of violence against women.
- Inclusion of Acid Attack as a disability**.**
- Training for Women Heads of Panchayats.
- **Extending Maternity Leave** duration From 12 weeks to 26 weeks.
- **RashtriyaMahilaKosh,** Providing micro-credit to Poor women through NGOs, SHGs**.**
- **Mahila e-Haat,** online digital marketing Platform for women.
- **New Passport Rules,** Submission of the father's name is not mandatory and Does not need to submit her/his marriage/divorce Certificates**.**
- **The dowry Prohibition Act, of 1961,** Penalizes Giving and taking.
- SABLA Scheme, Provides life Skills and Supplementary nutrition to out-of-school girls.
- Sexual Harassment electronic-Box (SHe-Box)**.**
- **The national database on Sexual offenders** includes the name, addresses, photographs and fingerprint details of those Convicted in Sexual assault Cases.

CHILD MARRIAGE FREE INDIA CAMPAIGN

GS-II SOCIAL JUSTICE

In News

- **Nobel Peace Laureate Kailash Satyarthi has launched a nationwide campaign against child marriage.**
  - He requested Citizens to start collective action against child marriage.
- The Kailash Satyarthi Children's Foundation (KSCF) leading the campaign.
- 70,000 women and girls led people in lighting lamps, and torchlight processions in around 10,000 villages from over 500 districts in 26 states, as part of the campaign.
- **The campaign has three main objectives:**
  - To ensure the strict implementation of the law.
  - To enhance the participation of children and women and to ensure their empowerment by providing them with free education till the age of 18.
  - To provide safety to children against sexual exploitation.

Child Marriage

- As per Census 2011, over 12 million child marriages were reported in the country.
- Child Marriage is defined as a marriage of a girl or boy before the age of minimum legal age (18 years).
- **The reason behind Child Marriage**
  - It is a widely practised social custom.
  - Poverty and Illiteracy of a Child's parents.
  - Social and Economic Condition of the family including the Cultural values of the family and the Surrounding Society.
  - Lack of awareness about the harmful effects of Lack of easy access to Schooling.
  - Political Patronage: Due to Social acceptance politicians find it difficult to oppose the practice of child marriage as it may mean losing votes and Support.
- **Child marriage is also widely reported to be used to traffic girls from poor and tribal families for either the Sex trade or as cheap labour**.
- It is more prevalent in rural areas.
- **Rates of Child marriage are highest in the Central and Western parts of India and lower in the eastern and southern parts of India.**
- **Result of Child Marriage;**
  - It Restricts access to education and better opportunities in the future.
  - It limits the freedom of decision and promotes socio-economic and gender inequality.
  - It is associated with multiple health risks, limited Knowledge and access to, and use of, Contraception and reproductive health services and information.

Prohibition of Child Marriage (Amendment) Bill 2021

- According to the National Family Health Survey 2019-21 (NFHS-5), 23% of women between the age of 20 and 24 were married before 18 years of age.
- **In India, the practice of child marriage was first legally prohibited in 1929 through the Child Marriage Restraint Act, of 1929.**
  - **As per the 1929 Act, marriage of girls below the age of 14 years and boys below the age of 18 years was prohibited**.
  - This Act was amended in 1978 to increase the minimum age to 18 years for females, and 21 years for men.
- The Prohibition of Child Marriage Act, of 2006 replaced the 1929 Act, with the same minimum age limits.
- **The Prohibition of Child Marriage (Amendment) Bill, 2021 seeks to increase the minimum age of marriage for females to 21 years.**
- The Bill was referred to the Standing Committee on Education, Women, Children, Youth, and Sports on December 21, 2021.
- The Bill was introduced to amend the Prohibition of Child Marriage Act, of 2006.
- The main objective is to increase the minimum age of marriage for females to 21 years.
- **Under the 2006 Act, a person married below the minimum legal age (18 years) may apply for dissolution within two years of reaching majority (before 20 years of age**).
  - The 2021 Bill is going to increase this to five years (23 years of age).
  - Repeated pregnancies and Childbirth before they are physically mature and psychologically ready.
  - In domestic violence, women feel powerless and lack access to vital resources and decision-making power.

Significance of the Bill

- **Increasing the minimum age of marriage for females to 21 years, ensures gender equality, as the legal marriage age for males is already 21 years,** different ages of marriage promote the Stereotype that wives must be younger than their husbands.
- The Bill increases the minimum age of marriage for females to 21 years. This signifies that a person married between 18 and 21 years may also apply for voiding the marriage.
- Increasing the age of marriage will help in achieving various goals **including improvement of maternal and infant mortality rates (IMR and MMR), nutrition levels, the sex ratio at birth (SRB), female labour force participation, and gender equality, and will lead to the empowerment of women.**

Concern

- **About a quarter of 20-24-year-old women are married before the age of 18 years, despite that being the minimum age of marriage since 1978**.
  - The limited success of the current law raises the question of whether an increase in the minimum age would have any significant impact on reducing the incidence of child marriage.
- **According to NFHS-5 (2019-21)**, the prevalence of underage marriages remains high, with 23% of women between 20 and 24 years of age married before the age of 18. At the same time, the detection of such marriages remains low, with only 785 cases registered under the law in 2020.
  - This raises the question of whether the increase in the minimum age would have any significant impact on reducing child marriages.
- **Increasing the legal age for marriage for women will increase the number of marriages performed underage and render young adults without legal protection.**

Steps by Government

- BetiBachaoBetiPadhao to address the declining Child Sex Ratio.
- **PM MatruVandanaYojana (PMMVY) Providing Cash incentives** for improved health and nutrition to pregnant and nursing mothers.
- **Scheme for Adolescent Girls aims at girls in the age group 11-18, to empower and improve their social status through nutrition, life skills, home skills and vocational training**
- Pradhan MantriMahila Shakti Kendra scheme promotes community participation through the involvement of Student Volunteers for the empowerment of rural women
- **National Crèche Scheme to provide daycare facilities to children of the age group of 6 months to 6 years of working women who are employed.**
- RashtriyaMahilaKosh (RMK) to provide micro-credit to poor women for various livelihood support and income-generating activities at concessional terms
- SwadharGreh provides relief and rehabilitation to destitute women and women in distress.
- **Ujjawala is a Comprehensive Scheme for the prevention of trafficking and rescue**, rehabilitation, reintegration and repatriation of victims of trafficking for commercial sexual exploitation.
- Working Women Hostels for ensuring safe accommodation for women working away from their place of residence.

- **One-Stop Centre (OSC) and Women Helpline (WH)** are being implemented to facilitate access to an integrated range of services including medical aid, police assistance, legal aid/ case management, psychosocial counselling and temporary support services to women affected by violence.
- Emergency Response Support System set up under Nirbhaya Fund.
- Mahila Police Volunteers, to report the incidences of violence against women.
- **The dowry Prohibition Act, of 1961, Penalizes Giving & taking.**
- SABLA Scheme, Providing life Skills and Supplementary nutrition to out-of Schoolgirls.
- The national database on Sexual offenders includes the name, addresses, photographs and fingerprint details of those Convicted in Sexual assault Cases.
- **National Policy for Women, 2016**
  - **Addresses women's issues throughout life-Cycle, issues from education, health, economic participation, decision making, violence, Creation of an enabling environment etc**.
- In 2020, the Union government has set up a task force under Ms Jaya Jaitly, it suggested increasing the age of marriage for females to 21.

Way Forward

- **The practice of child marriages is largely due to the overall social customs, tradition, illiteracy, poverty, low status of women in society, and lack of awareness. These issues cannot be tackled by legislative interventions alone.**
- There is a need for improved access to education, skill training and employment opportunities, safety for women and strengthening maternal health services to reduce maternal and infant mortality rates.
- **The issue of raising the age of marriage for women must be supported with measures that help delay underage marriages such as access to education and improving women's safety.**

GLOBAL HUNGER INDEX 2022 — GS-II SOCIAL JUSTICE

In News

- **India ranked 107 out of 121 countries on the Global Hunger Index 2022.** It fares worse than all countries in South Asia barring war-torn Afghanistan.

Global Hunger Index

- The Global Hunger Index (GHI) is a **tool that measures and tracks hunger globally as well as by region and by country,** prepared by European NGOs of Concern Worldwide and Welthungerhilfe. The GHI is calculated annually.
- The index is **based on four indicators; Under-nourishment, wasting, stunting and under-five mortality.**
- While undernourishment represents the share of the population with insufficient caloric intake, child stunting indicates the share of children under age five who have low height for their age, reflecting chronic undernutrition. Child wasting reflects acute undernutrition in children under age five with low weight for their height.
- Each set of GHI scores uses data from 5 years. The 2022 GHI scores are calculated using data from 2017 through 2021.

India's Performance

- **India slipped six places on Global Hunger Index 2022 to take 107th position out of 121 countries ranked.**
- India has been ranked behind all south Asian countries except war-torn Afghanistan.
- **India's score of 29.1** places it in the 'serious' category.
- Neighboring Pakistan, Sri Lanka, Bangladesh, Nepal, and Myanmar have been ranked 99, 64, 84, 81, and 71 respectively – all countries above India. As many as 17 countries have been collectively ranked between 1 and 17 with a score of less than five.
- India's child wasting rate (low weight for height), at 19.3%, is worse than the levels recorded in 2014 (15.1%) and even 2000 (17.15%), and is the highest for any country in the world and drives up the region's average owing to India's large population.
- **Prevalence of undernourishment, which is a measure of the proportion of the population facing chronic deficiency of dietary energy intake**, has also risen in the country from 14.6% in 2018-2020 to 16.3% in 2019-2021. This translates into 224.3 million people in India being considered undernourished out of the total 828 million people undernourished globally.
- India has shown improvement in the other two indicators - child stunting has declined from 38.7% to 35.5% between 2014 and

2022 and child mortality has also dropped from 4.6% to 3.3% in the same comparative period.

- On the whole, India has shown a slight worsening with its GHI score increasing from 28.2 in 2014 to 29.1 in 2022.

Global Scenario

- **44 countries currently have "serious" or "alarming" hunger levels.**
- Globally, progress against hunger has largely stagnated in recent years. The 2022 GHI score of 18.2 for the world is considered "moderate", but 18.2 in 2022 is only a slight improvement from 19.1 in 2014. This is due to overlapping crises such as conflict, climate change, the economic fallout of the COVID-19 pandemic as well as the Ukraine war, which has increased global food, fuel, and fertilizer prices and is expected to "worsen hunger in 2023 and beyond."

PALLIATIVE CARE

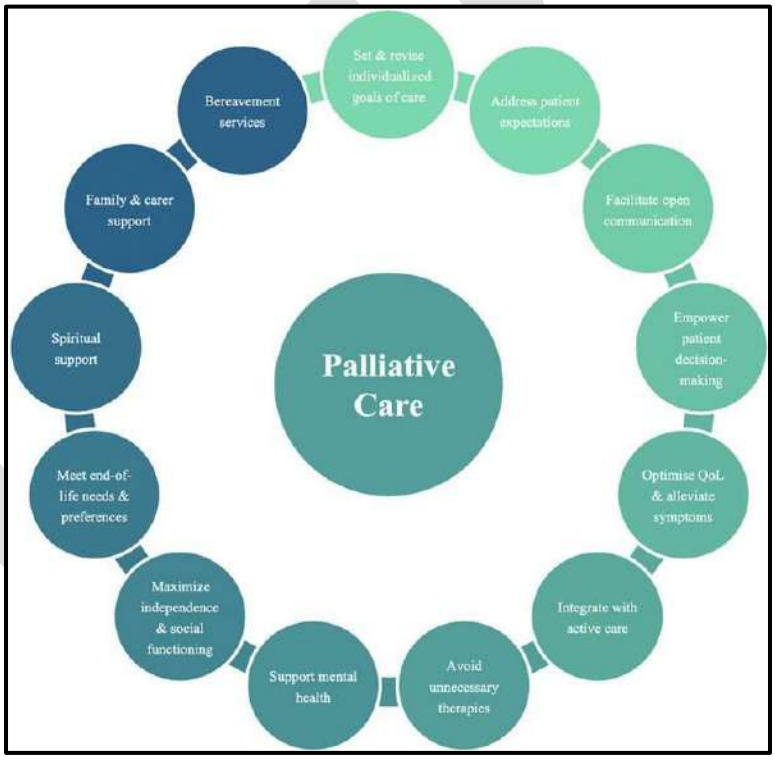
GS-II SOCIAL JUSTICE

In News

- According to the Health Ministry data; **In India, only 1-2% of the population in need of palliative care has access to it as compared to the global average of 14%.**

Palliative Care

- Palliative care is an approach that **improves the quality of life of patients (adults and children) and their families who are facing problems associated with a life-threatening illness**. It prevents and relieves suffering through the early identification, correct assessment and treatment of pain and other problems, whether physical, psychosocial or spiritual.
- **Palliative care is required for a wide range of diseases. The majority of adults in need of palliative care have chronic diseases such as cardiovascular diseases, cancer, chronic respiratory diseases, AIDS and diabetes.** Many other conditions may require palliative care, including kidney failure, chronic liver disease, multiple sclerosis, Parkinson's disease, rheumatoid arthritis, neurological disease, dementia, congenital anomalies and drug-resistant tuberculosis.



The situation in India: Health Ministry Data

- India stands at number three in terms of cancer incidence in the world; most States in the country do not even have to enable legislation or policy to integrate palliative care with treatment offered to cancer patients.
- **Currently, only three States in India (Kerala, Karnataka and Maharashtra) have a palliative care policy**. Kerala, Mizoram, Tamil Nadu, Karnataka, Punjab, and Assam report the highest overall crude incidence rates of cancers which is greater than 130 cases per lakh population.
- In a global comparison for organ-wise incidence, the disease burden for head and neck, breast, cervix and ovary cancers in India is higher if not at par with other countries like China, the U.S. and the UK.
- The state of cancer incidence in the country, the financial burden for cancer treatment is highest compared to all diseases, making it unaffordable for over 80% of the population.
- Medical insurance does not play a significant role in hospice and palliative care provision in India.

Way Forward

- The government needs to undertake efforts to include palliative care packages under reimbursement schemes of the government as well as private insurance plans.
- India needs a systematic approach to improving palliative care. These improvements include increasing the workforce, better application of policies, good political support, and educating health care workers and patients requiring palliative treatment.
- **Each state needs to develop a policy that suits its needs and its social and cultural background**. Community models for the provision of home-based PC need to be implemented all over the country. Empowerment of family members and volunteers to be effective palliative caregivers might prove to be the most realistic approach for meaningful coverage, especially in rural areas.

- There is an acute shortage of trained PC physicians, so clinicians should attend local and national presentations on PC to increase their knowledge base.
- The introduction of palliative medicine into the curriculum of undergraduate education of doctors and nurses is recommended as an efficient way to broaden the base of PC coverage at the national level.
- **Research in PC is very much essential to deliver high-quality palliative care**. Many of the developments like megestrol for cancer cachexia, bisphosphonates for pain in bone metastasis, and opioids for palliation of breathlessness in terminal illness have come from research in palliative care.

ANTI-SUPERSTITIONS LAWS IN INDIA

GS-II SOCIAL JUSTICE

In News

- The recent incident of brutal murders of two women as part of "ritualistic human sacrifices" in Kerala has started a debate about superstitious beliefs and witchcraft in India.

Present Status

- As per the latest report of the National Crime Records Bureau (NCRB), in 2021, a total of 6 deaths were linked to human sacrifices, while witchcraft was the motive for 68 killings.
  - The maximum number of witchcraft cases were reported from Chhattisgarh (20), followed by Madhya Pradesh (18) and Telangana (11).
  - Kerala saw two cases of human sacrifice.
- India saw 88 deaths due to witchcraft and 11 died as part of 'human sacrifices, In 2020 as per the NCRB report.
- According to the **National Crime Records Bureau report of 2021**: Chhattisgarh, Madhya Pradesh and Telangana accounted for 49 out of the 68 registered cases of witchcraft in the country.
- In India**, no Union law criminalizes actions that promote the belief in witchcraft; however, several states had made laws.**

States' law

- **In 1999, Bihar became the first state to introduce a law on the subject.**
  - It defined Witches as women who were thought by society members to possess the power of harming others through the art of black magic, evil eyes, or "Mantras" (chants).
- Bihar passed the Prevention Of Witch Practices Act, of 1999, which provides effective measures to prevent witch practices and identification of a woman as a witch and their oppression mostly prevalent in Tribal areas and to eliminate the woman's torture, humiliation and killing by the society.
  - The act **defined it as a cognizable and non-bailable offence**; meaning a police officer could make an arrest without a warrant, and bail is not automatically given.
  - It has a provision of **jail term** extending up to 3 months or a fine of Rs 1,000 for those who caused harm to a woman by branding her a witch.
- In 2001, Jharkhand also made a law. According to the law **identification of 'witches', lead to horrific crimes against women…including death, inhumane treatment, rape, etc.**
- In Chhattisgarh; Provision of punishment of up to 3 years of jail for identifying any person as a witch.
- The **Maharashtra Prevention and Eradication of Human Sacrifice and other Inhuman, Evil and Aghori Practices and Black Magic Act, 2013** criminalizes practices related to black magic, human sacrifices, the use of magic remedies to cure ailments and other such acts which may exploit people's superstitions.
- Odisha passed a law in 2013 to **provide effective measures to tackle the menace of witch-hunting.**
- **Karnataka Prevention and Eradication of Inhuman Evil Practices and Black Magic Act, 2017** bans several practices related to black magic and superstition, like forcing a person to walk on fire at religious festivals and the practice of piercing rods from one side of the jaw to the other.
- In 2018, Assam passed a law to **prevent the sharing of harmful information and to ensure the protection or shelter home the possible victims.**

Way Forward

- Witch-hunting and superstition-related crimes violate basic fundamental rights guaranteed under Articles 14, 15, and 21 of the Indian Constitution.
- These acts also violate provisions of several International legislations to which India is a signatory, such as;
  - Universal Declaration of Human Rights, 1948.
  - International Covenant on Civil and Political Rights, 1966.
  - The Convention on the Elimination of All Forms of Discrimination against Women, 1979.
- **Illiteracy, misleading information, Orthodox and** superstitious mindset of the people are the main reasons behind this evil practice.
- **Strict implementation of the law and promotion of education and social awareness could help us to get rid of this social evil.**

INDIA- U.S TIES

GS-II INTERNATIONAL RELATIONS

Context

- External Affairs Minister S Jaishankar during a press briefing said that the **relationship between India and US today impacts the rest of the world** as there are a lot of countries which look to the association individually and bilaterally and hope for solutions which the world is searching for in many aspects.
- On his visit to US, **with United States Secretary of State Antony J Blinken by his side, External Affairs Minister S Jaishankar declared, "I am very bullish about the [Indo-US] relationship."**
- Only the previous day, Jaishankar had remarked that the US decision to provide a $450-million sustenance package for Pakistan's ageing F-16 fleet was "not fooling anybody".
- Recently, US Ambassador to Pakistan visited PoK.

Details

- It would appear that Jaishankar had had a change of heart within 24 hours. In fact, such divergences are now routine in the deepening bilateral relationship.
- So with Jaishankar listening, Blinken said it was Washington's "obligation" to provide military equipment to ensure that Pakistan's F-16s are kept capable to deal with "clear terrorist threats" from al-Qaeda and the Islamic State.
- As the countries navigate choppy geopolitical waters in the aftermath of the Russian invasion of Ukraine, the relationship is being put through a "stress test".

Evolution over two decades

- Following the nuclear tests of May 1998, as much of the western world came down heavily on India, Prime Minister Atal Bihari Vajpayee wrote to President Bill Clinton, putting China in the frame.
- While the tests were a temporary setback, "by the turn of the century, India's relations with the US and the West, in general, had begun to crystallize into a mutually beneficial and substantive relationship
- The rapprochement and subsequent strengthening of bilateral ties was a major geopolitical shift in the new millennium.
- Talks between then External Affairs Minister Jaswant Singh and US Deputy Secretary of State Strobe Talbott led to President Clinton's historic visit of March 2000, and the Indo-US nuclear deal of the George W Bush years elevated Indo-US ties to a higher strategic trajectory.
- Obama became the only President to make two visits to India, and he hosted both Prime Ministers Manmohan Singh and Modi in the White House.
- Despite President Donald Trump's unpredictability, ties continued to improve, the Quad framework was revived, and the defence partnership was strengthened with the signing of the foundational agreements.
- Trump visited India, one of his last visits overseas before the pandemic shut down much of the world.
- Under President Joe Biden, the rhythm has been maintained, especially on the Indo-Pacific strategy — even though the chaotic US exit from Afghanistan last year left New Delhi vulnerable at a time when it was already facing a challenge on the LAC.

Current geopolitical context

- **Russia's invasion of Ukraine has tested the relationship like never before**. India's refusal to criticise Moscow's war has made New Delhi's allies in Europe deeply uncomfortable and caused a fair bit of consternation in Washington and other Western capitals.
- **So when Prime Minister Narendra Modi told President Vladimir Putin that "today's era is not of war", the US was pleased with the formulation and its articulation in full public glare.**
- **The US has been unhappy that India has been buying more oil from Russia than earlier.** India argues that it must protect its citizens from the inflationary impact of the war.
- While Washington did brief New Delhi on the F-16 programme, framing it as a continuation of the old programme, not a new one, and necessary for Pakistan to fight terrorism, South Block disagreed both on its optics and substance.
- **Some analysts in New Delhi view the renewal of the US-Pakistan military engagement as a message to New Delhi for its strategy of "issue-based alignment".**
- Also, while senior US officials such as Under Secretary of State Victoria Nuland and Assistant Secretary Donald Lu have made visits to New Delhi, **the absence of a full-time ambassador 20 months after the Biden Administration took charge, has had an impact on ties.**
- Even as they navigate the minor turbulence in their relationship due to the Ukraine war, both India and the US see China as the biggest threat and rival.
- With the recent "no-limits" ties between Russia and China, irritants in the US-India relationship present potential weak spots.

- Every leader since Vajpayee has seen the nations as "natural allies" — and there is no better time to accommodate and invest in the relationship.

Must read: https://www.iasgyan.in/daily-current-affairs/india-us-relations-6

INDIA-UK RELATIONS

GS-II INTERNATIONAL RELATIONS

Context

- **Legal and regulatory impediments in India continue to be a source of "frustration" for investors looking to set up or expand operations in India**, even as land acquisition and "regular delays" in Customs clearances remain problematic, the U.K. India Business Council (UKIBC) has conveyed to the Government of India.

New areas of cooperation

- Both democracies are working cohesively to deter aggressors and are developing **deeper ties between Britain and India in the Indo-Pacific** which would not only result in job creation, but also **foster security in the region.**
- India and U.K. are engaging for **defence-related trade and deepening cyber security and defence cooperation** between the two countries.
- A **new joint cyber security programme** is set to be announced, which aims **to protect online infrastructure in India and the U.K. as both parties attempt to carry out joint exercises** to combat threats from cyber criminals and ransomware.
- India and the U.K. also plan to hold **the first Strategic Tech Dialogue**, a ministerial-level summit on emerging technologies.
- U.K. and India have agreed to **strengthen their cooperation in the maritime domain** as the U.K. will join **India's Indo-Pacific Oceans Initiative** and become a major partner on maritime security issues in Southeast Asia.
- India is a **key strategic partner for the U.K. in the Indo-Pacific** both in terms **of market share and defence**, India has signed the **Defence and International Security Partnership** deal with U.K. in 2015.
  - U.K. is a **regional power in the Indo-Pacific** as it possesses **naval facilities in Oman, Singapore, Bahrain, Kenya, and British Indian Ocean Territory.**
- The U.K. has also confirmed **£70 million of British International Investment** funding to support the usage of **renewable energy in India**, which will help in building renewable energy infrastructure and developing solar power in the region.
- India and the U.K. recently concluded the first round of talks for an **India–U.K. Free Trade Agreement**.
- For Britain, a successful conclusion of an FTA with India would provide a **boost to its 'Global Britain' ambitions** as the U.K. has sought to expand its markets beyond Europe since Brexit.
- Britain has been trying to seize opportunities in the growing economies of the Indo-Pacific to cement its place on the global stage as a serious global actor.
- The newer areas of cooperation — namely **fintech, market regulation, sustainable and green finance, and cyber security** — have emerged as the new frontiers of this engagement.

New trajectory of the India-U.K. relationship

- British Prime Minister is expected to visit India at the end of April.
- The **2030 Roadmap** aims **to double bilateral trade between India and the U.K. by 2030**.
- Both India and the U.K. are engaging in robust dialogues **to promote cooperation on strategic and defence issues** both in the Indo-Pacific as well as at the global level.
- India is evolving as a 'leading power' and the U.K. recalibrates its strategic outlook post-Brexit, which is a unique moment in India-U.K. ties.

Recent developments

- Recently, UK-India signed a trade and investment deal worth 1 billion pounds.

Details of the deal

- It was part of an **Enhanced Trade Partnership (ETP).**
- **ETIP** aim:
- to double the value of UK-India trade by 2030 and declare a shared intent to begin work towards a comprehensive Free Trade Agreement (FTA).
- to address several trade barriers, including the lifting of restrictions to enable fruit producers across the UK to export apples, pears and quince to India for the first time.
- To secure improved access for medical devices through the acceptance of "UK Certificates of Free Sale" in India.

India and UK 2030 vision is for

- revitalized and dynamic connections between people;
- re-energised trade, investment and technological collaboration that improves the lives and livelihoods
- of citizens;

- enhanced defence and security cooperation that brings a more secure Indian Ocean Region and Indo-Pacific
- India-UK **leadership in climate, clean energy and health** that acts as a global force for good.
- Through this ambitious Roadmap, the India-UK relationship will elevate to a Comprehensive Strategic Partnership (CSP).

Free Trade Agreement cooperation will–

- resolve market access issues, boost exports and strengthen trade partnerships across a comprehensive range of areas.
- remove trade barriers through a balanced and beneficial market access package including agriculture, health, education, legal services, marine, and social security
- help to share experience on regulatory reform, tax administration, and trade facilitation and standards through a new UK-India Ease of Doing Business MoU
- institutionalize cooperation between relevant regulators to facilitate exports and avoid trade disruptions due to non-compliance with standards by producers and exporters.
- Increase exchanges and cooperation in the services sector.
- Step up bilateral Small & Medium Enterprises (SME) trade and collaborations, particularly technology sharing and financing of businesses.
- Identify infrastructure projects in India, particularly green transition projects, that utilise UK Export Finance support in the form of long-term competitive financing of up to £4bn, including in Indian Rupees.

Background of India-U.K. economic relations

- **Guiding principle:** The economic and commerce matters of India and U.K. are guided by the India-UK Joint Economic & Trade Committee, Economic and Financial Dialogue and India-UK Financial Partnership.
- **Existing trade balance:** Merchandise trade between the two countries was US$15.45 billion in 2019-20 with the trade balance in favour of India.
- **FDI inflow:**
  - India became the second-largest source of FDI according to the Department for International Trade inward investment statistics for 2019-2020.
  - UK is the 6th largest inward investor in India with a cumulative equity investment of US $28.39 billion, accounting for around 6% of all foreign direct investment into India.
- **Trade basket:**

The main products of export from India to the UK include:

- Articles of apparel & Clothing
- Accessories
- Power Generating Machinery & Equipment
- Petroleum and related products
- Manufactured articles
- Textile Yarn
- Footwear
- Medicinal and Pharmaceutical
- Manufactures of metal
- Road Vehicles
- Transport Equipment

The main products of import from UK to India include:

- Power Generating Machinery & Equipment
- Non-Ferrous Metals, Ferrous ores & Metal scrap
- General Industrial Machinery and Equipment & Machines
- Beverages
- Electrical Machinery and Appliances
- Professional, Scientific and controlling instruments and appliances
- Chemical materials & products

NORD STREAM PIPELINE LEAKS

GS-II INTERNATIONAL RELATIONS

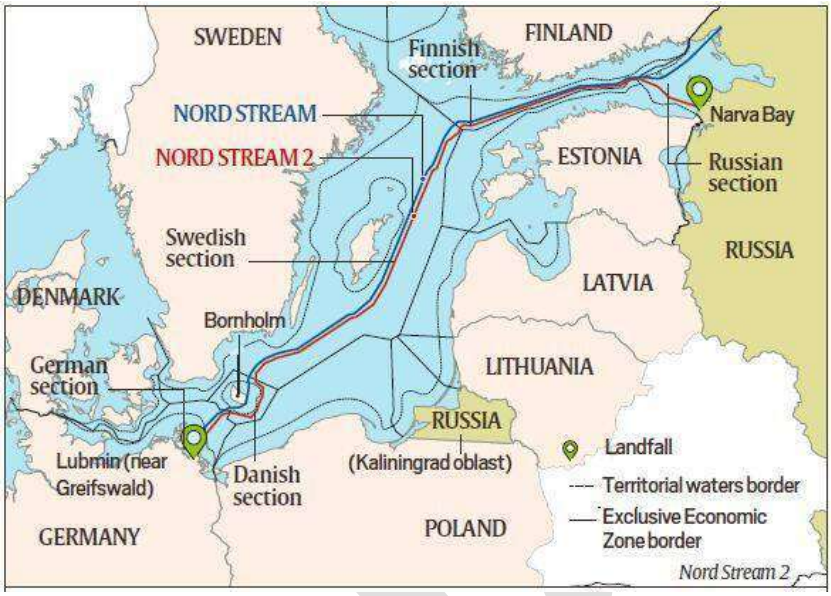
Context

- **Sweden's coast guard said that it discovered the fourth leak in the two damaged offshore pipelines that comprise the crucial Nord Stream pipelines (Nord Stream 1 and Nord Stream 2), designed to carry gas from Russia to Europe via the Baltic sea.**
- The presently unexplained leak is the second of its kind to be discovered in Swedish waters, while two other leaks were found near Denmark earlier this week, Reuters reported.

Details

- **Nord Stream 1 is a 1,224 km underwater gas pipeline running from Vyborg in northwest Russia to Lubmin in northeastern Germany via the Baltic Sea.**
- The majority owned by the Russian energy giant Gazprom, it is the primary network through which gas reaches Germany.
- Most of the gas goes directly to Germany, while the rest travels west and southwards through onshore links to other countries and into storage caverns, according to Reuters.

- **Gazprom and five other European firms decided to build Nord Stream 2 in 2015, valued at around $11 billion.**
- **The 1,200-km pipeline was to run from Ust-Luga in Russia to Greifswald in Germany through the Baltic Sea and carry 55 billion cubic metres of gas per year. It was meant to run along with the Nord Stream 1 system.**
- Germany is Russia's biggest European gas consumer, and most of it comes through the Nord Stream.
- The pipelines have been at the centre of tensions lately. Russia has been accused of leveraging Europe's dependency on its energy, as retaliation against the Western sanctions imposed on it since the Ukraine war began.



- The leaks occurred a day before the ceremonial launch of the Baltic Pipe, which carries gas from Norway to Poland, a project that is part of Poland's attempt to reduce its dependence on Russian energy, according to Reuters.
- While investigations have not yet revealed the cause behind the leaks, leaders from Europe and the United States suspect foul play. They alleged that it was an act of sabotage with three separate leaks and explosions occurring on the very same day.
- While the EU and the United States have stopped short of explicitly blaming Russia so far, Ukraine and Poland have not been so cautious.
- Moscow has, however, called the allegations against it "predictably stupid and absurd", blaming the US and its collaborators for the attacks – a charge Washington has denied.

Who gains from it?

- The EU seems to be an unlikely source, as they would not seek to willingly lose out on their energy source.
- **For the West, Russia would be the likely suspect. Russia has previously reduced its energy exports to Europe in retaliation since the invasion of Ukraine led to sanctions on it.**
- Russia is also under the scanner because the leaks occurred a day before the launch of the Baltic Pipe, which would lessen Poland's dependence on Russian energy.
- **However, as the Nord Stream pipelines are majority controlled by Russia's Gazprom, it is unclear why Moscow would damage the infrastructure it has a majority stake in and spent billions constructing.**
- Europe continues to be heavily dependent on Russian energy and any damage to the pipelines would mean Russia losing its bargaining chip.
- European nations, who want to wean themselves off Russian energy, have increasingly turned towards the US, from whom they purchase liquified natural gas (LNG) that comes via ships.
- **Russia alleges that the US has much to gain from the stoppage of the pipelines, as it can become a larger exporter of energy. However, such an attempt by the United States would carry immense risk and sever the close ties it shares with European countries, especially its own NATO allies.**

INDIA'S DEFENCE PRODUCTION

GS-II INTERNATIONAL RELATIONS

Context

- **India ranks fourth among 12 Indo-Pacific nations in self-reliant arms production capabilities**, according to a study released this month by the Stockholm International Peace Research Institute (SIPRI), a widely respected independent resource on global security.

Details

- China tops the list, Japan is second, South Korea is in third place, and Pakistan is at number 8.
- **The study**, which measures self-reliance until 2020, is based on three indicators of self reliance in each country:
- Arms procurement — imports, licensed and domestic production as a proportion of the government's total procurement of major conventional arms;
- Arms industry — the study presents the five largest arms companies in each country, where data are available, ranked by sales of arms and military services in 2020 to both domestic and export customers;

- Uncrewed maritime vehicles, the sea equivalent of drones – covering both uncrewed surface vehicles (USVs) and uncrewed underwater vehicles (UUVs), meant to provide a qualitative understanding of how countries are engaging domestic research institutes and firms to produce such cutting edge systems.
- The study's choice of maritime domain was because the Indo-Pacific region is a "maritime theatre", and most of its flashpoints involve navies.
- The 12 countries in the study were selected because they have the highest military spending in the region – Australia, China, India, Indonesia, Japan, South Korea, Malaysia, Pakistan, Singapore, Taiwan, Thailand and Vietnam.
- **According to the study, understanding and determining the extent of self-reliance in the Indo-Pacific region, which has several ongoing flashpoints, is crucial for trust and confidence-building among states.**
- This region has also seen a growing allocation by states for defence procurement. Eighteen arms manufacturing companies based in the region were ranked among the world's largest arms companies in 2020.

ARMS EXPORTS & IMPORTS; MILITARY SPENDING IN INDO-PACIFIC REGION

Country	Exporter rank*	Importer rank*	Largest supplier**	Military Spending 2021***	Spending rank****
Australia	3	2	US (69%)	31,754	5
China	1	3	Russia (77%)	293,352	1
India	4	1	Russia (54%)	76,598	2
Indonesia	5	8	US (23%)	8,259	9
Japan	14	6	US (97%)	54,124	3
South Korea	2	4	US (58%)	50,227	4
Malaysia	NA	16	Spain (32%)	3,830	13
Pakistan	13	5	China (72%)	11,305	8
Singapore	7	9	France (43%)	11,115	7
Taiwan	12	15	US (100%)	12,958	6
Thailand	15	10	South Korea (25%)	6,605	10
Vietnam	11	7	Russia (66%)	5,500*****	NA

*Regional rank, 2016-20. Regional ranking is based on 44 jurisdictions in Asia and Oceania as defined in SIPRI databases, **Share of total arms imports, ***Current US$ mn, ****Regional rank, 2021, *****In 2018 NA: Not applicable.
Sources: SIPRI Arms Transfers Database, March 2022; SIPRI Military Expenditure Database, April 2022

- China was the world's fifth largest arms importer in 2016-20.
- **India is ranked as the second largest importer of arms for its armed forces in 2016-20. India is highly dependent on imports of complete foreign major arms, including many produced under licence or as components for its domestic production.**
- Of India's total volume of procurement in 2016–20, 84 per cent was of foreign origin.
- Domestic arms companies provide only 16 per cent of its total procurement. According to the study, the significant arms sales of local firms and the high level of licensed production push India to fourth position in the list.
- **Hindustan Aeronautics Ltd, Indian Ordnance Factories, Bharat Electronics, Mazagaon Docks and Cochin Shipyard are among the major Indian arms servicing companies.**
- Ashok Leyland, one of the largest suppliers of trucks to the Indian Army, is the only company ranked in the top 50 in the Indo-Pacific.
- India has seven Uncrewed Maritime Vessel projects ongoing.
- In the private sector, Larsen & Toubro has been developing AUV prototypes on its own and in collaboration with foreign partners, such as Italy's EdgeLab, while DRDO and the Central Mechanical Engineering Research Institute have been considering development of AUV prototypes.

CLEAN ENERGY PRODUCTION

GS-II INTERNATIONAL RELATIONS

Context

- During a Ministerial meeting of the U.S.-India Strategic Clean Energy Partnership (SCEP), **U.S. Energy Secretary Jennifer Granholm and Indian Minister of Petroleum and Natural Gas Hardeep S. Puri underscored the critical importance of bilateral clean energy engagement to strengthen energy security and to accelerate clean, secure, and just energy transition.**

Highlights of Joint Statement

- As climate and clean energy leaders, the United States and India **share a common vision to deploy clean energy at scale during this critical decade to reduce emissions and achieve climate change mitigation goals, taking into account different national circumstances.**
- Through regular consultations on global energy markets, efforts to **strengthen collective energy security, and deepening technical engagement to support economy-wide decarbonization**, the two countries are proactively addressing the multiple crises that the world faces through the U.S.-India Strategic Clean Energy Partnership.

- The Ministers underscored the **importance of ensuring reliable energy supplies to ensure balanced energy markets**, including India's support for the U.S. initiative to release crude oil from the strategic petroleum reserves, and the importance of diversifying to clean energy sources.
- The Ministers stressed that **climate and clean energy collaboration should promote energy access, affordability, energy justice**, while supporting sustainable economic growth and just energy transitions.
- India and the United States discussed progress on continued efforts to advance emerging fuels and technologies and electrification and decarbonization of end use sectors.
- **Enhanced bilateral efforts include:**
  - Strengthening the power grid to ensure reliable, affordable, and resilient clean energy supply including through smart grids and energy storage;
  - Assessing grid-integrated buildings, electric vehicles, and other distributed energy resources to support load management;
  - Advancing renewable energy development and deployment, including to support India's goal of achieving approximately 50 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030;
  - Advancing energy efficiency and conservation in appliances, buildings and the industrial sector;
  - Electrifying and decarbonizing the transportation sector including creating an enabling ecosystem through setting up an Electric Vehicle (EV) financing services facility in India;
  - Reducing emissions across the oil and gas value chain including efforts at deploying methane detection and abatement technologies;
  - Decarbonizing the industrial sector through efforts at electrification, carbon capture and storage, and deployment of other clean emerging energy technologies;
  - Deepening cooperation between Indian and U.S. Department of Energy labs and agencies, like the EIA, and on energy data management, modeling, low carbon technologies.
- The Ministers also reiterated the importance of private sector engagement to facilitate investment, inform policy, and accelerate technology deployment.
- To that end, the United States and India continue to convene public-private tasks forces on hydrogen and biofuels, and announced the launch of a new Energy Storage Task Force to support large-scale integration of renewable energy needed to support the clean energy transition.
- The Ministers welcomed collaboration between Indian and U.S. companies through a Memorandum of Understanding to deploy methane abatement technologies in India's city gas distribution sector under the Low Emissions Gas Task Force to help reduce emissions in the oil and gas sector.
- Agencies from across the U.S. and Indian governments demonstrated a number of accomplishments across the five technical pillars of cooperation on: 1) Power & Energy Efficiency, 2) Renewable Energy, 3) Responsible Oil & Gas, 4) Sustainable Growth, and 5) Emerging Fuels and Technologies.
- The Ministers welcomed expanded efforts under the U.S.-India Strategic Clean Energy Partnership to support a just energy transition to meet today's unprecedented energy security and climate and energy challenges.

UN PEACEKEEPING FORCES

GS-II INTERNATIONAL RELATIONS

Context

- **Jean-Pierre Lacroix visited India, the United Arab Emirates, Pakistan and Japan.** The United Nations peacekeeping chief is undertaking a visit to India, among the largest troop contributing countries for its operations.

Details

- Mr. Lacroix participated in a two-day meeting organised by the Challenges Forum, which brings together leading policymakers, practitioners and academics on key issues linked to peace operations.
- The purpose of Mr. Lacroix's visit wass to thank the countries for their contributions and support to U.N. peacekeeping as well as to update them on progress in enhancing the effectiveness of peacekeeping.
- According to information on the website of Challenges Forum, the event CAF22 gathered partners and key stakeholders to discuss how future peace operations can remain relevant in a world of growing geopolitical friction.
- **The CAF22 was co-hosted by the organisation's Indian partner the United Service Institution of India (USI).**
- **Under the overarching theme "Future of Peace Operations", the three sub-themes for the forum are "Place for Preventive Deployment in Diplomacy", "Protection of Civilians in Peace Operation" and "Protecting the Protectors".**
- India is one of the largest troop and police contributing countries to U.N. peacekeeping missions and more than 5,700 Indian peacekeepers are deployed in nine out of 12 U.N. peacekeeping missions at present.
- **Since the 1950s, India has cumulatively deployed more than 260,000 troops to the missions. Through the years, 177 Indian peacekeepers have made the supreme sacrifice, the highest from any troop-contributing country.**

Details

- A total 175 Indian peacekeepers have so far died while serving with the United Nations.
- India has lost more peacekeepers than any other UN Member State.
- Since 1948, UN Peacekeepers have undertaken 71 Field Missions.
- There are approximately 81,820 personnel serving on 13 peace operations led by UNDPO, in four continents currently. This represents a nine-fold increase since 1999.
- A total of 119 countries have contributed military and police personnel to UN peacekeeping. Currently, 72,930 of those serving are troops and military observers, and about 8,890 are police personnel.
- India has a long history of service in UN Peacekeeping, having contributed more personnel than any other country. To date, more than 2,53,000 Indians have served in 49 of the 71 UN Peacekeeping missions established around the world since 1948.
- Currently, there are around 5,500 troops and police from India who have been deployed to UN Peacekeeping missions, the fifth highest amongst troop-contributing countries.
- India has also provided, and continues to provide, eminent Force Commanders for UN Missions. India is the fifth largest troop contributor (TCC) with 5,323 personnel deployed in 8 out of 13 active UN Peacekeeping Missions, of which 166 are police personnel.
- India's contribution to UN Peacekeeping began with its participation in the UN operation in Korea in the 1950s, where India's mediatory role in resolving the stalemate over prisoners of war in Korea led to the signing of the armistice that ended the Korean War

Process of Decision Making

- To efficiently **attain a particular end or objective**, an ordered and cohesive scheme must be established: this is the decision-making process that will lead to the most appropriate plans.
- **An Integrated Mission Planning Process is the product of the UN's integrated mission operations.**
- Aside from the police component, integrated missions have a **military component, a civilian component, and mission support.**
- In UN missions there are three planning levels:
  - **Strategic;**
  - **Operational and,**
  - **Tactical**
- The tactical planning is produced within each component, while the strategic and operational planning are connected.
- The concept of maneuver and the associated orders to be carried out by FPU personnel are the result of a methodical analysis of various factors that lead to a decision that is always in accordance with the mission mandate, UN doctrine, the rule of law, and strategic and operational level guidelines and orders.

Principles of Peacekeeping

These three principles are inter-related and mutually reinforcing:

- **Consent of the parties**
  - The key parties to a dispute **provide their approval for UN peacekeeping forces to be deployed**.
  - This **necessitates the parties' commitment to a political process**.
  - Their approval of a peacekeeping mission gives the UN with the **essential political and physical independence** to carry out its statutory objectives.
- **Impartiality**
  - Impartiality is essential for retaining the **key parties' consent and cooperation**, but it should not be confused with neutrality or inaction.
  - Peacekeepers from the United Nations should be **impartial while dealing with conflict parties**, but not neutral when carrying out their mandate.
- **Non-use of force except in self-defence and defence of the mandate**
  - UN peacekeeping missions **are not intended to be used as a means of enforcing the law.**
  - They may, however, **employ force at the tactical level with the Security Council's permission if acting in self-defense or to defend the mandate.**

Role of India

- India has participated in **49 UN peacekeeping deployments so far, contributing over 200,000 troops and a large number of police officers.**
- With 7,860 people deployed with 10 UN Peacekeeping Missions in 2014, **India is the third largest troop contributor nation** [TCC], with 995 of them being police officers, including the UN's first female formed police unit.

- **The United Nations recently praised Indian peacekeepers for their efforts in avoiding a massacre in the South Sudan conflict, which resulted in the deaths of two Indian soldiers.**

INDIA-UK JOINT WORKING GROUP

GS-II INTERNATIONAL RELATIONS

Context

- **India-U.K. decided to form joint group to enhance defence cooperation.**

Details

- It was decided on the side-lines of DefExpo 2022 in Gandhinagar on October 18, 2022. DefExpo-2022 has representation from 20 U.K. defence companies.
- **The JWG is part of an ongoing initiative between the two countries to strengthen the defence and security partnership.**
- The U.K. recently issued its first Open General Export License in the Indo-Pacific region to India, shortening delivery times for defence procurement.
- The U.K. industry is already integrating Indian defence suppliers into their global supply chain.
- The Royal Air Force (RAF) recently conducted a subject matter expertise exchange with Defence Research and Development Organisation (DRDO) during the visit of Eurofighter Typhoon, Voyager and A-400 in New Delhi and also held joint-flying exercises with the Indian Air Force (IAF).

Background of relations

- India and the United Kingdom share historic ties since several centuries.
- The two countries have a Strategic Partnership since 2004 and enjoy a multi-faceted relationship spanning across trade and economy, health, science & technology, defence& security, people-to-people relations, climate change and close cooperation on multilateral issues.
- There have been regular high level visits

Bilateral Institutional Engagements

- The India-UK Foreign Office Consultations
- The India-UK Disarmament and Non-Proliferation Dialogue
- India-UK JWG on Counter Terrorism
- India and UK also regularly meet under the UN Dialogue, Policy Planning Dialogue, Strategic Dialogue, Cyber Dialogue and Home Affairs Dialogue to discuss cooperation in specific sectoral areas.

Economic Cooperation

- Merchandise trade between the two countries was US$15.45 billion in 2019-20 with the trade balance in favour of India.
- During the period of April to August 2020, India's merchandise export to the UK was USD 2.33 billion and Import was USD 1.47 billion, totalling USD 3.80 billion.
- India invested in 120 projects and created 5,429 new jobs in the UK to become the second-largest source of foreign direct investment (FDI) after the US in 2019 according to the Department for International Trade (DIT) inward investment statistics for 2019-2020.
- UK is the 6th largest inward investor in India, after Mauritius, Singapore, Netherlands, Japan, and USA with a cumulative equity investment of US $28.39 billion (April 2000 - June 2020), accounting for around 6% of all foreign direct investment into India.

Defence

- India and the UK signed the Defence and International Security Partnership (DISP) in November 2015 to provide a strategic roadmap and direction to the evolving India-UK Defence Relations.
- Defence Consultative Group at Defence Secretary level last met in 2019.
- The virtual Defence Equipment Sub-Group (DESG) meeting was last held in 2020.
- The secretarial level talk was focused on issues about defence production and defence industry collaboration.
- Around 70 defence related companies across the UK supply various goods for aircraft/helicopter manufacturing/overhaul at HAL like ejection seats, fuel tank kits, hydraulic pumps, engine spares etc and support legacy platforms like Jaguar, Mirage & Kiran.
- Maritime cooperation is another area where engagement is increasing.
- UK is deploying Carrier Strike Group in Indian Ocean region this year in line with its strategic tilt to Indo-Pacific.

Education, Research and Innovation

- UK is among the favoured destinations for Indian students to pursue higher education.
- India was one of the biggest beneficiaries of UK's new liberalised point-based immigration system.
- Around 50000 Indian students are currently studying in UK.

- UK is India's second largest partner in Science and Technology collaborations. The two sides are collaborating under institutionalized mechanisms like UK-India Education and Research Initiative (UKIERI) and through UK Research and Innovation (UKRI) programmes.
- UK identifies India as a key development partner. Further, the two sides are discussing Global Innovation Programme, which will support Indian sustainable innovations to be scaled up and transferred to select developing countries. GIP builds on the success of Invest Global, a pilot project that was supported by DST and ex-DFID as part of the Millennium Development Alliance.

Climate and Environment

- India and UK closely engage on climate related issues through various mechanisms including the Ministerial Energy Dialogue (Sep, 2018), and Joint Working Groups on Climate, Power and Renewables.
- India-UK Green Growth Equity Fund is mobilising institutional investments in the renewable energy, waste management, electric mobility and environment sub-sectors in India.

Health

- Health sector collaboration is a key element of India-UK Strategic Partnership.
- The Joint Working Group on Health and Life Sciences regularly meets to prioritise and coordinate bilateral cooperation in the health sector.
- The successful partnership between Oxford University, AstraZeneca and SII on Covid19 vaccine demonstrated the potential of Indian and UK expertise working together to solve international challenges.
- The two sides are also working on pandemic preparedness, Antimicrobial Resistance (AMR), Zoonotic research, non-communicable diseases, digital health, ayurveda and alternate medicines, as well as health worker mobility.
- An MOU was signed in April 2018 during the visit of PM Modi to the UK.

Multilateral Collaboration

- UK has been supportive of India's permanent membership of UNSC since 2004 and voted favourably in the roll-over decision on UNSC reforms to the 70th session of UNGA.
- UK is also a strong supporter of India's membership of the NSG, MTCR, Australia Group and Wassenar Arrangement.
- UK and India are the current co-chairs of CDRI. UK is also a member of ISA and supports its activities.

Indian Diaspora

- The Indian Diaspora in UK is one of the largest ethnic minority communities in the country, including approximately 1.6 million British nationals of Indian origin and about 3,51,000 NRIs living in the UK equating to almost 2.5 percent of the UK population and contributing 6% of the country's GDP.

INDIA AFRICA DEFENCE DIALOGUE

GS-II INTERNATIONAL RELATIONS

Context

- **India-Africa Defence Dialogue to be held on October 18 on the sidelines of DefExpo 2022 in Gandhinagar, Gujarat.**

Details

- The broad theme of the dialogue is 'India-Africa: Adopting Strategy for Synergising and Strengthening Defence and Security Cooperation'.
- India's approach towards Africa is guided by the **Kampala Principles** enunciated by Prime Minister Shri Narendra Modi in 2018.
    - **The Kampala Principles** promote ownership of private sector engagement (PSE) through development co-operation by partner countries and ensure the alignment of PSE projects and programmes with national sustainable development priorities.
- The first-ever India-Africa Defence Ministers Conclave was held in Lucknow, Uttar Pradesh in conjunction with DefExpo on February 06, 2020.

Background of relations

- India's **relations with Africa date back several centuries**. The presence of Indians in East Africa is documented in the 'Periplus of the Erythraean Sea' or Guidebook of the Red Sea by an ancient Greek author written in 60 AD.
- The **geographical proximity and easy navigability** in Indian Ocean resulted in well-established trade network between India and the Swahili Coast predating European exploration.
- More **concrete relation between India and Africa begins to emerge during the Islamic age** which is evident through the accounts of Venetian traveller Marco Polo.
- **Political connection during the colonial era was linked through M.K Gandhi** who began his political career in South Africa, became the leader of colonized and established Indian Natal Congress in 1894.

- After India got independent, it raised voice for African liberation taking their case to all the available international forums. End of racial struggle and decolonization became the rallying point of India–Africa relations.
- India was a forerunner as a champion of the interests of the developing countries from Africa, particularly through the **Bandung Declaration of 1955, the Group of 77, and the Non Aligned Movement (NAM).**
- Africa is home to over half a dozen of the fastest growing countries of this decade such as Rwanda, Senegal, and Tanzania etc making it one of the growth pole of the world.
- **African continent has a population of over one billion with a combined GDP of 2.5 trillion dollars making it a huge potential market.**
- Africa is a **resource rich continent** dominated by commodities like crude oil, gas, pulses and lentils, leather, gold and other metals, all of which India lack in sufficient quantities.
- India's **duty-free tariff preferential scheme for Least Developed Nation** (LDCs) launched in 2008 has benefited 33 African states.
- Multilateral engagement was launched with the first **India Africa Forum Summit** (IAFS) in 2008.
- India is investing in capacity building providing more than $1 billion in technical assistance and training to personnel under the Indian **Technical and Economic Cooperation** (ITEC) program.
- As a full member of **African Capacity Building Foundation** (ACBF), India has pledged $1 million towards ACBF's sustainable development, poverty alleviation, and capacity building initiative.
- India has invested $100 million in the **Pan-African E-Network** to bridge the digital divide in Africa, leveraging its strengths in information technology.
- Indian military academies offer **training to military officers** from a number of African states.
- India has also unveiled the Vision Document of the **Asian Africa Growth Corridor** which is jointly prepared by Indian and Japanese think tanks.
- Under the **Vaccine Maitri initiative**, India supplied 24.7 million doses of Made of India Covid vaccines to 42 countries in Africa.
- Moreover, over **3 million strong Indian diaspora in Africa** also proves to a crucial strategic asset for India to further its relations with African countries.

Trade Relations

- **Trade between the African subcontinent and India increased from $7.2 billion in 2001 to $59.9 billion in 2017**, making India the **continent's fourth-largest national trading partner**, according to Exim Bank and the African Export-Import Bank (Afriexim Bank).
- Trade with India accounted for more than 6.4 per cent of total African trade in 2017.
- Bilateral trade between India and the 48 countries of sub-Saharan Africa was valued at $46.82 billion in 2020-21, down from $55.70 billion in 2019-20.
- India has a negative trade balance with sub-Saharan Africa, the Ministry figures show.
- **Ministry of External Affairs said that 38 African nations have benefited from India's Duty Free Tariff Preference (DFTP) scheme which provides duty free access to 98.2 per cent of India's total tariff lines.**
- Lines of Credit (LoCs) worth $12.26 billion have so far been extended to African countries, making them the second-largest recipient of India's concessional loans, the MEA said.
- **Mauritius is the first and only African country so far to have a CECPA (Comprehensive Economic Cooperation and Partnership Agreement) with India, an agreement that aims at building trade ties between the two countries.**

FATF'S GREY LIST

GS-II INTERNATIONAL RELATIONS

Context

- **Four years after it was placed on the 'grey list' and penalised with severe financial strictures by the Financial Action Task Force (FATF), Pakistan won a major reprieve, as the international watchdog on terror financing and money laundering agreed to remove Pakistan's name from the list of countries under 'increased monitoring'.**
- Reacting to the decision, the Ministry of External Affairs said that Pakistan must continue to take "credible, verifiable, irreversible and sustainable" action against terror groups on its soil.
- FATF said Pakistan had completed two action plans comprising a 34-point tasklist since 2018.

What is the FATF?

- The Financial Action Task Force is an **international watchdog for financial crimes such as money laundering and terror financing**.

Establishment

- It **was established at the G7 Summit of 1989 in Paris** to address loopholes in the global financial system after member countries raised concerns about growing money laundering activities.
- **In the aftermath of the 9/11 terror attack on the U.S., FATF also added terror financing as a main focus area**. This was later broadened to include restricting the funding of weapons of mass destruction.

Members and meetings

- The FATF **currently has 39 members**. The decision-making body of the FATF, known as its plenary, **meets thrice a year**.
- Its meetings are attended by 206 countries of the global network, including members, and observer organizations, such as the World Bank, some offices of the United Nations, and regional development banks.

Mandate

- The FATF **sets standards or recommendations for countries** to achieve in order to plug the holes in their financial systems and make them less vulnerable to illegal financial activities.
- It **conducts regular peer-reviewed evaluations called Mutual Evaluations (ME) of countries** to check their performance on standards prescribed by it. The reviews are carried out by FATF and FATF-Style Regional Bodies (FSRBs), which then release Mutual Evaluation Reports (MERs).
- For the countries that don't perform well on certain standards, time-bound action plans are drawn up.
- Recommendations for countries range from **assessing risks of crimes to setting up legislative, investigative and judicial mechanisms to pursue cases of money laundering and terror funding.**

What are FATF's 'grey' and 'black' lists?

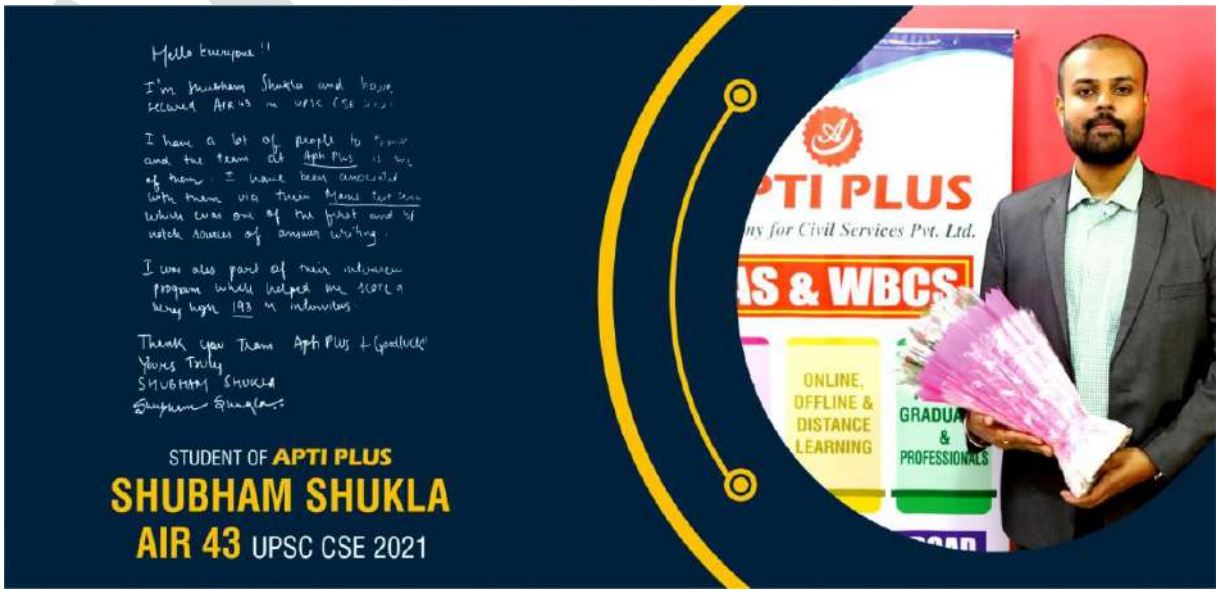
- While **the words 'grey' and 'black' list do not exist in the official FATF lexicon,** they designate countries that need to work on complying with FATF directives and those who are non-compliant, respectively.
- At the end of every plenary meeting, FATF comes out with two lists of countries.

Grey List

- The grey countries are designated as "jurisdictions under increased monitoring", working with the FATF to counter criminal financial activities. For such countries, the watchdog does not tell other members to carry out due-diligence measures vis-a-vis the listed country but does tell them to consider the risks such countries possess**. Currently, 23 countries including Pakistan are on the grey list.**

Black List

- For the black list, it means countries designated as **'high-risk jurisdictions subject to call for action'**.
- In this case, the countries have considerable deficiencies in their AML/CFT (anti-money laundering and counter terrorist financing) regimens. Thus, FATF calls on members and non-members to apply enhanced due diligence.
- In the most serious cases, **members are told to apply counter-measures such as sanctions on the listed countries**. **Currently, North Korea and Iran are on the black list.**
- Being listed under the FATF's lists **makes it hard for countries to get aid from organizations like the International Monetary Fund (IMF), Asian Development Bank (ADB), and the European Union.** It may also affect capital inflows, foreign direct investments, and portfolio flows.



LEAD POISONING

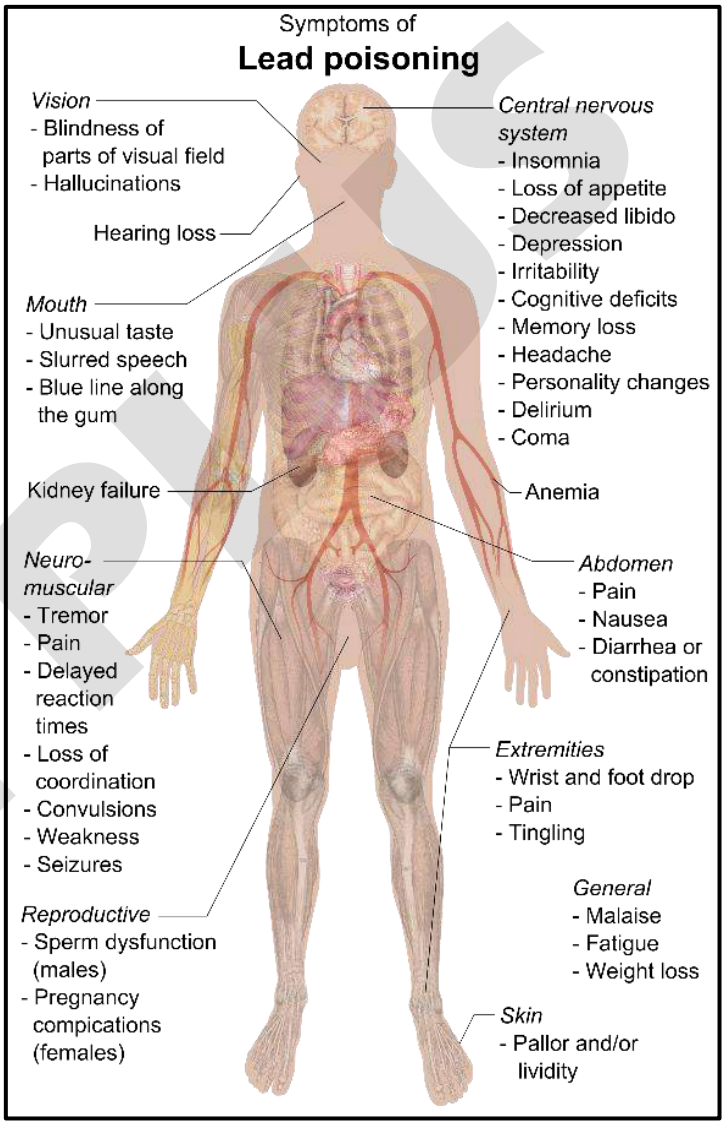
GS-II HEALTH

Context

- A 2020 report by the United Nations Children's Fund (UNICEF) found India to be home to a major chunk of the 800 million children poisoned by lead globally. Now, NitiAayog and the Council of Scientific & Industrial Research (CSIR) report has found that India bears the world's highest health and economic burden due to lead poisoning.

Lead poisoning

- Lead poisoning occurs when lead builds up in the body, often over months or years. Even small amounts of lead can cause serious health problems. Children younger than 6 years are especially vulnerable to lead poisoning, which can severely affect mental and physical development.
- Lead is a **naturally occurring toxic metal found in the Earth's crust**. Its widespread use has resulted in extensive environmental contamination, human exposure and significant public health problems in many parts of the world.
- Important sources of environmental contamination come from **mining, smelting, manufacturing and recycling activities** and use in a wide range of products.
- More than three quarters of global lead consumption is for the **manufacture of lead-acid batteries for motor vehicles**.
- Lead is, however, also used in many other products, for example **pigments, paints, solder, stained glass, lead crystal glassware, ammunition, ceramic glazes, jewellery, toys, some cosmetics such as kohl and sindoor**.
- Drinking water delivered through **lead pipes** or pipes joined with lead solder may contain lead.



Lead Poisoning status: Findings of the Report

- Bihar, Uttar Pradesh, Madhya Pradesh, Jharkhand, Chhattisgarh and Andhra Pradesh had the highest average blood lead levels (BLL) among Indian states. These states account for 40 per cent of India's population that is plagued with this poor health indicator.
- Some 23 states have an average BLL that goes **beyond five microgram per decilitre (µg / dl) — the standard used to gauge poisoning.** The statistics are worrying on a national level with the average for the country being 4.9 µg / dl for children less than two years old.
- India accounted for 275,561,163 of the 800 million children suffering from lead poisoning globally according to the 2020 Unicef report. This number meant that **half of India's children were poisoned by lead.**
- Lead poisoning shaved off an estimated five per cent of Indian Gross Domestic Product (GDP) due to lower economic productivity and reduced lifetime earnings. It also caused 230,000 premature deaths in India.
- Deaths due to lead poisoning have continued to rise in India even though lead use in petrol — a key source — was phased out by 2000 in the country. This indicates other sources. The government report includes battery recycling, occupational sources such as lead mining, smelting, welding, soldering and automobile repatriating. Other inconspicuous sources include adulterated spices, cosmetics and traditional medicines.

Way Ahead

- There is a **desperate need for policy changes at the national and state levels** given the severe health implications.
- **Need of the hour:** Identifying at-risk populations through BLL monitoring, investigating sources of elevated BLLs and healthcare workforce training to sensitise them to monitor, detect and treat lead poisoning.

- Another step is to undertake targeted research and intervention studies to **identify potential newer sources which policy makers and the scientific community can address head on.**

WORLD HEALTH SUMMIT

GS-II HEALTH

Context

- Global leaders committed to donating $2.54 billion for eradicating polio at the World Health Summit.

World Health Summit

- The World Health Summit is the **unique international strategic forum for global health.**
- Held annually in Berlin, it **brings together stakeholders from politics, science, the private sector, and civil society from around the world** to set the agenda for a healthier future by inspiring innovative solutions for better health and well-being for all.
- The World Health Summit was **founded in 2009.** It is traditionally held under the patronage of the German Chancellor, the French President, the President of the European Commission, and the Director-General of the World Health Organization (WHO).

Participants & Speakers

- Leading scientists and medical professionals.
- Ministers and civil servants.
- High-ranking officials at international organizations.
- CEOs from industry and civil society.
- Young professionals and students.

Goals

- Improve health worldwide.
- Find answers to health challenges, guided by science.
- Bring together stakeholders from all sectors and all regions of the world.
- Facilitate open dialogue.
- Strengthen international cooperations.
- Set health agendas.
- Foster the recognition of global health as a key political issue.
- Promote the global health debate in the spirit of the UN Sustainable Development Goals: SDG 17 "Partnership for the Goals"Bring together stakeholders from all sectors.

Results

- **M8 Alliance Declaration-** The M8 Alliance is a growing network and currently consists of 30 members in 20 countries. It is a growing network of excellent universities, research institutions, and medical branches of national academies of science across 130 countries.

Highlight of 2022 World health Summit

- Bill & Melinda Gates Foundation pledged $1.2 billion to the largest international public health initiative, Global Polio Eradication Initiative (GPEI).

GPEI

The **Global Polio Eradication Initiative** is an initiative **created in 1988**, just after the World Health Assembly resolved to eradicate the disease poliomyelitis. Led by the World Health Organization, it is the largest international public health initiative in history. The GPEI is led by national governments with six core partners - Rotary International, the World Health Organization (WHO), the US Centers for Disease Control and Prevention (CDC), United Nations Children's Fund (UNICEF), the Bill & Melinda Gates Foundation and Gavi, the Vaccine Alliance.

Read all about Polio: *https://www.iasgyan.in/daily-current-affairs/wild-polio*
Read about GAVI: *https://www.iasgyan.in/daily-current-affairs/vaccine-alliance-gavi*

GLOBAL TB REPORT, 2022

GS-II HEALTH

Context

- An estimated 10.6 million people fell ill with tuberculosis (TB) in 2021, an increase of 4.5% from 2020, and 1.6 million people died from TB - **World Health Organization's 2022 Global TB report.**

Report

- This is the first time in many years **an increase has been reported in the number of people falling ill with TB and drug resistant TB.**
- **TB services are among many others disrupted by the COVID-19 pandemic in 2021,** but its impact on the TB response has been particularly severe. **Ongoing conflicts across Eastern Europe, Africa and the Middle East have further exacerbated the situation** for vulnerable populations.
- Many people with TB were not diagnosed and treated. The reported number of people newly diagnosed with TB fell from 7.1 million in 2019 to 5.8 million in 2020. There was a partial recovery to 6.4 million in 2021, but this was still well below pre-pandemic levels.
- Reductions in the reported number of people diagnosed with TB suggest that the **number of people with undiagnosed and untreated TB has grown**, resulting first in an increased number of TB deaths and more community transmission of infection.
- The number of people provided with treatment for RR-TB and multidrug-resistant TB (MDR-TB) has also declined between 2019 and 2020.
- The report notes a decline in global spending on essential TB services from US$6 billion in 2019 to US$5.4 billion in 2021, which is less than half of the global target of US$13 billion annually by 2022.

About Tuberculosis (TB)

- Tuberculosis (TB) is a potentially serious infectious disease that mainly affects the lungs.
- **The *'Mycobacterium tuberculosis'* bacteria that cause TB are spread when an infected person coughs or sneezes.**
- Mostly asymptomatic. When symptoms do occur, they usually include a cough (sometimes blood-tinged), weight loss, night sweats and fever.
- Patients with active symptoms will require a long course of treatment involving multiple antibiotics.

Present Status of TB in India

- **According to World Health Organisation (WHO) estimates, India has the world's largest tuberculosis epidemic.**
- **In 2020, India accounted for 26% of the incident TB cases across the globe.**
- India has an incidence rate of 192 cases per 100,000 of population. India accounted for 38% of global TB deaths among HIV-negative people and for 34% of the combined total number of TB deaths in HIV-negative and HIV-positive people.
- Further in 2020, India accounted for 24% of the global gap between estimated TB incidence and the no. of people newly diagnosed with TB and reported.

Global TB targets

- In 2014 and 2015, all Member States of WHO and the UN adopted the UN Sustainable Development Goals (SDGs) and WHO's End TB Strategy. The SDGs and End TB Strategy both include targets and milestones for large reductions in TB incidence, TB deaths and costs faced by TB patients.
- These goals aim for a 90% reduction in deaths caused by tuberculosis deaths by 2030, compared with 2015 levels.

Steps taken by the Government

- **In 2020, the Indian government made statements to eliminate tuberculosisfrom the country by 2025 through its National TB Elimination Program.**
  - Interventions in this program include major investment in health care.
  - Providing supplemental nutrition credit through the NikshayPoshanYojana.
  - Organizing a national epidemiological survey for tuberculosis.
  - Organizing a national campaign to tie together the Indian government and private health infrastructure for the goal of eliminating the disease.
- **The ministry's commitment to eliminating tuberculosis in the country by 2025.**
  - As part of its efforts to eliminate tuberculosis, the Union Government changed the name of Revised National Tuberculosis Control Program (RNTCP) to National Tuberculosis Elimination Program (NTEP) in 2019.

Concerns

- The NikshayPoshanYojana entitles every tuberculosis (TB) patient, seeking treatment in either the public or private sector, to a direct benefit transfer (DBT) of Rs 500 per month for nutritional needs. It was launched in 2018. However, data from the latest India TB Report 2022, shows that **only 62.1 per cent of 2.1 million notified cases across the country received at least one payment in 2021.**
- In Delhi, which has the highest burden of all forms of TB at 747 cases per 100,000 people, only 30.2 per cent of patients have got at least one DBT.
- Other poor performers are Punjab (31.8 per cent), Jharkhand (40.1 per cent), Maharashtra (46.6 per cent), Bihar (45.8 per cent), Rajasthan (55.9 per cent) and Uttar Pradesh (58.7 per cent). In the North East, Manipur (4.2 per cent) and Meghalaya (23.7 per cent) fared the worst.
- **India has set a target to eliminate TB by 2025.** Experts believe that to reach this goal, the country must go beyond the medical aspects. **Undernutrition is a major risk factor that drives TB**, acknowledges the World Health Organization. The condition accounts for nearly 34 per cent of all cases.

Way Ahead

Recognizing Bottlenecks

- The government needs to take stock of where the bottlenecks are. There is no point in pouring more money into a failing system.

Ensuring Food Security

- Any investment in diagnostic treatments is irrelevant if people fighting TB are living on an empty stomach. It affects the poorest populations and almost every family is in financial distress due to medical costs and lost wages. This distress can worsen food insecurity. A **broader approach is needed to prevent TB**, and **it should include food support for those in close contact with the patient** as they are also at high risk of contracting the disease.

Diagnosis and Surveillance

- Drug-resistant tuberculosis remains a public health crisis, and **ongoing surveillance of the burden** is essential to mounting an effective response. Accurate diagnosis and treatment of tuberculosis, including drug-resistant forms, should be available and accessible to all who need it.
- The Global Project on Anti-Tuberculosis Drug Resistance Surveillance serves to guide the development and expansion of the surveillance of antimicrobial resistance among other pathogens.

Building Infrastructure

- Closing gaps in the detection of drug-resistant tuberculosis requires investment in laboratory capacity, sample transport systems, and data connectivity solutions. To improve detection requires a multistep process, first requiring improved bacteriological confirmation among presumptive cases of pulmonary tuberculosis.

Early detection

- Efforts are needed to minimise the emergence of resistance to the first new drugs to be made available for the treatment of tuberculosis. Early detection of resistance relies on investment in research and development of new molecular tools.

Investment

- The global epidemic of drug-resistant tuberculosis remains a public health threat, with the COVID-19 pandemic reversing years of progress.
- Urgent investment is needed from governments, donors, the commercial sector, academic institutions, NGOs and other stakeholders.

APTI PLUS
Academy for Civil Services Pvt. Ltd.

LEGACY OF SUCCESS CONTINUES IN UPSC CSE 2021
HEARTIEST CONGRATULATIONS OUR STAR PERFORMERS

45+ SELECTIONS IN IAS 2021

AIR 9
PREETAM KUMAR

AIR 29
BHAVISHYA

AIR 43
SHUBHAM SHUKLA

AIR 50
ABHIJIT RAY

AIR 93
DEEPESH KUMARI

AIR 102
PRAKHAR

AIR 107
PANKAJ

AIR 137
RISHABH

AIR 152
NEHA

AIR 158
RAJ

AIR 180
SHRISTI

AIR 186
SAMIKSHA

AIR 211
LALITH

AIR 220
GARIMA

AIR 228
MAYANK

AIR 229
ARPITA

AIR 232
BISWA

AIR 240
UTSAV

AIR 269
ANUP

AIR 300
SHIVANI

AIR 319
GAJANAN

AIR 324
AJIT

AIR 325
KAJALE

AIR 355
PRATIBHA

AIR 379
ANURAG

AIR 439
KESHAV

AIR 469
SASHI

AIR 494
ABHINANDAN

AIR 497
SHUBHAM

AIR 534
SUDHA

AIR 541
RITESH

AIR 590
RAJESH

AIR 621
RAJNISH

AIR 622
RAJESH K.

AIR 636
SHANTANU

AIR 644
SPARSH

AIR 648
SHUBHAM

AIR 650
DHARAVATH

AIR 658
SAPAVATH

AIR 673
B S MEENA

AND MANY MORE...

GENERAL STUDIES - III

TOKENIZATION

GS-III ECONOMY

Context

- From October 1, the Reserve Bank of India's card-on-file (CoF) tokenisation norms have kicked in.

What is tokenisation?

- Tokenisation refers to the replacement of actual card details with a unique alternate code called the 'token', which shall be unique for a combination of card, token requester, (i.e. the entity which accepts requests from the customer for tokenisation of a card and passes it on to the card network to issue a corresponding token) and the device.

How did India decide to carry out tokenisation?

- In September 2021, the RBI prohibited merchants from storing customer card details on their servers with effect from January 1, 2022, and mandated the adoption of card-on-file (CoF) tokenisation as an alternative.
- Following a series of representations from several industry players and digital payment platforms who anticipated disruption in online transactions from January 1, 2022, the RBI extended the implementation date of card-on-file (CoF) tokenisation norms by another six months to June 30, 2022.
- The June 2022 deadline was further extended as the RBI felt that although considerable progress had been made in terms of token creation and transaction processing based on these tokens had also commenced, the concept was yet to gain traction across all categories of merchants. Subsequently, the deadline was extended till September 30, 2022.

Background

- Digital is currently one of the most convenient and favoured platforms for availing services and making purchases.
- Because of our increased frequency of making online transactions, most of us have been saving our payment information on merchant sites, which means that our payment partners have access to sensitive financial information that should otherwise be highly personal.
- In order to secure this data and protect not just customers but also merchants and banks, RBI is now prohibiting merchants from storing debit and credit card details on their servers post June 30, 2022.
- As a safer and more convenient alternative to card storage, RBI has mandated the adoption of tokenization through which one's sensitive card information can be replaced with a non-sensitive uniquely generated code called 'Token'.

Tokenization

- Tokenisation is a **process by which card details are replaced by a unique code or token, allowing online purchases to go through without exposing sensitive card details.**
- Under tokenisation services, **a unique alternate code is generated to facilitate transactions through cards**.
- It is the process of **substituting a 16 digit customer card number with a non-sensitive equivalent value**, referred to as a token.
- This essentially means that a **customer's card information will no longer be available on any Merchant, Payment Gateway, or 3rd party** that helps in the processing of digital transactions today.
- With card tokenisation, **consumers no longer need to fear saving their card details**.
- Cardholders will have to give an explicit consent that will be collected for tokenisation.

Why RBI wants cards to be tokenized?

- Customer's card details are stored by merchants, and if their security measures are inadequate, this **puts all the customers at risk.** There have been several instances in the past where merchant websites have been hacked and debit and credit card details have been leaked. This is what the RBI wants to eliminate.
- By mandating card tokenization, the burden of security is now on payment processors and banks, not merchants.
- Thus, a tokenised card transaction is considered safer as the actual card details are not shared with the merchant during transaction processing.
- Tokenization ensures standardization for card on file transactions through higher security standards which is irreversible as compared to existing reversible cryptographic standards.

RBI also encouraged cardholders to tokenise their cards for their own safety. Till date, about 19.5 crore tokens have been created.

RBI's latest directions

- As per the Reserve Bank of India's latest order, all merchants must delete customer debit and credit card data on or before

June 30 2022 and replace card payments with unique tokens for all online, point-of-sale and in-app transactions.

Benefits of tokenization in a nutshell

Largely designed to counter online frauds and curb digital payment breaches, tokenization comes with a slew of benefits. Some of them are:

- **Enhanced safety and security:** Tokens generated will be unique to a single card at a specific merchant and this will take up the overall security of making card-based transactions. It eliminates the risk of storing card details online and ensures the uncompromised convenience of storing customer's token details on the merchant site.
- **Quicker checkouts**: Tokenized Mastercard will allow the convenience of quick checkouts as one doesn't need to punch in the card number for each purchase.
- **No more 'False Declines'**: Many times legitimate online payments using valid cards are declined on the grounds of the transaction looking like a fraud. With tokenization, this becomes a thing of the past as the usage of tokens for payments confirms security of the highest order.
- **Easy card management:** With tokenization, one can also keep track of all your cards and the merchants they have been tokenized with.
- **No need for a physical card**: With tokenization, one can store a virtual version of one's card on a smartphone for the days one forgets to carry your wallet.
- **Added benefits:** Tokenization also comes with cashback benefits when secured with platforms like Amazon, PayTM, Swiggy, Flipkart and PhonePe among others.

REGIONAL RURAL BANKS

GS-III ECONOMY

Context

- In a bid to enable regional rural banks (RRBs) to raise resources by listing on stock exchanges**, the government has issued draft guidelines that set certain basic criteria, including net worth of at least ₹300 crore during the previous three years.**

Details

- They should also have capital adequacy above the regulatory minimum level of 9% in each of the preceding three years.
- The RRBs should have a track record of profitability and earned operating profit of minimum ₹15 crore for at least three out of the previous five years, according to the draft guidelines issued by the finance ministry recently.
- Besides, there should not be any accumulated loss and the lender should have given return on equity of minimum 10% in three out of the preceding five years, it said.
- As per the draft norms, the responsibility of identifying suitable lenders for issuing initial public offering (IPO) has been left with the respective sponsor banks.
- The sponsor bank would take into account the relevant norms and regulations of the Securities and Exchange Board of India (Sebi) and Reserve Bank of India (RBI) regarding capital raising and disclosure requirements while identifying RRBs for IPO, it said.

About

- Regional Rural Banks (RRBs) are **government owned scheduled commercial banks** of India that operate at regional level in different states of India.

Establishment

- Regional Rural Banks were established under the provisions of an ordinance passed **on 26 September 1975 and the RRB Act 1976** to provide sufficient banking and credit facility for agriculture and other rural sectors.
- As a result, five RRBs were set up on 2 October 1975 **on the recommendations of the Narsimha Committee** on Rural Credit, **during the tenure of Indira Gandhi's government.**

Objectives of RRB

RRBs were set up with the following set of objectives:

- To overcome the credit gaps that is prevailing in rural areas.
- To restrict the flow of cash from rural to urban areas by adopting necessary policies and measures.
- To generate employment opportunities in rural areas.
- To provide basic banking facilities to rural and semi-urban areas.
- To give effect to some governmental functions such as disbursal of wages under MGNREGA policy.
- To provide other bank-related facilities such as locker facility, internet banking, mobile banking, debit a credit card, etc.
- To grant credit facilities to people belonging to rural areas such as small farmers, artisans, small entrepreneurs, and so on.

- To accept deposits from people.

Ownership

- The RRBs are **jointly owned by the central government, state government, and the sponsoring bank with 50%, 15%, and 35% shareholding respectively.**

First RRB

- Prathama Bank, with head office in Moradabad, Uttar Pradesh was the first RRB.

Ministry

- These banks are **under the ownership of Ministry of Finance,** Government of India.

Mandate

- They were **created to serve rural areas with basic banking and financial services**. However, **RRBs also have urban branches**.

Area of operation

- The area of operation is limited to the area notified by the government of India covering, and it covers one or more districts in the State.

Working

- These banks, overall affairs are managed by a Board of Directors, which consists of one Chairman, three directors as nominated by the Central Government, maximum of two directors as nominated by the concerned State Government, and a maximum of three directors as nominated by the sponsor bank.

Management

- Management of each RRB is vested in a **nine-member board of directors, headed by a Chairman, appointed by the Government of India.** While discharging their functions, they have to cover the commercial angle, and at the same time, follow the directive principle issued by the Government. For example, they can appoint officers and employees, but their salary structure is prescribed by the Government according to the one existing in the state where the bank is located.

Functions

RRBs perform various functions such as:

- Providing banking facilities to rural and semi-urban areas,
- Carrying out government operations like disbursement of wages of MGNREGA workers and distribution of pensions,
- Providing para-banking facilities like locker facilities, debit and credit cards, mobile banking, internet banking, and UPI services.

Importance of RRBSs

- The importance of Regional rural Banks lies in the fact that they have been able to **uplift the rural sections of the society** by catering to their banking and financial needs.
- They provide loans for crops, other agricultural activities, for artisans and cottage industries, small businesses, etc. Further, they have also been advancing **loan facilities to differently-abled persons** and weaker sections of society.
- **Reduce rural and urban gap** by mobilizing financial resources and services to rural regions.
- Regional Rural Banks pave the way for **inclusion of the marginal population** like small farmers, Below Poverty Line (BPL) farmers and workers, small entrepreneurs, artisans, women, etc.
- Regional Rural Banks assist rural businesses by providing them short-term loans, insurance facilities, etc., and help to **improve the role of entrepreneurship in rural areas.**
- Providing assistance like loans, advances, insurance to agriculturists for farming inputs, equipment, processing, marketing activities, and cooperative societies helps in the **growth of agriculture and the advancement of farmers.** Many public and private sector banks do not deal with farmers and rural section due to their small financial needs, fewer incomes, etc. In such a case, there is a need for a separate banking system to protect the interests of these sectors.
- The RRBs look forward to **covering underserved rural areas** in terms of financial services and extending credit assistance.
- Help in the growth of cooperative societies, agricultural societies, etc.
- RRBs **reduce** farmers' and the weaker sections' **dependency on traditional sources such as moneylenders** who exploited them with a high rate of interests on loans.

Evaluation of RRBs by Narasimham Committee on the Financial System

The Committee referenced three fundamental issues of RRBs:

- RRBs have a low acquiring limit due to such vast numbers of limitations put on the business attempted by these banks;
- With the ongoing honor of a council, the wages and pay sizes of RRBs would be like that of business banks, and in this manner, the general concept of ease option in contrast to the activity of business bank has been invalidated; and
- The very region of tasks of RRBs is additionally being used by the supporting banks by running their own country branches promoting specific abnormalities like duplication of administrations and uses control and organization.

Other reasons behind non-suitability of RRBs:

- RRBs can set up its branches for the most part in uneven and under-banked zones;
- The loaning activities of RRBs are mainly limited to target gathering made out of little borrowers of country and semi-urban territories; and
- The pace of intrigue charged by RRBs on their advance is nearly lower.

Improvements needed in the working of RRB

- The unique role of RRB in providing credit facilities to weaker sections in the villages must be preserved. The RRB **should exist as rural banks of the rural poor.**
- The RRB may be permitted to **lend** up to 25% of their total advances **to the richer section of the village society.**
- The State Government should also take keen interest in the growth of RRB.
- **Participation of local people** in the equity share capital of the RRB should be allowed encouraged.
- **Local staff** may be appointed as far as possible.
- **Cooperative societies may be allowed to sponsor** or co-sponsor with commercial banks in the establishment of the RRB.
- A **uniform pattern of interest rate structure** should be devised for the rural financial agencies.
- The RRB must **strengthen effective credit administration** by way of credit appraisal, monitoring the progress of loans and their efficient recovery.
- The credit policy of the RRB should be based on the group approach of financing rural activities.
- The RRB may initiate certain **new insurable policies like deposit-linked cattle** and other animals insurance policy, crop insurance policy or the life insurance policy for the rural depositors.
- The RRB may **relax their procedure for lending** and make them easier for village borrowers.
- **Co-ordination between district level development planning and district level credit planning** is also required in order to chart out the specific role of the RRB as a development agency of the rural areas.
- Steps needed for **opening more branches in more fragile and remote zones** of the state.
- Profitability can be improved by **controlling the expenses and expanding the salary.**
- The RRBs must be **cautious and diminish the working costs** since it has been found from our examination that these costs have expanded the absolute consumption of the banks.
- The RRB must **reinforce successfully credit organization** by method for credit examination, observing the advancement of advances and their productive recuperation.

DIRECT TAX COLLECTIONS

GS-III ECONOMY

Context

- Gross direct tax collections including corporate and personal income tax rose nearly 24 per cent so far in the current financial year to Rs 8.98 lakh crore, the tax department said.

Details

- This includes a 32.3 per cent growth in personal income tax (including Securities Transaction Tax) mop up and 16.73 per cent increase in corporate tax revenues over the same period last year
- After adjusting for refunds, the net direct tax collections between April 1-October 8 stood at Rs 7.45 lakh crore, which is 52.46 per cent of the Budget estimates (BE) for the full year tax collection target, the department said.
- The Budget had estimated direct tax collection at Rs 14.20 lakh crore this fiscal, higher than Rs 14.10 lakh crore collected last fiscal (2021-22). Tax on corporate and individual income makes up for direct taxes.
- Direct Tax collections up to 8th October, 2022 show that gross collections are at Rs 8.98 lakh crore which is 23.8 per cent higher than the gross collections for the corresponding period of last year
- Refunds amounting to Rs 1.53 lakh crore have been issued between April 1- October 8, an increase of 81 per cent over the corresponding period last year.
- After adjusting refunds, net direct tax collection stood at Rs 7.45 lakh crore, 16.3 per cent higher over the year-ago period. This includes a 16.25 per cent increase in PIT (including STT) and 16.29 per cent in corporate tax.
- Tax collection is an indicator of economic activity in any country. But in India, the robust tax collection was despite a slowdown in industrial production and exports.

What is a Direct Tax?

- Direct taxes, usually **levied on a person's income and wealth,** are paid directly by people or an organization to the Government.
- The person or the organization in question cannot transfer this type of tax to another person or entity for payment. Some of the examples of direct tax include income tax and wealth tax.

Types of Direct Taxes in India

- The various types of direct taxes levied on the citizens by the Government Of India are discussed as follows:

1. Corporate Tax

- Under the Indian Income Tax Act, 1961, **both Indian as well as foreign organizations are liable to pay taxes to the government.**
- The corporate tax is **levied on the profit of domestic firms that are different from the shareholders.**
- Also, foreign corporations whose profits appear or are deemed to emerge in India are also liable to pay taxes to the Government of India.
- The income of a company, be it in the form of dividends, interest and royalties, is taxable. Corporate tax also includes the following :

Minimum Alternative Tax (MAT):

- The MAT is imposed by the Government on Zero Tax companies. The accounts of these companies are made according to the Companies Act.

Fringe Benefits Tax (FBT):

- Fringe benefit tax (FBT) was a form of tax that companies paid in lieu of benefits they offered their employees in addition to the compensation paid to them (examples, gym, drivers and maids). It was **included by the Finance Act 2005 with effect from April 1, 2006.**

Dividend Distribution Tax (DDT):

- An amount that is declared, distributed or paid as a dividend to the shareholders by a domestic company is taxed under the Dividend Distribution Tax. It is applicable to domestic companies only; **foreign companies are exempted from this tax rule**.

Securities Transaction Tax (STT):

- The SST is imposed on the income which the companies get through taxable securities transactions. This tax is free of any surcharge. It is **similar to tax collected at source (TCS).** STT is a direct tax levied on every purchase and sale of securities that are listed on the recognized stock exchanges in India.

2. Wealth Tax

- The wealth tax is **imposed on property owners**. It does not matter if the property is generating an income or not.
- If owning a property, one is liable to pay wealth tax yearly to the Government of India on the basis of the current market value of the property.
- Not everything is taxable under the wealth tax law.
- The working assets are exempted from the wealth tax law. Some of the examples of working assets are as follows:
  1. Gold Deposit Bonds
  2. Stock Holdings
  3. Commercial Complex Properties
  4. House property (rented for more than 300 days yearly)
  5. House property owned for business or professional requirement
  6. House property held for business or profession

3. Capital Gains Tax

- The capital assets of an individual refer to anything owned for personal use or to make an investment.
- For businesses, the **capital asset is anything that can be used for more than a year** and is not intended to be sold or liquidated during the course of business operation.
- Machinery, cars, homes, shares, bonds, art, businesses and farms are some of the examples of capital assets.
- The capital gains tax is imposed on the income derived from the sale of investments or assets.
- On the basis of the holding period, **capital tax is categorized under short-term gains and long-term gains**. The formula to calculate the capital gains is:

Capital Gains = Sale Value – Purchase Value

- **Only those capital assets are liable to short-term gain, which are sold within 3 years of acquisition**.
- The exception to this rule is securities. The capital assets sold after being held for more than 3 years fall under long-term gains

Benefits of Direct Tax

The direct taxation has its share of benefits. Some of them are listed as follows:

Economic:

- The direct tax such as the income tax is **collected annually and is mostly deducted at the source**.
- For example, the income tax is deducted from an employee's salary every month.
- This **saves a great amount of administrative costs** as here the employer acts as the tax collector.
- This system makes direct tax more economical than other types of taxes where a lot of administrative costs are involved.

Productive:

- The direct taxes are also very productive. The revenue generated from direct tax is directly proportional to the changes in the national wealth of the country.
- In simple words, the **increase in a country's population and/or prosperity will consequently increase the returns on direct tax.**

Certain:

- In case of direct tax, a taxpayer is certain about the amount of tax to be paid.
- In addition, the tax authorities can also precisely estimate the revenue they can expect from the direct tax.
- There is **no ambiguity in the tax amount** as it is decided before the tax submission date.
- This certainty on the tax amount from both the sides **helps in eliminating corruption from the tax collection system.**

Equitable:

- The direct taxes are **imposed on the basis of a taxpayer's income.**
- The taxpayers with high income need to pay more taxes compared to the taxpayers with lesser income. In other words, the rich pay more taxes than the poor.
- This is, however, applicable to all the sections of the society.
- People belonging to similar economic conditions are taxed under the same rate.
- The equitable trait of the direct tax serves the purpose of equality and justice across all sections of the population.

Progressive:

- The direct taxes **play an important role in reducing the gap of financial inequalities across the country.**
- These taxes are progressive **as the government imposes tax on people according to their income**.
- The money collected from these taxes helps implement policies and rules for the uplift of the poor in the society, helping achieve the aim of social and economic equality.

Anti-inflationary:

- Direct taxes can be used as an anti-inflationary tool to **stabilize the price level in the market**.
- It can be **used to control the use and demand of products.**
- The increase in demand of the product and services during **inflation can be decreased by increasing the direct tax.**
- Doing this will force people at large to spend less money to purchase the products and services, thus, reducing their demand and consequently the inflation rate.

Disadvantages of Direct Taxes

Inconvenient to tax payers:

- Direct taxes are inconvenient and irksome to tax payers. Nobody pays tax happily. They are irksome partly because numerous accounting and other formalities are to be observed and partly because large lump sum payments have to be made. Every increase in direct taxes hurts the feelings of the tax payers.

Uneconomical:

- Direct taxes are uneconomical in the sense that the tax authorities have to contact each and every tax payer. For this purpose, a large organization is required. The cost of collecting these taxes is much more and the net revenue income is too little.

Disincentive to Work and Save:

- One disadvantage of direct taxes is that **they reduce the desire to work and save**. The rate of direct taxes are usually high. Many business ventures are not undertaken on the ground that a large part of the income earned will have to be given to the government in the form of taxes. Thus, direct taxes reduce incentives to work hard and save.

Evasion:

- Another disadvantages of a direct tax is that it is **liable to be evaded**. Dishonest persons generally file false return of their income and wealth. Businessmen in India generally manipulate their accounts to evade tax liability. Honest persons suffer while dishonest persons enjoy. In India, problem **of black money is the result of large tax evasion**.
- That is why a direct-tax is **"a tax on honesty."**

Narrowness of Scope:

- Direct taxes are levied only on certain groups of persons. A large number of citizens are not covered under the tax net. Due to this narrowness of their scope they do not raise the civic sense in all the groups.

Arbitrary:

- Another objection against direct taxes is that they are invariably levied arbitrarily by the government. No well-defined principles are considered while fixing the rates of taxes. This is against the spirit of social justice.

Unpopular:

- These taxes are unpopular, partly because the tax payers are not going to be directly benefited by these taxes and partly because they irk the tax-payer.

WORLD ECONOMIC OUTLOOK: IMF

GS-III ECONOMY

Context

- **The central message of the International Monetary Fund's latest World Economic Outlook (WEO) — it publishes two WEOs each year (in April and October) as well as two updates (January and July) — to policymakers around the globe: "The worst is yet to come" for the world economy.**

Details

- IMF does separately state that "more than a third of the global economy will contract this year or next, while the three largest economies—the United States, the European Union, and China—will continue to stall".
- Persistently high inflation and stalling growth is possibly the toughest policy challenge available.

Outlook on growth

- IMF has sharply cut the forecast for global growth — from 6.0 per cent in 2021 to 3.2 per cent in 2022 and 2.7 per cent in 2023.
- Barring the global financial crisis of 2008 and the sharp fall immediately after the Covid pandemic in 2020, this is the weakest growth profile for the world since 2001.

On inflation

- Global inflation is now expected to peak at 9.5 per cent in late 2022.
- It is expected to remain elevated for longer than previously imagined and is likely to decrease to 4.1 per cent only by 2024.
- A particular worry here is the trajectory of core inflation — that is the inflation rate when prices of food and fuel are taken away. Core inflation typically rises and falls more gradually than inflation in food and fuel.

Downside risks in these projections

- The first risk is that of policy miscalibration. Given the precarious situation facing most economies as well as massive uncertainty about what lies ahead, this is the biggest worry.
- Even when fiscal and monetary policies are aligned, there can be other mistakes. For instance, monetary policymakers can over-tighten their stance or do the opposite.
- Over-tightening risks stalling down growth while under-tightening risks inflation seeping through to core inflation and taking longer to contain.
- Another big cause of worry is financial stability and its interplay with a stronger US dollar.
- Lastly, there are geopolitical risks associated with the war in Ukraine. A worsening, or prolonging of the conflict can make all the above-mentioned pressures worse.

What it means for India?

- India's GDP growth rate is better and inflation is not as high.
- But these metrics hide that in absolute terms, India is barely out of the contraction suffered in 2020, that it was home to the most people (5.6 crore, according to World Bank) pushed below abject poverty in 2020 or that crores are unemployed.
- Moreover, if RBI cuts its growth rate forecast in April (7.2 per cent) by the same measure as IMF has (1.4 per cent points), India's growth in 2022-23 will be 5.8 per cent.
- The threat to India comes from at least four sources:
  1. higher crude oil and fertiliser prices will spike domestic inflation;
  2. global slowdown will hurt exports, dragging down domestic growth and worsening the trade deficit;
  3. a strong dollar will put pressure on the rupee's exchange rate, which will likely result in reducing our forex reserves and
  4. reducing our capacity to import goods when the going gets tougher.
- Also, given the low demand among most Indians, the government might be forced to spend more towards providing basic relief in the form of food and fertiliser subsidies. This will worsen the government's financial health.

LEADS SURVEY REPORT 2022

GS-III ECONOMY

Context

- The Gati Shakti National Master Plan completed one year. To mark the occasion, the Ministry of Commerce and Industry (MoCI) published the fourth edition of Logistics Ease Across Different States (LEADS) Report 2022.

LEADS Report

Launch

- The 'Logistics Ease Across Different States' (LEADS) Report was first launched in 2018.

Objective

- The Report is released every year with the main objective of ranking Indian states and UTs on the basis of the efficiency of their respective logistics ecosystems. The index is an indicator of the efficiency of logistical services necessary for promoting exports and economic growth.
- The index aims to boost the logistics performance across India, which is critical for reducing the cost of transactions and boosting international and domestic trade.

Ranking

- It lists the various actions taken by each state to improve ease of storage and movement of goods, identifies the shortcomings in physical, regulatory and operational environment in each state and gives suggestions to each state on the way forward.
- It provides three performance categories – Achievers (states and UTs achieving 90 per cent or more), Fast Movers (states and UTs scoring between 80 and 90 per cent), and Aspirers (states and UTs with percentage scoring below 80 per cent).

Survey Methodology

- The LEADS survey assesses viewpoints of various users and stakeholders across value chain including shippers, terminal infrastructure service providers, logistics service providers, transporters and government agencies to understand the enabler and impediments to the logistics ecosystem in the country.
- The annual survey processes the data received from stakeholders (perception data) and States/ UTs (objective data) and ranks the logistics ecosystem of each State/ UT using a statistical model.

Findings of the 2022 LEADS Report:

Achievers

- States in the Achievers category are Assam, Chandigarh, Delhi, Haryana, Himachal Pradesh, Karnataka, Maharashtra, Odisha, Punjab, Tamil Nadu, Telangana, Uttar Pradesh and Uttarakhand.

Fast Movers

- States listed in the Fast Movers category include Madhya Pradesh, Rajasthan, Kerala, Puducherry, Sikkim and Tripura.

Aspirers category

- The Aspirers category of the ratings have states like Bihar, Chhattisgarh, Goa, Andaman and Nicobar Islands, Lakshadweep, Ladakh, Jammu and Kashmir, Arunachal Pradesh, Mizoram and Nagaland.

How was the 2022 LEADS Report different?

- For the 2022 Report, **the survey was not virtual but a physical one** wherein, apart from the public sector stakeholders, the ones from **the private sector were also contacted**.
- The private stakeholders included Shipper/Export/Importer, Logistics Service Providers (Freight forwarders, CHAs, Custom brokers etc), Transport Service Providers (Truck operators etc) and Transport Infrastructure Service Providers (ICD/CFS operators, port operators, warehouse operators etc.). The aim is to understand the enablers and impediments of the logistics ecosystem in the country.

Significance of LEADS Report

- The LEADS Report is an indicator of results of various initiatives for improving the logistics ecosystem throughout the country.

- The LEADS Report will assist in the implementation of the PM Gati Shakti National Master Plan (PMGS-NMP) and the National Logistics Policy (NLP) by identifying gaps in the existing logistics services, infrastructure and regulatory environment.

Overview of India's Logistics Sector

- India's logistics are estimated to account for about **14.4% of GDP.**
- More than 22 million people rely on it for their income.
- Overall, India's logistics sector consists of 37 export promotion councils, 40 Participating Government Agencies (PGAs), 20 government agencies, 10,000 commodities and 500 certifications.
- In 2019, the Indian logistics sector was valued at Rs. 15.1 lakh crore (US$ 190 billion). The **unorganised sector amounts to 99% of the logistics sector** that includes owners of less than five trucks, brokers or transport companies' affiliates, small-scale warehouse owners, customs brokers and freight forwarders, among others.
- The development of the logistics sector is also reflected by the fact that India scored 90.3% in the United UNESCAP's Global Survey on Digital and Sustainable Trade Facilitation conducted in 2021, which is an exceptional improvement from the score it secured in 2019 of 78.5%, brought about by gains in the scores of five important indicators.

Challenges faced by the Logistics Sector in India

Overview

- Logistics in India, unfortunately, is **highly fragmented, and to date, 85 percent of the transporters own less than 20 trucks,** when it comes to **warehousing over 90 percent of warehouses are smaller than 10,000 square feet each**. Going forward, the warehousing space opens up the opportunity for consolidation and further growth.
- **Organized players account for only 3.5 percent of the logistics market**. However, they are expected to grow much faster at a compounded rate of more than 35 percent over the next few years.
- The total logistics spending in India is a major lag because almost **14 percent of the GDP is spent on logistics costs, which is significantly higher than developed countries like China, US and Europe**, where the global average is somewhere around 8 percent. So there's lots of room for improvement.

Transportation Issues

- In India, a predominant mode of freight cargo transportation is via road, with nearly 60% cargo moved by road and 32% by rail. Due to over-saturated rail networks and high rail tariffs. Movement of goods is done by road transportation, which proves to be quite inefficient, because of poor road infrastructure, multiple checkpoints, and congestion.

Port Sector Issues

- Due to high turnaround times for ships because of overcrowded berths and delay in cargo evacuation unloaded at berths, logistics companies in India suffer unreasonably. Coastal shipping in India gets hampered due to the weak land side and port facilities, and insufficient depth at ports discourage large vessels, thus curbing the large scale use of it for freight movements.

Tax Structure and Warehousing Problems

- The complicated tax regime places several hardships on logistics companies in India. Multiple State and Center taxes lead to considerable loss of time in transit on roads. The poor state of warehousing and their restricting locations are one of the few major concerns of this industry. Storage facilities are quite fragmented for low margin products thereby resulting in a disincentive to create a large integrated warehousing space. The Government owned most of the large warehouses and used for food grain.

Technological and Skill Deterrents

- In India, automation of processes is still in the embryonic stage and non-standardization in the industry due to its fragmentation further slows down the progress. Acceptance and adoption of technological advancements like RFID, tracking, warehouse management system, etc. can resolve the issues between domain requirement and IT. Besides this, there is lack of quality workforce in this sector, and the available skill set needs to be upgraded urgently.

Fuel Costs

- The highest challenge in logistic industry is high fuel costs. If the fuel prices goes high is likely to increase transportation costs to the shippers. Raising the fuel prices are increasing the surcharges added to freight rates, this will cut down the revenue and earnings of truckers as fuel prices increase.

Customer Services

- Customers want the full clarity into where their delivery is at on time. Now a days, the location of a shipment is as associated as your social network. In fact, the customer anticipation have increased, their readiness to pay for speedy shipping has declined with just about 50% of consumers not in the mood to pay anything excess for less than two-day shipping.

Driver Shortage & Retention

- Employment and detainment of the driver will be an issue despite the lower demand of the shipments.

Government Regulations

- Government Regulations Carriers face significant compliance regulations imposed by government of state and other

authorities.

Overcoming the challenges

- The need of the hour is to **develop adequate infrastructure** in the fringe areas of major metropolitan trade hubs of the country and in high commerce corridors.
- To combat other legal challenges, it is suggested that there should be an **organized inventory of all logistics and supply chain documentation**.
- Furthermore, moving forward to a **technology-driven documentation approach** would highly impact the logistic sector by **avoiding transit delays and untimely deliveries.**

DIGITAL BANK UNITS

GS-III ECONOMY

Context

- Recently, India launched 75 Digital Banking Units in villages and small towns across the country.

Background

- Availing banking services has traditionally been a struggle for people living in villages and small towns.
- Even as more than a billion bank accounts exist in India, people living in remote areas have had to typically take a day off from the work to visit a nearby city for their banking related work.
- The Digital Bank Units are being set up to ensure that the benefits of digital banking reach every nook and corner of the country and cover all states and union territories.

What are Digital Bank Units?

- Digital Bank Units are brick-and-mortar outlets or specialised fixed point business units, that are equipped with tablets and internet services. This is **to help individuals and small businesses open their savings accounts, access government identified schemes, perform verifications, make transactions and avail loans and insurance.**

Who will set up these DBUs?

- Commercial banks (**other than** regional rural banks, payment banks and local area banks) with past digital banking experience are permitted to open DBUs. Unless specifically restricted, they don't need to take permission from the RBI in each case.

How many banks participating in DBUs?

- As many as 11 public sector banks, 12 private banks and one small finance bank are participating in the endeavour.

What services will be provided by these units?

- The RBI has mandated that each DBU will have to offer **certain minimum digital banking products and services**. Such products should be on both liabilities and assets side of the balance sheet of the digital banking segment. Digitally value-added services to conventional products would also qualify as such.
- DBU outlets will provide a variety of digital banking facilities to people such as opening of savings account, balance-check, print passbook, transfer of funds, investment in fixed deposits, loan applications, stop-payment instructions for cheques issued, apply for credit / debit cards, view statement of account, pay taxes, pay bills, make nominations, among others.
- The services include digital kit for customers, mobile banking, Internet banking, digital kit for merchants, UPI QR code, BHIM Aadhaar and point of sale (PoS).
- Other services include making applications for and onboarding customers for identified retail, MSME or schematic loans. This may also include end-to-end digital processing of such loans, starting from online application to disbursal and identified government-sponsored schemes that are covered under the national portal.
- DBUs will spread Digital Financial Literacy and special emphasis will be given to customer education on cyber security awareness and safeguards.
- Also, there shall be digital mechanisms to offer real-time assistance and redress customer grievances arising from business and services offered by the DBUs directly or through business facilitators and correspondents.

Transactions one can do at a DBU- Recent announcements

- Both ICICI Bank and HDFC have announced to set up DBUs.
- For example: ICICI bank DBU's will have 2 distinct features – **a Self-service Zone and a Digital Assistance Zone.**

Self-service Zone

- At the Self-service Zone, the customers can access ATM, a Cash Deposit Machine (CDM) and a Multi-Functional Kiosk (MFK) that offers services like printing of passbook, depositing cheque and accessing internet banking.

- It will also provide a digital interactive screen where customers can interact with a chatbot to know about products, offers and mandatory notices.

Digital Assistance Zone

- The Digital Assistance Zone will have branch officials to assist customers to undertake the services including opening of savings account, current account, fixed deposit and recurring deposit etc.
- The above services will be offered in a completely digital manner through a tablet device, using Aadhaar-based eKYC.

Significance

- The Digital Banking Units are part of Government's efforts to serve people in the far-flung areas of the country.
- DBUs will enable customers to have cost effective, convenient access and enhanced digital experience of banking products and services all-round the year.
- DBUs **will also help bring financial services and literacy to more citizens.**

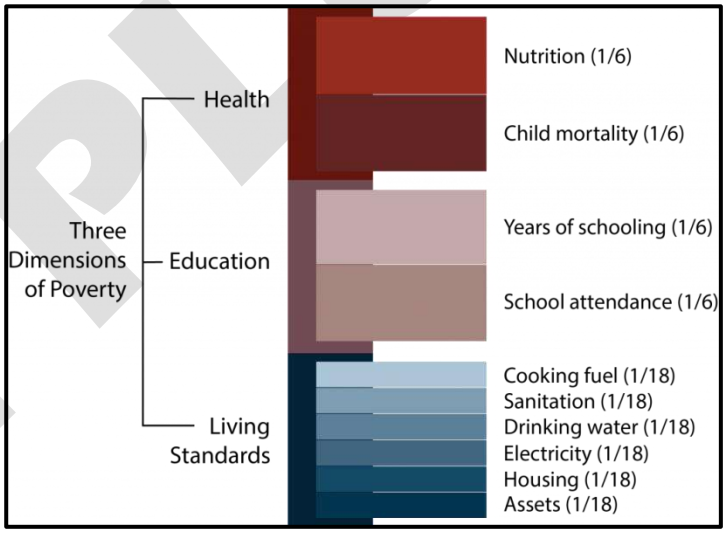
GLOBAL MULTIDIMENSIONAL POVERTY INDEX

GS-III ECONOMY

Context

- **According to the Global Multidimensional Poverty Index (MPI), Poverty in India during the 15 years between 2005-06 and 2019-21 declined by nearly 41.5 crores.**

Details



- The Global Multidimensional Poverty Index (MPI) was released by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI).
  - The report highlighted that the poverty rate in India declined from 55.1% in 2005-06 to 16.4% in 2019-21.
- MPI Improvement for India has resulted in a reduction in poverty in South Asia.
- **The highest number of poor people was recorded in Sub-Saharan Africa.**
- The report doesn't fully consider the effects of the COVID-19 pandemic on poverty in India.
  - For MPI, Nearly 71% of the data taken from the National Family Health Survey-5 (2019- 2021) were collected before the pandemic.
- The global MPI makes a deprivation profile of each household and person based on 10 indicators ranging from Health, Education and Standard of living.
  - All indicators are equally weighted within each dimension.
  - The global MPI identifies people as multidimensionally poor if their deprivation score is 1/3 or higher.
- **Bihar, the poorest State in 2015-2016, saw the quickest reduction in MPI value.**
  - Poverty fell from 77.4% in 2005-2006 to 34.7% in 2019-2021.
- According to the report, India still has the largest number of poor people worldwide at 22.8 crores, followed by Nigeria at 9.6 crores.

Reasons behind Poverty in India

- **Illiteracy and lack of quality education:** Despite more than 15 million graduates being produced every year, there are no jobs available for them due to the lack of quality education. Most of these graduates are studying outdated educational syllabi and hence cannot be productively employed anywhere.
- **A vicious trap of poverty:** Prevalence of massive malnourishment, stunting and wasting amongst children which negatively impact their physical and mental potential pushing them deeper into the vicious trap of poverty for the rest of their lives.
- **Sub-standard health outcomes:** More than 60% of the household incomes in many families are devoted towards health expenditure. This out-of-pocket expenditure on healthcare is one of the biggest pull factors for poverty.
- **Administrative Bottleneck:** Certain government policies favour one sector over the other. Also, there is a lack of rule of law and enforcement of laws such as the Minimum Wages Act.
- **Income Inequality:** According to Oxfam, the top 10% of the Indian population holds 77% of the total national wealth. 73% of the wealth generated in 2017 went to the richest 1%, while 67 million Indians who comprise the poorest half of the population saw only a 1% increase in their wealth.

- **Discrimination:** Discrimination and poverty go hand in hand. Discrimination can both cause poverty and be a hurdle in alleviating poverty. Ex: Discrimination against women, SC, ST, Disabled, Old age people etc is one of the major causes of poverty among them.
- **Nature of job:** Approximately 56% of the total working population is in the agricultural sector. Which is marked by poor landholding, low productivity and disguised unemployment.
- The issue of low employment growth within industrial and service sectors has contributed to stagnant or declining standards of living.
- **Inadequate public infrastructure**: Lack of accessibility to primary health care centres, quality public schools, research institutions, roads, waterways, rural markets, etc. act complementary for the rise and sustenance of poverty in India.
- **Poor policy structure**: Given the vicious cycle of poverty, government hand-holding is needed to support those above the poverty lines to prevent them from slipping below the line.

Consequences of Poverty

The high infant mortality

- 4 million children die each year in India before their fifth birthday.
- In addition to Nigeria, Pakistan, the Democratic Republic of the Congo and China, India is one of the countries with the highest child mortality rates.
- Pneumonia, malaria and diarrheal diseases as well as chronic malnutrition are the most frequent causes of death.

Malnutrition - not even a bowl of rice a day

- India is one of the world's top countries when it comes to malnutrition: More than 200 million people don't have sufficient access to food, including 61 million children. 7.8 million infants were found to have a birth weight of fewer than 2.5 kilograms - alarming figures for a country commonly referred to as an emerging market.

Child labour - no time to play and learn

- Although child labour for children under the age of 14 in India is prohibited by law, according to o cial figures, 12.5 million children between the ages of 5 and 14 are working.
- Aid agencies assume that in reality, there are many more estimating that 65 million children between 6 and 14 years do not go to school.
- Instead, to secure survival, it is believed that Indian children contribute to the livelihood of their families; they work in the field, in factories, in quarries, in private households and in prostitution.

Lack of education - no opportunities without education

- According to UNICEF, about 25% of children in India have no access to education.
- The number of children excluded from school is higher among girls than boys. Although women and men are treated equally under Indian law, girls and women, especially in the lower social caste, are considered inferior and are oppressed by their fathers, brothers and husbands.
- Without education, the chance of finding a living wage from employment in India is virtually hopeless.

Child marriage - the early end of childhood

- According to an investigation by the medical journal The Lancet, 44.5% of girls are still married in India before they are of legal age.
- Due to poverty, many parents encourage early marriages for their daughters in hopes of better lives for them.

Effects on Society

- The occurrence of violence and crime is geographically coincident. Due to unemployment and marginalization, poor people often indulge in wrong practices such as prostitution, theft, and criminal activities to earn money.
- Coupled with a lack of education and a properly formed moral conscience, a poverty-ridden society is more affected by violence by its people against its people from a sense of deep-seated discontent and rage.
- Homelessness affects child health, women's safety and an overall increase in criminal tendencies. Lack of money is a major cause of stress among the middle class and the poor and leads to a decline in the productivity of individuals.
- Large families fail to meet the monetary needs of the members and children as young as 5 years are made to start earning to contribute to the family income.
- Terrorist organizations offer poverty-ridden families money in exchange for a member's participation in their activities which induces a sense of accomplishment among the youth.

Effect on Economy

- Poverty is a direct index indicating the success of the economy of the country. The number of people living under the poverty threshold indicates whether the economy is powerful enough to generate adequate jobs and comforts for its people. Schemes providing subsidies for the poor of the country again impose a drain on the economy.

Way Forward

- The **growth of the population at the current rate should be checked by the implementation of policies and awareness**

promoting birth control.

- All efforts should be made to increase employment opportunities in the country, either by inviting more foreign investments or by encouraging self-employment schemes.
- Measures should be taken to bridge the immense gap that remains in the distribution of wealth among different levels of society. A 99% one-off windfall tax on the wealth gains of the 10 wealthiest men in Covid19 alone will generate $ 812 billion.
- Certain Indian states are more poverty stricken than others like Odhisha and the North East states. Government should seek to encourage investment in these states by offering special concessions on taxes.
- The primary needs of people for attaining a satisfactory quality of life like food items, and clean drinking water should be available more readily.
- Improvement of the Subsidy rates on commodities and the Public Distribution system should be made.
- **Free high school education** and an increased number of functioning health centres should be provided by the government.
- At the household level, subsidized food grains have enabled people to meet food requirements but there is no certainty of income, particularly during the pandemic time. But Poverty is not just a measure of hunger. There is a need for Universal Income Support. Economic Survey 2016-17has suggested replacing all current cash transfers with universal basic income. The survey wants UBI to replace and not supplement the existing social welfare, and anti-poverty schemes like MGNREGA, PMJSY etc.
- Investments in human capital and public goods have significant positive impacts on private-sector productivity, with estimated rates of return ranging from 15% to upwards of 45 %. The enhanced productivity of human beings or human capital contributes substantially not only towards increasing labour productivity but also stimulates innovations and creates the ability to absorb new technologies.

MINIMUM SUPPORT PRICES

GS-III ECONOMY

Context

- The Union cabinet raised the minimum support price for wheat by 5.45 per cent to Rs 2,125 per quintal from Rs 2,015 per quintal to encourage bringing more area under the crop amid tight government stocks.
- Besides wheat, the government has hiked the minimum support price (MSP) of five rabi crops by up to 9 per cent.

What is MSP?

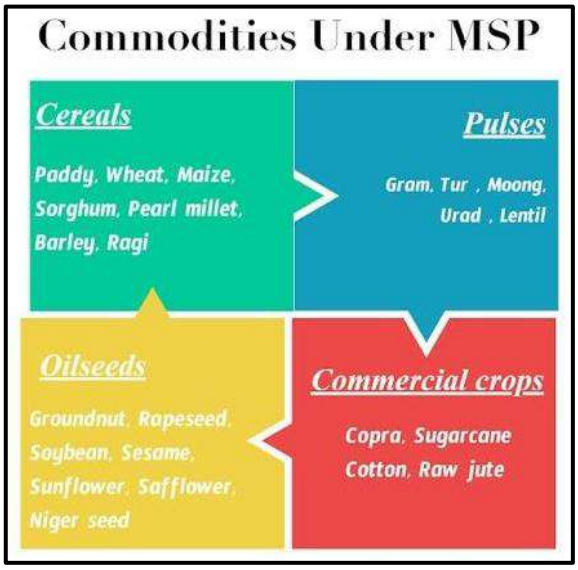
- The minimum support price (MSP) is an agricultural product price, set by the Government of India to purchase directly from the farmer. This is **not enforceable by law.**
- This rate is to safeguard the farmer to a minimum profit for the harvest, if the open market has lesser price than the cost incurred.

Details

- Government of India announces Minimum Support Prices (MSP) for **23 major agricultural commodities** of Fair Average Quality (FAQ) each year at the start of the planting season in both the Crop seasons.
- It does so after taking into account the **recommendations of the Commission for Agricultural Costs and Prices (CACP).**
- The MSP framework was begun in 1966-67 for wheat and extended further to incorporate other fundamental food crops and afterward offered to the poor under the public distribution framework under subsidized rate.

Calculating MSP

- Since 2009, the Commission for Agricultural Costs and Prices fixes the MSP of a crop based on:
  1. cost of production
  2. demand
  3. supply
  4. price fluctuations
  5. market price trends
  6. different costs and
  7. international market prices
  8. agricultural wage rate



Procurement

- The procurement at MSP is being done by **Central and State Agencies under various schemes of Government.**
- Procurement centres are opened by respective **State Government Agencies and Central Nodal Agencies like NAFED, FCI etc.**

- This is done after taking into account the production, marketable surplus, convenience of farmers and availability of other logistics / infrastructure such as storage and transportation etc.

Is the MSP Different in different states?

- Because of the variety in irrigation and wages, the expense of a similar yield changes from one state to another. However, there is no draft of the local Minimum Support Price, so there is one MSP for the whole country.

Current Status of MSP: Pros, Cons & what can be done better?

- The MSP comes as a much relief to many farmers.
- The trouble with MSP is that while it is touted as an all-important factor for farmers promising an instant rise in their income and stability, it also has many drawbacks in implementation.

Significance of Minimum Support Price

- **Fixed Remunerations**– The farmers are financially insured against the impulses of price fall in the market. It gives security to farmers from crop loss and price uncertainty.
- **Help in Decision Making**– MSP are reported toward the start of the planting season, this assists farmers with settling on the best choices of crop that they should plant. This development data assists the farmer with settling the best choice with regards to which yield to plant for the most extreme monetary advantage inside the restrictions of his agricultural land size, environment, and irrigation framework.
- **Crop Diversification** – The MSP declared by the Government of India without precedent for 1966-67 for wheat has been reached out to around 24 crops at the present. This has urged the farmers to develop these different crops to maximize their agricultural income.
- **Price Limitations for Private Purchasers** – MSP conveys a value message to advertise that if vendors don't offer higher than MSP costs the farmer may not sell them his produce. In this manner, it goes about as an anchor or benchmark for agricultural produce. It guarantees the market costs won't be radically lower than Minimum Support Price.
- **Commercial Crops**– MSP is utilized as an instrument to boost the creation of explicit food crops which is short in supply. MSP spurs farmers to develop commercial crops and expanded creation on a commercial basis.
- **Purchasing Power Enhancement** – MSP provides fixed amounts in framers' hands which make them financially stable. It helps in upgrading the buying limit and updating the style of living of farmers and their families.
- **Empowers farmers**: It is a one-price policy guaranteeing assured pay, which directly influences farmer's pockets. It considers various factors when fixing the price and does not leave the farmer at the mercy of the market.

Cons of MSP

- **Low Number of Beneficiaries:** The advantages of this plan don't arrive at all farmers and for all crops on the farm. Not all farmers have had the option to get the advantages of MSP due to the absence of awareness about MSP schemes. There are numerous locales of the nation like the north-eastern district where the execution of MSP schemes is week.
- **Inadequate Storage Facility:** MSP without adequate storage capacity has brought about immense heaping of stocks in the stockrooms. The stock has now become twofold the necessities under the plans of PDS, Buffer stock and so there is the requirement of more storage space for these agricultural produces.
- **Natural Issue:** MSP prompts non-logical farming practices whereby the soil, water is worried to a degree of depletion groundwater table and salinization of soil.
- **Yield Variety:** MSP influences the crop variety in India. With MSP editing designs get influenced as it prompts the creation of MSP upheld only those crops as it ensures returns.
- **Inflation:** Too much of a hike on MSP either paves way for inflationary effects on the economy, with a rise in prices of foodgrains and vegetables, or loss to government treasury if it decides to sell at a lower price as compared to the higher MSP it bought at.
- **Disparity:** MSP is a nationwide single price policy. However, the actual costing for production varies from place to place, more severely so in areas lacking irrigation facilities and infrastructure. Thus, not all farmers have equal benefits.
- **Market value way and above MSP:** Market prices should ideally never be below MSP. If they fall below the MSP, in concept, the farmer can always sell it to the government, which will then resell it or store as buffer. However, practically this does not always happen. The market value in many cases does fall below MSP due to lack of infrastructure and procurement apparatus on the government's end.

Way Ahead

Alternative Options for MSP:

- **Substitute Pay Models:** Instead of depending on MSP alone, the public authority needs to investigate substitute models to support farmers.

- **Value Deficiency Payment:** To take care of the issue of MSP, Both NITI and Economic Survey suggest Price Deficiency Payment (PDP) in which the public authority pays the farmers the contrast between modular rate (the normal costs in major mandis) and theMinimum
- **Support Price:** A few states like Madhya Pradesh (Bhavantar Bhugtan Yojana), Haryana government (Bhavantar Bharapai Yojana) have dispatched value shortage financing plans.
- **DBT Support:** By moving from cost to pay support, all market-twisting info and yield appropriations can be imploded into the Pradhan Mantri Kisan Samman Nidhi or PM-KISAN scheme.
- **Stock Should be Diversified:** The public authority should stock adequate amounts of all fundamental food things not just rice and wheat, that empower powerful market mediation, with the premium of helpless buyers better dealt with through designated cash moves.
- **Deficiency Price Payment**: The Govt. can also go for the alternative of **'deficiency price payment'** without requiring the government to purchase undesirable quantities and undesirable commodities. Deficiency price payment must be part of the difference between the actual price received by farmers and the MSP. **Example:** The Madhya Pradesh government has launched a 'Price Deficiency Payment' schemes for the farmers.
- **Swaminathan Commission:** It prescribed MSP 50 per cent above C2.
- **Direct Income Transfers for Non-Staple Food Crops:** Public procurement needs to continue for staple cereals, but farmers of non-staple food crops need to be provided with direct income transfers. These are fiscally prudent, obviate the need for physical procurement and storage by the government, do not distort current production, and also provide a basic income to farmers.

PROMPT CORRECTIVE ACTION (PCA)

GS-III ECONOMY

Context

- The Reserve Bank of India (RBI) has placed Dhanlaxmi Bank under tight monitoring with the bank's financial position coming under greater public scrutiny.

Details

- The RBI's tight monitoring comes in the wake of the intense court battle started by a group of minority shareholders against the bank's management team over inadequate financial disclosures, rising expenses, and general mismanagement of the business.

RBI's supervision

- The Banking Regulation Act, 1949 empowers the Reserve Bank of India to inspect and supervise commercial banks. These powers are exercised through on-site inspection and off-site surveillance.

On site Inspection

- On site inspection of banks is carried out on an annual basis. Besides the head office and controlling offices, certain specified branches are covered under inspection so as to ensure a minimum coverage of advances.
- The Annual Financial Inspection (AFI) focusses on statutorily mandated areas of solvency, liquidity and operational health of the bank. It is based on internationally adopted CAMEL model modified as CAMELS, i.e., capital adequacy, asset quality, management, earning, liquidity and system and control. While the compliance to the inspection findings is followed up in the usual course, the top management of the Reserve Bank addresses supervisory letters to the top management of the banks highlighting the major areas of supervisory concern that need immediate rectification, holds supervisory discussions and draws up an action plan, that can be monitored. All these are followed up vigorously. Indian commercial banks are rated as per supervisory rating model approved by the BFS which is based on ' CAMELS ' concept.

Off-site Monitoring

- As part of the new supervisory strategy, a focussed off-site surveillance function was initiated in 1995 for domestic operations of banks. The primary objective of the off site surveillance is to monitor the financial health of banks between two on-site inspections, identifying banks which show financial deterioration and would be a source for supervisory concerns. This acts as a trigger for timely remedial action.

Prompt corrective action (PCA)

- Prompt corrective action (PCA) is enforced by RBI **when banks breach certain regulatory requirements such as return on asset, minimum capital, and quantum of non-performing assets**.
- Banks under PCA face restrictions like dividend distribution, branch expansion, and management compensation or may require promoters to infuse capital in the bank.
- Reserve Bank of India had introduced a Prompt Corrective Action Framework (PCA) for Scheduled Commercial Banks in 2002.
- The **PCA Framework for NBFCs, came into effect from October 1, 2022**. This is to further strengthen the supervisory tools

applicable to NBFCs.

- Under the PCA, the RBI places restrictions on lending by troubled banks and keeps a close eye on them until their financial position improves sufficiently.

When Does RBI Invoke Prompt Corrective Action?

- RBI takes into account four factors to determine whether it needs to put a bank under the PCA framework. These include **profitability, asset quality, capital ratios and debt level**.
- The central bank grades each of these factors based on actions depending upon the grade/threshold level, categorized from one to three, where 1 is the lowest of the lot and 3 being the highest based on how banks stand with respective frameworks.

Following is a look at these factors and their grades:

Capital Adequacy Ratio (CAR)

- The CAR is basically the capital needed for a bank measured in terms of assets (mostly loans) disbursed by the banks.
- The higher the assets, the higher should be the capital retained by the bank.
- This measures how much debt and equity capital banks possess to cover their asset book risk.
- If CAR is less than 10.25%, but above 7.75%, the bank falls in the first grade.
- Banks having a CAR of over 6.25%, but below 7.75%, fall under grade 2. However, if a bank's capital adequacy ratio is less than 3.625%, it is categorised under grade 3.

Asset Quality

- This parameter refers to the non-performing assets of a bank. If the net NPA of a bank is more than 6%, but less than 9%, it falls under the first threshold.
- If Net NPA crosses the 9% mark, it triggers the second grade. That said, if this metric is 12% or more, the bank will fall in the third grade of PCA.

Profitability

- The regulator considers the return on assets (ROA) of a bank as the key measure for profitability. Note that if a bank's ROA is negative for two, three and four years in a row, it will be categorised as grade 1, grade 2 and grade 3, respectively.

Debt Level/Leverage

- The last factor that RBI considers to measure the financial risk of any bank is its overall debt level/leverage.
- The regulator triggers grade 1 if the overall leverage of a bank is more than 25 times its Tier 1 capital.
- However, when total leverage is over 28.5 times its core capital (including disclosed reserves), RBI takes action according to grade 2 of PCA.

Corrective Actions that can be taken when a Bank is put under PCA framework

1. **Special Supervisory Actions**
   - Special Supervisory Monitoring Meetings (SSMMs) at quarterly or other identified frequency
   - Special inspections/targeted scrutiny
   - Restricted and need based regulatory/supervisory approvals to be given by the Reserve Bank
   - Resolution by Amalgamation/ Reconstruction/ Splitting
   - File insolvency application under IBC (under Insolvency and Bankruptcy Code, 2016)
   - Winding up of the NBFC
2. **Strategy related Actions**
   - Activate the Recovery Plan that has been duly approved by the Supervisor
   - Undertake a detailed review of business model in terms of sustainability of the business model, profitability of business lines and activities, medium and long term viability, etc.
   - Review short-term strategy focusing on addressing immediate concerns
   - Review medium-term business plans, identify achievable targets and set concrete milestones for progress and achievement
   - Undertake business process reengineering as appropriate
   - Undertake restructuring of operations as appropriate

3. **Governance related Actions**
   - RBI may actively engage with the NBFC's Board on various aspects as considered appropriate
   - RBI may recommend to promoters/shareholders to bring in new Management/ Board
   - RBI may remove managerial persons under the RBI Act, as applicable
   - Removal of Director and/or appointment of another person as Director in his place
   - RBI may supersede the Board under the RBI Act and appoint an Administrator
   - RBI may require the NBFC to invoke claw back and malus clauses and other actions as available in regulatory guidelines,

and impose other restrictions or conditions
- Impose restrictions on Directors' or Management compensation, as applicable.

4. **Capital related Actions**
   - Detailed Board level review of capital planning
   - Submission of plans and proposals for raising additional capital
   - Requiring the NBFC to bolster reserves through retained profits
   - Restriction on investment in subsidiaries/associates
   - Restriction in expansion of high risk-weighted assets to conserve capital
   - Reduction in exposure to high-risk sectors to conserve capital
   - Restrictions on increasing stake in subsidiaries and other group companies
5. **Credit risk related Actions**
   - Preparation of time bound plan and commitment for reduction of stock of NPAs
   - Preparation of and commitment to plan for containing generation of fresh NPAs
   - Strengthening of loan review mechanism
   - Restrictions/reduction in total credit risk weight density (example: restriction/ reduction in credit for borrowers below certain rating grades, restriction/reduction in unsecured exposures, etc.)
   - Reduction in loan concentrations in identified sectors, industries or borrowers
   - Sale of assets
   - Action plan for recovery of assets through identification of areas (geography-wise, industry segment-wise, borrower-wise, etc.) and setting up of dedicated Recovery Task Forces, etc.
   - Prohibition on expansion of credit/ investment portfolios other than investment in government securities / other High-Quality Liquid Investments
   - Higher provision

PARBOILED RICE

GS-III AGRICULTURE

Context

- Almost 1,000 tonnes of parboiled rice - which is used to make idlis - are reportedly held up at the ports in Tamil Nadu since last month following the Central government order that levied 20% duty on raw rice exports and banned export of broken rice.

What is parboiled rice?

Definition

- The dictionary meaning of 'parboil' **is 'partly cooked by boiling'**. Thus, the expression parboiled rice **refers to rice that has been partially boiled at the paddy stage, before milling.**

History

- Parboiling of rice is not a new practice, and has been followed in India since ancient times. However, there is **no specific definition of parboiled rice of the Food Corporation of India or the Food Ministry.**

Processes

- There are several processes for parboiling rice. For example, the Central Food Technological Research Institute (CFTRI), Mysuru, uses a method in which the **paddy is soaked in hot water for three hours.**
- There is another common method in which **paddy is soaked for 8 hours**. The **water is then drained and the paddy steamed for 20 minutes**. Also, the paddy is dried in the shade in the method used by the CFTRI, but it is sun-dried in the common method.
- The Paddy Processing Research Centre (PPRC), Thanjavur follows a method known as the **chromate soaking process**. It **uses chromate, a family of salt in which the anion contains both chromium and oxygen, which removes the odour from the wet rice.**
- All processes generally involve three stages—**soaking, steaming and drying**. After passing through these stages, the paddy goes for milling.

Are all rice varieties suitable for parboiling?

- Generally, **all varieties can be processed into parboiled rice**, but it is ideal to use long slender varieties to prevent breakage during milling. However, aromatic varieties should not be parboiled because the process can make it can lose its aroma.

What are the benefits of Parboiled Rice?

- There are several benefits. For example, **parboiling makes rice tougher**.
- This **reduces the chances of the rice kernel breaking during milling**.
- Parboiling also **increases the nutrient value of the rice.**
- Parboiled rice **has a higher resistance to insects and fungi.**
- **Loss of nutrients due to the removal of husk and bran in milling are decreased.**
- During harvesting the vitamin and mineral present in hull (outer covering of the paddy) and bran coat are dissolved and seeped into the endosperm. Part of the scutellum and germ which are rich in B vitamins get fixed to the grain and hence **losses of B vitamins are less.**
- Losses of water soluble nutrients due to washing of rice are less in parboiled rice compared to raw rice.
- Parboiled rice is a source of iron and calcium. Compared to white rice, **parboiled rice has fewer calories, fewer carbohydrates, more fiber, and more protein. This makes it a healthier alternative to traditional white rice.**
- Parboiling improves digestibility and protein efficiency ratio is higher compaired to raw rice.
- Parboiled rice **will not turn into glutinous mass when cooked.**
- Parboiled rice **swells more when cooked to the desired softness**.
- Parboiling **stabilizes the oil content of the bran**. The discrete oil globules in the aleuronic layer of the native rice grain are ruptured into a band by parboiling.

Disadvantages of parboiling

- The **rice becomes darker and may smell unpleasant** due to prolonged soaking.
- Besides, setting up a parboiling rice milling unit **requires a higher investment than a raw rice milling unit**.

Stock of parboiled rice in the country

- According to the Food Ministry, the total stock of parboiled rice is 40.58 lakh metric tonnes (LMT) as on April 1, 2022.
- Out of this, the highest stock is in Telangana at 16.52 LMT, followed by Tamil Nadu (12.09 LMT) and Kerala (3 LMT).
- The stock was in the range 0.04–2.92 LMT in 10 other states —Andhra Pradesh, Chhattisgarh, Odisha, Jharkhand, West Bengal, Karnataka, Bihar, Punjab and Haryana.

Demand of Parboiled Rice in India

- The Food Ministry pegs the parboiled rice demand at 20 LMT per annum for distribution under the National Food Security Act, 2013. According to the Ministry, the **demand for parboiled rice has come down in recent years.**
- In the last few years, **production in parboiled rice-consuming states such as Jharkhand, Kerala and Tamil Nadu has increased,** resulting in less movement to the deficit states.
- Earlier, the Food Corporation of India (FCI) used to procure parboiled rice from states such as Telangana to supply to these states. But in recent years, parboiled rice production has increased in these states. So, the Ministry says, the current stock of parboiled rice is sufficient to meet the demand for the next two years.

PADDY STRAW PALLETISATION

GS-III AGRICULTURE

Context

- With winter approaching and instances of stubble burning in Punjab and Haryana rising, the Union Environment Ministry announced a ₹50 crore scheme to incentivise industrialists and entrepreneurs **to set up paddy straw pelletisation and torrefaction plants.**

What is Stubble Burning?

- Stubble (parali) burning is a method of removing paddy crop residues from the field to sow wheat from the last week of September to November. Stubble burning is a **process of setting on fire the straw stubble**, left after the harvesting of grains, like paddy, wheat, etc.
- It is usually **required in areas that use the combined harvesting method** which leaves crop residue behind.

Reason behind stubble burning

- The main reason for paddy (rice crop) stubble burning is the short time available between rice harvesting and sowing of wheat. A delay in sowing wheat adversely affects the wheat crop. The short timeframe available between rice and wheat crops can also be attributed partly to the 2009 Punjab Preservation of Subsoil Act, where paddy transplantation date is fixed for June 20 which pushes ahead the harvesting of rice crop.
- As a result farmers get less than 20-25 days between two crops. Hence the quickest and easiest solution is to burn the crop residue. It is estimated that 20 million tonnes of rice stubble are produced every year in Punjab, out of which 80% is burnt on the farm. Farmers say they don't have the time or money to store the straw or plow the stubble back into the ground which is quite justified.
- To put it simply, **the traditional way of stubble-burning is easier, low cost and time-efficient, compared to alternatives that demand more time, investment and labour.**

Statistics

- According to an August 2019 study titled **'Fields on fire: Alternatives to crop residue burning in India,'** farmers in northwest India burn around 23 million tonnes of rice straw so that they can clear the land quickly for the sowing of wheat.
- In addition to wheat and paddy, sugarcane leaves are most commonly burnt. According to official reports, more than 500 million tonnes of parali (crop residues) is produced annually in the country. Out of this cereal crops (rice, wheat, maize and millets) account for 70 per cent of the total crop residue.
- From October 2020, air quality in New Delhi and other cities in north India reached up to 20 times higher than the safe threshold levels defined by the World Health Organization.

Impact of Stubble Burning

- The effects of these emissions are devastating. Air quality monitoring stations in Delhi-NCR registered above 999 on the Air Quality Index in 2019, which is way beyond emergency levels. Schools and offices were forced are forced to shut down for days.
- Apart from contributing to air pollution, stubble-burning deteriorates the soil's organic content, essential nutrients and microbial activity – which together will reduce the soil's long-term productivity.
- The cost of air pollution due to stubble burning in India is estimated to be $30 billion annually.
- These air pollutants are a concern for people's health when levels in the air are high. PM 2.5 and PM10 particularly cause cancer
- The other health effects of air pollution ranges from skin and eyes irritation to severe neurological, cardiovascular and respiratory diseases, asthma, chronic obstructive pulmonary disease (COPD), bronchitis, lung capacity loss, emphysema, cancer, etc. It also leads to an increase in mortality rates due to the prolonged exposure to high pollution.

Solutions to the burning problem

- In 2014, the Union government released the **National Policy for Management of Crop Residue**.
- Farmers can also manage crop residues effectively by employing agricultural machines like:
  - Happy Seeder(used for sowing of crop in standing stubble)
  - Rotavator (used for land preparation and incorporation of crop stubble in the soil)
  - Zero till seed drill (used for land preparations directly sowing of seeds in the previous crop stubble)
  - Baler (used for collection of straw and making bales of the paddy stubble)
  - Paddy Straw Chopper (cutting of paddy stubble for easily mixing with the soil)
  - Reaper Binder (used for harvesting paddy stubble and making into bundles)
- Among these, the most efficient technology to counter crop burning at the moment seems to be the **Turbo Happy Seeder (THS).** The THS is basically a machine mounted on a tractor that not only cuts and uproots the stubble, but can also drill wheat seeds on the soil that has just been cleared up. The straw is simultaneously thrown over the sown seeds to form a mulch cover.
- The THS can also be fitted with the Super-Straw Management System (S-SMS) that spreads the straw evenly.

Taking a holistic approach

- A holistic approach is required to address crop residue burning. This includes a multi-disciplinary and multi-agency setting involving
  - technical agencies,
  - market-based economic tools,
  - supporting agricultural and environmental policies, and
  - awareness and capacity building for farmers.
- In the short term, misconceptions among farmers regarding paddy straw management needs to be resolved. These misconceptions include improvement in soil fertility due to stubble burning and reduction in yield due to use of in situ machines.
- Even though national schemes provide for establishing farm machinery banks to provide hiring services to farmers, there are serious issues of timely availability of machines to farmers.
- In the medium term (that is the next seven years), there is a need to encourage crop diversification and rotation.
- While technological interventions for the management of crop residue may be useful in the short term, crop diversification as a policy intervention needs to be emphasized by the government.
- This is also in context of multiple environmental externalities of present cropping patterns, such as depleting groundwater, poor soil quality and air pollution.
- Crop diversification can improve resilience from the effects of greater climate variability and extreme events. It can be implemented in various ways such as crop rotation, poly-cultures, increased structural diversity, or agroforestry.
- There also needs to be a central coordinating mechanism for paddy stubble management and crop diversification with adequate resources, and a clear assignment of responsibilities between national and sub-national agencies. The target should be putting a stop on crop residue burning at any cost, especially during the COVID-19 pandemic.
- A detailed study involving all stakeholders is required to understand the reason behind slow progress towards crop diversification in spite of regulatory policy nudges and fiscal policy incentives by both central and state governments.
- A push towards crop diversification package should be a mix of policy measures such as encouragement of agro-business enterprises – possibly under **Aatmanirbhar Bharat Abhiyan (Self-reliant India)** – farmer awareness campaigns, economic incentives such as minimum support prices for alternative crops, along with infrastructure support such as agricultural inputs for identified alternative crops, cold storage facilities and market promotion mechanisms.

The new Scheme

- With winter approaching and instances of stubble burning in Punjab and Haryana rising, the Union Environment Ministry announced a ₹50 crore scheme to incentivise industrialists and entrepreneurs **to set up paddy straw pelletisation and torrefaction plants**
- Paddy straw made into pellets or torrefied can be mixed along with coal in thermal power plants. This **saves coal as well as reduces carbon emissions** that would otherwise have been emitted were the straw burnt in the fields, as is the regular practice of most farmers in Punjab and Haryana.

APTI PLUS

Torrefaction

- Torrefaction of biomass, e.g., wood or grain, is a **mild form of pyrolysis at temperatures typically between 200 and 320°C**. Torrefaction changes biomass properties to provide a better fuel quality for combustion and gasification applications. Torrefaction produces a relatively dry product, which reduces or eliminates its potential for organic decomposition.

Pelletizing

- Pelletizing is the process of compressing or molding a material into the shape of a pellet. A wide range of different materials are pelletized including chemicals, iron ore, animal compound feed, plastics, waste materials, and more. The process is considered an excellent option for the storage and transport. Among the various energy utilization ways of crop straw, pelletization is a process which has high productivity [1-3], high density and high srength. The biomass fuels produced in this way is also convenient for transportation and burning.

ONE NATION ONE FERTILISER SCHEME

GS-III AGRICULTURE

Context

- The Prime **Minister of India inaugurated PM Kisan Samman Sammelan 2022 at Indian Agricultural Research Institute in New Delhi.**
- On this occasion, **PM launched several initiatives:**
  - He inaugurated 600 Pradhan Mantri Kisan Samruddhi Kendras (PMKSK) under the Ministry of Chemicals and Fertilisers.
  - He launched Pradhan Mantri Bhartiya Jan Urvarak Pariyojana - One Nation One Fertiliser.
  - He released the 12th installment amount of Rs. 16,000 crores under the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) through Direct Benefit Transfer.
  - He inaugurated the Agri Startup Conclave and Exhibition.
  - He launched 'Indian Edge', an e-magazine on fertiliser.
  - Pradhan Mantri Bhartiya Jan Urvarak Pariyojana - One Nation One Fertiliser has also been launched to ensure affordable quality fertiliser of Bharat brand to the farmers.
- **Government to develop more than 3.25 lakh fertiliser shops across the country as Pradhan Mantri Kisan Samruddhi Kendras.**
  - PM Sammridhi Kendras are the sales centres for fertiliser.
  - These will be centres where farmers can buy fertilisers and seeds.
  - These centres will provide soil testing and avail useful information about farming techniques.
  - It will ensure the quality of the fertiliser and its availability, as urea will be available only under the 'Bharat' brand name in the entire country".

Details

- The **Ministry of Chemicals and Fertilisers has decided to brand all fertilizers as "One nation, one fertilizer" under the name Pradhanmantri Bhartiya Januvarak Pariyojna (PMBJP).**
- The government said a logo using the PMBJP fertilizer scheme will be placed on the side of the fertilizer packs.
- Under the new "One Nation One Fertiliser" scheme, companies are allowed to display their name, brand, logo and other relevant product information only on one-third space of their bags. . On the remaining two-thirds space, the "Bharat" brand and Pradhanmantri Bharatiya Jan Urvarak Pariyojana logo will have to be shown.
- The single brand name for UREA, DAP, MOP and NPK etc. would be BHARAT UREA, BHARAT DAP, BHARAT MOP and BHARAT NPK etc. respectively for all Fertiliser Companies, State Trading Entities (STEs) and Fertiliser Marketing Entities (FMEs).
- As mentioned earlier, the logo indicating the Fertiliser subsidy scheme namely Pradhanmantri Bhartiya Janurvarak Pariyojna will be used on fertiliser bags.

To reduce the use of chemical fertilizers by incentivizing states, the Union government introduced the PM PRANAM scheme.

- PM PRANAM stands for **PM Promotion of Alternate Nutrients for Agriculture Management Yojana.**
- **Aim:** The proposed scheme intends **to reduce the subsidy burden on chemical fertilisers, which is expected to increase to Rs 2.25 lakh crore in 2022-2023**. This is 39% higher than the previous year's figure of Rs 1.62 lakh crore.
- The scheme **will not have a separate budget and will be financed by the "savings of existing fertiliser subsidy" under schemes run by the Department of Fertilizers.**
- Further, 50% subsidy savings will be passed on as a grant to the state that saves the money.
- 70% of the grant provided under the scheme can be used for asset creation related to the technological adoption of alternate fertilizers and alternate fertiliser production units at the village, block and district levels.
- The remaining 30% of grant money can be used for incentivizing farmers, panchayats, farmer producer organisations and self-

help groups that are involved in the reduction of fertiliser use and awareness generation.

- The **government will compare a state's increase or reduction in urea in a year, to its average consumption of urea during the last three years**. Data available on a fertiliser Ministry dashboard, iFMS (Integrated fertilisers Management System), will be used for this purpose.
- **Significance of PM Pranam Scheme**
  - Due to increased demand for fertiliser in the country over the past 5 years, the overall expenditure by the government on subsidies has also increased.
  - The total requirement of four fertilisers — Urea, DAP (Di-ammonium Phosphate), MOP (Muriate of potash), and NPKS (Nitrogen, Phosphorus and Potassium) — increased by 21% between 2017-2018 and 2021-2022.
  - In light of the increased demand, the government has also been increasing the subsidies it provides for chemical fertilisers.
  - In the Union Budget 2021-22, the government had budgeted an amount of Rs 79,530 crore, which increased to Rs 1.40 lakh crore in the revised estimates (RE). However, the final figure for fertiliser subsidy touched Rs 1.62 lakh crore in 2021-22.
  - **PM PRANAM, which seeks to reduce the use of chemical fertiliser, will likely reduce the burden on the exchequer.**
  - The proposed scheme is also in line with the government's focus on promoting the balanced use of fertilisers or alternative fertilisers in the last few years.

ODISHA'S MILLET MISSION

GS-III AGRICULTURE

Context

- In **2017, the state launched the Odisha Millet Mission (OMM), which aims to bring millets back to its fields and food plates by encouraging farmers to grow the crops that traditionally formed a substantial part of the diet and crop system in tribal areas**.

Details

Millets:

- This highly varied group of small-seeded cereal crops **not only requires less water, farm inputs and is more resilient to climate vulnerability, but rich in nutrients like calcium, iron and protein.**
- The Green Revolution has largely focused on production and consumption of wheat and paddy. However, in terms of nutritional value, millets will prove to be more beneficial

Scheme:

- OMM **provides farmers incentives of up to Rs 9,500 per ha over a three-year period to shift to millet cultivation.**
- **This includes free seeds and organic fertilisers.**
- Public-policy think tanks Watershed Support Services and Activities Network (WASSAN) headquartered in Hyderabad and the Nabakrushna Choudhury Centre for Development Studies (NCDS) based in Bhubaneswar, which have partnered with the state government for the mission, conduct regular training programmes for farmers to improve productivity and lower input costs.
- To complete the supply chain, the government has created an assured market for the produce.
- OMM has earned accolades for its agro-ecological initiatives from various national and international agencies, including UN. In 2021, NITI Aayog, think tank of the Union government, said it will facilitate OMM's learnings in other states.

Impact:

- Over the past five years, Odisha has recorded a **14-fold increase in millet production**, from 3,333 hectares (ha) in 2017-18 to 53,230 ha in 2021-22.
- Even the average yield has improved by 28 per cent because of sustainable agricultural practices and quality seeds.
- In 2018, NCDS conducted a survey of households growing millets under the mission, and found that the value of their produce per ha doubled from Rs 9,477 to Rs 20,701 and income per ha increased from Rs 3,957 to Rs 12,486.
- Increased income for women's self help groups involved in processing and sale of millet products

- Share of farmer households consuming millets in the winter has increased to 98.5 per cent, in the rainy season to 72.6 per cent and in summer to 89.9 per cent.

Much to be desired:

- **Numbers of sales outlets are still low**. Scale of Millet Shakti and public distribution is extremely limited
- **Only 500 kg of millets are procured at assured prices**. Farmers resort to the open market to sell produce they do not or cannot consume at low prices of R10-12 per kg
- OMM promotes production and consumption of seven millets. But **so far, focus has been on ragi,** which has accounted for 86 per cent of the total area under millets, according to data on the OMM website. In contrast, little millet, foxtail millet, sorghum, pearl millet, kodo millet and barnyard millet cover less than 13 per cent of the area.
- The **full potential of SHGs, though, has not yet been realised**. So far, only three women's SHGs manufacture and process Millet Shakti products, which limits the volume available, income generated, and consumption.

GM MUSTARD

GS-III AGRICULTURE

Context

- The Genetic Engineering Appraisal Committee (GEAC) has recommended the environmental release of the genetically modified (GM) mustard variety DMH (Dhara Mustard Hybrid)-11, paving the way for the commercialization of the country's first GM food crop.

What is hybrid mustard?

- A hybrid crop is produced by the cross-breeding of two genetically different varieties that can be even from the same species. The first-generation (F1) offspring produced with this technique usually have higher yields than existing varieties.
- This hybridisation is difficult in mustard as its flowers have both female (pistil) and male (stamen) reproductive organs, which makes the plant self-pollinating. Thus developing hybrids for mustard has its limits.
- But scientists did it through genetic modification. They crossed a popular Indian mustard variety 'Varuna' (the barnase line) with an East European 'Early Heera-2' mutant (barstar) to develop DMH-11.

Benefits being clamied

- DMH-11 is claimed to have an average 28 per cent yield increase over Varun.
- DMH-11 has been shown to deliver 30 per cent higher yields than other existing varieties. The average yield of existing mustard varieties is around 1,000-1,200 kilograms per hectare, while the global average is over 2,000-2,200 kgs.

Approval by GEAC

- GEAC has approved the supervised environmental release of GM mustard and to conduct field demonstration studies on its effects, if any, on honey bees and other pollinators.
- Note: India has only approved one GM crop, Bt cotton, for commercial cultivation so far.

Significance

- The GM mustard represents a step towards the goal of developing robust, high-yielding hybrids while at the same time trying to reduce the environmental footprint of agriculture.
- Supporters say it will lead to greater food security due to increased yields, reduced costs for food production, reduced need for pesticides and resistance to pests and disease.

Concerns

- Data from (Directorate of) Rapeseed Mustard Research (DRMR), Bharatpur shows that the claim DMH-11 GM mustard would increase yield by 26 per cent is deceptive and misleading as there are several existing hybrid varieties that outperform the transgenic variety DMH-11.
- Some experts have also expressed concerns over the DMH-11 mustard variety being herbicide tolerant, which allows the farmers to kill the surrounding weeds without harming the crop. They fear excess use of the herbicide on GM crops would increase toxic chemicals in food and soil.

Final Thoughts

- Genetically modified foods can potentially solve many hunger and malnutrition problems in the world, as well as help protect and preserve the environment by increasing yields and reducing reliance upon chemical pesticides and herbicides.
- However, it is important to proceed with caution to avoid unfavorable consequences for the surroundings and our health, considering that genetic engineering technology is very powerful.

Must Read:

GM Crops: *https://www.iasgyan.in/daily-current-affairs/gm-crops-26*

NOBEL PRIZE

Context

- Recently, The Nobel Prizes for 2022 were awarded.

What is the Nobel Prize?

- The Nobel Prize is an honorary award given to individuals in **six different categories** "who, during the preceding year, have delivered the greatest benefit to humankind."
- The medal was first given out for achievements in the domains of **physics, chemistry, physiology or medicine, literature, and peace. Later in 1968, the discipline of economic sciences added the sixth prize.**

When and how was the Nobel Prize founded?

- On November 27, **1895**, Swedish physicist Alfred Nobel made his last will and testament, designating the majority of his wealth to awards for peace, literature, physiology or medicine, physics, and chemistry. Nobel was a Swedish manufacturer, scientist, and engineer best known for developing dynamite.
- The first woman recipient was Marie Curie, who was the only woman to receive the honour twice.

2022 Nobel Prizes

Physiology or Medicine

- Swedish geneticist Svante Pääbo won the first Nobel of the year, **for initiating the field of ancient DNA studies**. He is renowned for extracting, sequencing, and analysing ancient DNA from Neanderthal bones.
- Pääbo's pioneering research was released in 2010, in which **he discovered that most present-day humans share 1 per cent to 4 per cent of their DNA with Neanderthals**. This implies that Neanderthals and Homo sapiens must have encountered one another and had children before Neanderthals went extinct around 40,000 years ago.
- The genome Pääbo sequenced also **revealed an entirely new kind of extinct human, called Denisovansafter the name of the cave in Siberia**, where they were found. By comparing Denisovan DNA with the genetic records of modern humans, he then revealed that **some populations in Asia and Melanesia inherited up to 6 per cent of their DNA from this ancient human.**

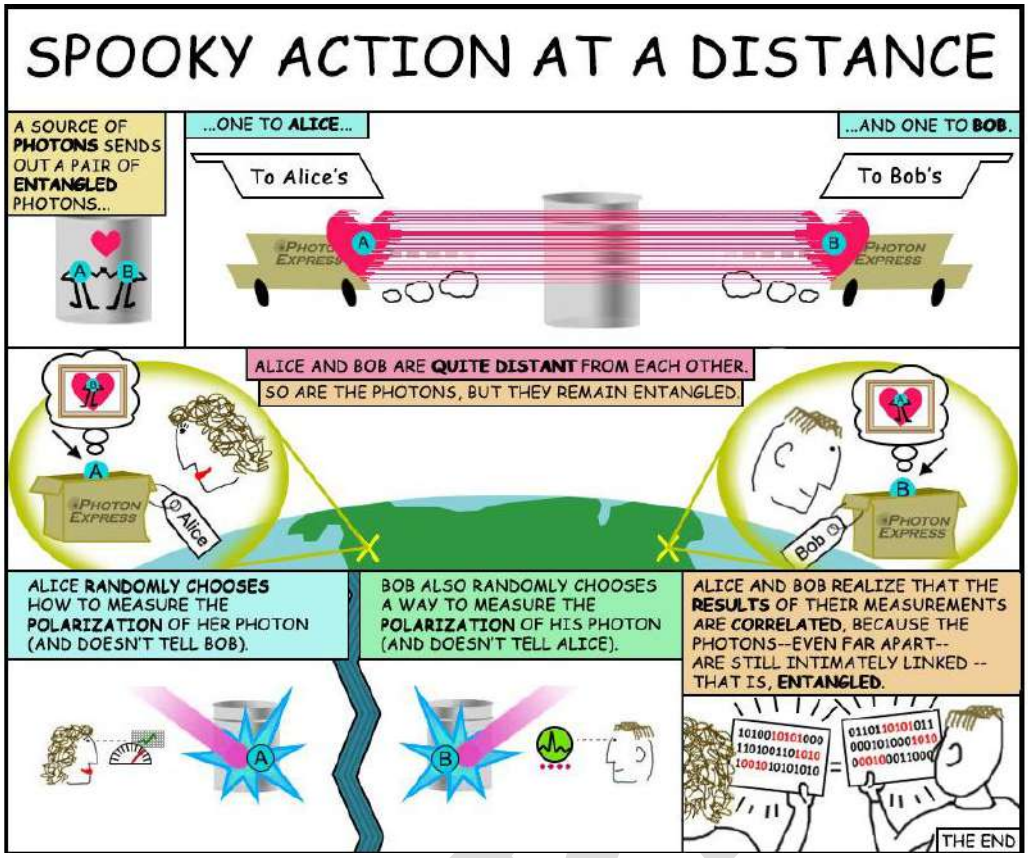
Physics

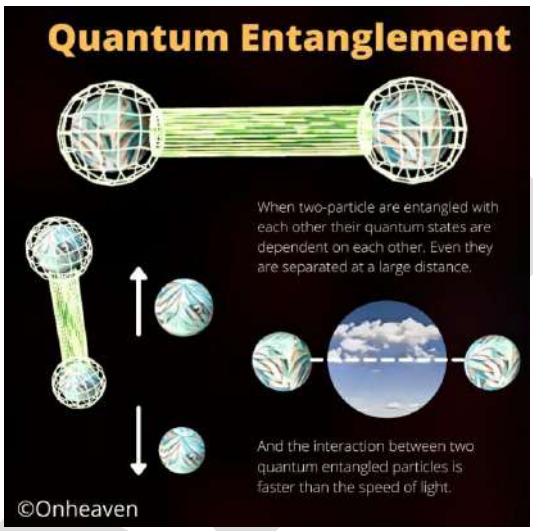
- The 2022 Nobel in Physics was awarded to Alain Aspect, John Clauser, and Anton Zeilinger**for their work in quantum physics**.
- Clauser worked on physicist John Bell's ideas and took measurements that supported quantum mechanics by clearly violating a Bell inequality, **proving that quantum mechanics cannot be replaced by a theory that uses hidden variables**.
- Anton Zeillinger on the other hand demonstrated a phenomenon called **quantum teleportation, which makes it possible to move a quantum state from one particle to one at a distance.** Together the group has brought greater insights into the **concept of the "entangled state" of subatomic particles.**

Quantum Entanglement

Quantum entanglement is a physical phenomenon that occurs when a pair or group of particles is generated, interact, or share spatial proximity in a way such that the quantum state of each particle of the pair or group cannot be described independently of the state of the others, including when the particles are separated by a large distance.

Measurements of physical properties such as position, momentum, spin, and polarization performed on entangled particles can, in some cases, be found to be perfectly correlated.





Chemistry

- The Nobel in Chemistry also went to a group of three scientists — Carolyn Bertozzi, Morten Meldal, and Barry Sharpless — **for discovering chemical reactions that let molecules snap together to create new compounds and that offer insight into cell biology.**
- The field of click chemistry that their experiments subsequently gave rise to, along with bioorthogonal chemistry has been harnessed to improve the targeting of cancer pharmaceuticals along with a host of health, agricultural, and industrial applications.
- The scientists have made a strong case for adopting **an alternative approach to producing new complex molecules in the laboratory or industry, which minimises waste and increases overall efficiency.**

Click chemistry

Click chemistry involves reactions that unite two synthetic molecules quickly and irreversibly. Some of these reactions can be carried out inside living cells without disrupting biochemical processes, making them "bioorthogonal."

GENETICALLY MODIFIED MOSQUITOES

GS-III SCIENCE & TECHNOLOGY

Context

- Scientists **have genetically modified mosquitoes to slow the growth of malaria-causing parasites in their guts**. This **can help prevent transmission of the disease to humans.**

Malaria

- Malaria is an acute febrile illness **caused by Plasmodium parasites**, which are spread to people through the bites of infected female Anopheles mosquitoes. There are 5 parasite species that cause malaria in humans, and 2 of these species – ***P. falciparum and P. vivax*** – pose the greatest threat.
- ***P. falciparum*** is the deadliest malaria parasite and the most prevalent on the African continent. ***P. vivax*** is the dominant malaria parasite in most countries outside of sub-Saharan Africa.
- The first symptoms – fever, headache and chills – usually appear 10–15 days after the infective mosquito bite and may be mild and difficult to recognize as malaria. Left untreated, ***P. falciparum*** malaria can progress to severe illness and **death within a period of 24 hours**.
- Though **only around 10 per cent of mosquitoes live long enough for the infectious parasite to develop**, malaria remains one of the most devastating diseases globally, putting at risk about half of the world's population. In 2021, it infected 241 million people and killed 627,000 people.

The new Research

- Researchers have genetically modified the main malaria-carrying species of mosquito in sub-Saharan Africa, ***Anopheles gambiae***, such that the mosquito produced antimicrobial peptides in its gut when it had a blood meal. The peptides impair the malarial parasite's development and also cause the mosquitoes to have a shorter life span. To prevent malaria spread via genetic modification, the change needs to be spread from lab-bred mosquitoes to wild ones. The innovation is so designed that it can be coupled with existing **'gene drive' technology.**
- Gene drive is one such powerful weapon that in combination with drugs, vaccines and mosquito control can help stop the spread of malaria and save human lives.
- Gene drive would cause the **anti-parasite genetic modification to be preferentially inherited**, making it spread more widely among any natural populations.

Gene Drive

A gene drive is a natural process and technology of genetic engineering that propagates a particular suite of genes throughout a population by altering the probability that a specific allele will be transmitted to offspring (instead of the Mendelian 50% probability). Gene drives can arise through a variety of mechanisms. They have been proposed to provide an effective means of genetically modifying specific populations and entire species. The technique can employ adding, deleting, disrupting, or modifying genes. Proposed applications include exterminating insects that carry pathogens (notably mosquitoes that transmit malaria, dengue, and zika pathogens), controlling invasive species, or eliminating herbicide or pesticide resistance.

INDIAN SPACE ECONOMY

GS-III SCIENCE & TECHNOLOGY

Context

- Indian space economy is set to reach $13 billion by 2025, according to a joint report by the Indian Space Association (ISpA), an apex industry association of space and satellite companies in the country.

What Is Space Economy?

- The Space Economy is defined by OECD as the full range of activities and the use of resources that create value and benefits to human beings in the course of exploring, researching, understanding, managing, and utilising space. The main segments of the **space economy include manufacturing, services from satellite operators and consumer services.**

Overview – The Indian space sector

- The Indian space sector has been globally recognized for building cost-effective satellites, launching lunar probes and taking foreign satellites to space.
- The global space economy is estimated at ~US$ 423 billion. Currently, India constitutes 2-3% of the global space economy and is expected to enhance its share to >10% by 2030 at a CAGR of 48%.

India's space missions (as per financial year)

Mission	2019-20	2020-21	2021-22
Earth observation satellites	4	1+2*	2
Communication satellites	1	1	0
Navigation satellites	0	0	1
Space science satellites	1	0	1
Technology demonstrator	0	0	0
PSLV	4	2+1*	2
GSLV Mk II	0	0+1*	1
GSLV Mk III	1	0	0
Small satellite launch vehicle	0	0+1*	2
Gaganyaan	0	0	1 (Unmanned)
Total	**11**	**4+5***	**10**

*Number of missions that were expected to be achieved by March 2021 at the time of releasing the report

Source: ISRO annual report 2021

Despite its achievements and priority status, India's space sector suffered from several regulatory constraints:

Conflicts of interest

- The Department of Space (DOS) sits under the Prime Minister's Office and directly controls the ISRO. ISRO also has a commercial arm – Antrix – that promotes ISRO's space products and India's Space Sector.
- The government therefore plays the dual role of regulator and commercial executor, which has led to significant bottlenecks in the participation of the private sector as the government balances enhancing competition with protecting the commercial viability of its own products.
- **Although the government allows for 100% FDI into the sector, all investments are governed by the sectoral guidelines of the Department of Space/ISRO, under the government route**.

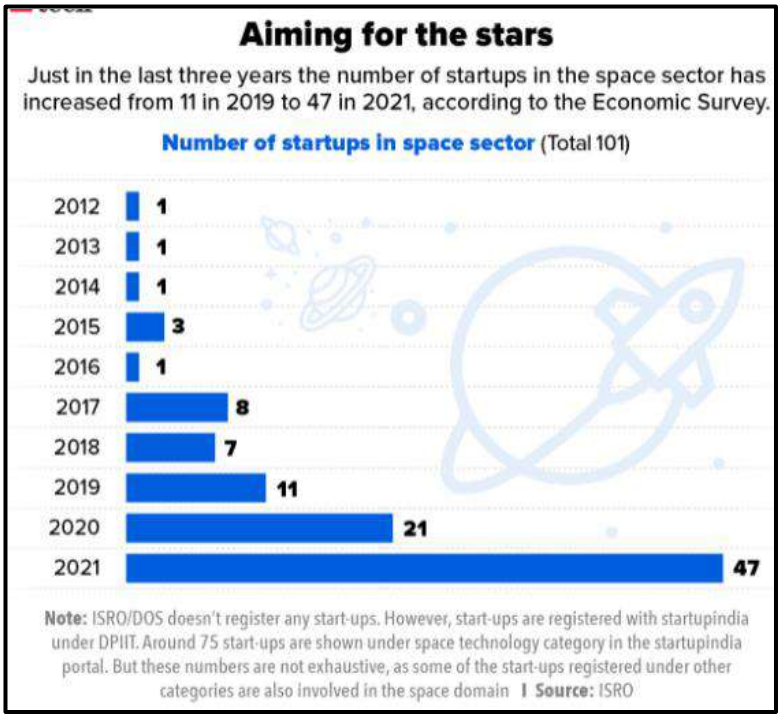
National security concerns

- Government security concerns around technology sharing, launch systems, and satellite capabilities have resulted in a reluctance to include private players in the industry.
- The recent reforms represent a long overdue step to reconcile the regulatory hurdles and pave the path for growth.

Key reforms in the Indian space sector

Promoting and enabling private enterprises to carry out independent space activities:

- In 2020, the Government in a historical decision, approved participation of private enterprises across all phases of space activities.
- The government also **approved formation of the Indian National Space Promotion and Authorisation Centre (IN-SPACe)**—that would act as part of the Indian Space Research Organisation (ISRO)—to help private players become independent actors instead of being solely vendors or suppliers.



Increasing participation of private enterprises in the Indian space sector:

- Many Indian private companies and start-ups have been showing interest in space activities and services, as various government initiatives have been announced.
- As of 2021, India has 368 private space firms, making it fifth in the world after the US, the UK, Canada and Germany.
- With 368 private space firms, India is leading China (288), France (269), and Spain (206).
- The number of private company proposals in the space sector has increased by 30% in 2021 from 22 proposals in 2020- ISRO.

- In just three years, the number of startups in the space sector increased to 47 in 2021 from 11 in 2019, an indicator of the pace of growth in the space sector in India.

Inspiring young entrepreneurs and students:

- To boost participation of young people and students in the Indian space sector, NITI Aayog, in collaboration with ISRO and the Central Board of Secondary Education (CBSE), launched the Atal Tinkering Lab (ATL) space challenge as part of the Atal Innovation Mission in 2021.
- The GOI has been developing world-class learning facilities and space museums, where students can learn the basics of space technology, develop interests, and pursue careers in Science, Technology, Engineering and Mathematics (STEM). STEM is a relatively new term in the Indian education industry and helps develop critical thinking and problem-solving abilities among students.

Revising the Foreign Direct Investment (FDI) policy to open investment opportunities for foreign companies:

- GOI is expected to announce a revised foreign direct investment policy for the Indian space sector that would open huge investment opportunities for foreign companies - ISRO.
- With IN-SPACe, the government can establish a link between ISRO and private sector companies to utilise Indian space resources and increase space-based activities. Currently, all FDI investments must be cleared by the government, but the industry wants investments to be cleared through the automatic route.

Establishment of the Indian Space Association (ISpA):

- In 2021, GOI, launched the ISpA. This association will help private players carry out independent space activities, facilitate services and technology developed by ISRO to be utilised in the private sector, provide regulatory and policy inputs and support start-ups, MSMEs and academia.
- ISpA will support the government's vision of 'Atmanirbhar India' (self-reliant India) and 'Make in India' to become a **leader in the global space industry.**
- It would act as **a single-window agency and open the Indian space sector to private enterprises and start-ups**.

Encouraging the public sector to focus on research & development activities:

- As IN-SPACe will govern participation of private players in the Indian space sector, ISRO will focus more on research & development, technology innovation, space exploration and human spaceflight.

Transferring technologies developed by ISRO to industries for commercialisation:

- A memorandum of understanding (MoU) was signed between the Department of Space (DoS) and NewSpace India Limited (NSIL) in 2020.
- This MoU will help the NSIL identify technologies developed by ISRO (that have the potential for commercialisation) and transfer it to external entities in the public & private sectors, academia and state & central government organisations.
- Under this agreement, as of 2021, NSIL has transferred over 363 technologies for commercialisation.
- An example of this initiative was seen when India was fighting the second wave of COVID-19, during which ISRO developed three types of ventilators and transferred the technology for clinical usage.
- Similarly, platforms such as Polar Satellite Launch Vehicle (PSLV) and Small Satellite Launch Vehicle (SSLV) have been identified for transfer of technology to the private sector.

Demand-driven approach for development of space assets:

- Reliance on space assets has increased significantly over the past few years in multiple industrial sectors. ISRO has moved from a supply-driven model to a demand-driven model for maximum utilisation of space assets.

Sharing ISRO's facilities with private players:

- ISRO has opened its facilities to the private sector.
- It has allowed two satellites from the private sector and one from academia to be tested in the US Rao Satellite Centre, Bangalore, in 2021.
- Further testing of the two satellites will take place at ISRO's spaceport and rocket centre facilities in Sriharikota and Thiruvananthapuram.
- IN-SPACe is an independent nodal agency under the DoS to allow space activities and usage of ISRO-owned facilities by Non-Governmental Private Entities (NGPEs).

While these policy interventions/reforms are steps in the right direction, there is a lot more that can be achieved with the right kind of stimulus from the government. A few potential avenues of development are:

Incubator and Grant Programs

- Research and development of space technology is a long and costly process.
- Setting up incubators and grant programs that support the sector during this initial R&D phase will greatly improve entrepreneurship and investor participation in this sector, as well as increase the success rate of these start-ups

Space Qualification

- One of the major stages en route to the successful commercialization of any space technology is space qualification.

- Space qualification refers to the testing and proof of concept demonstration of technologies while in space. Given the costs associated with commercial space qualification tests, most start-ups can only afford a limited number of attempts at this process.
- With ISRO's help in launching payload, more start-ups may be able to afford space qualification tests multiple times in the future, increasing the chances of successful commercialization.

Final thoughts

- Over the past two decades, private enterprises such as Virgin Galactic, SpaceX, Blue Origin and Arianespace have revolutionised the space sector by reducing costs and turnaround time in other spacefaring countries.
- However, in India, private enterprises have been limited to being merely suppliers to the government's space programme.
- Being one of the few spacefaring countries, India is increasingly encouraging private sector participation through various reforms that are expected to help India achieve a market share of more than 10% in the global space sector by 2030.

INDIA STRATEGIC FUND

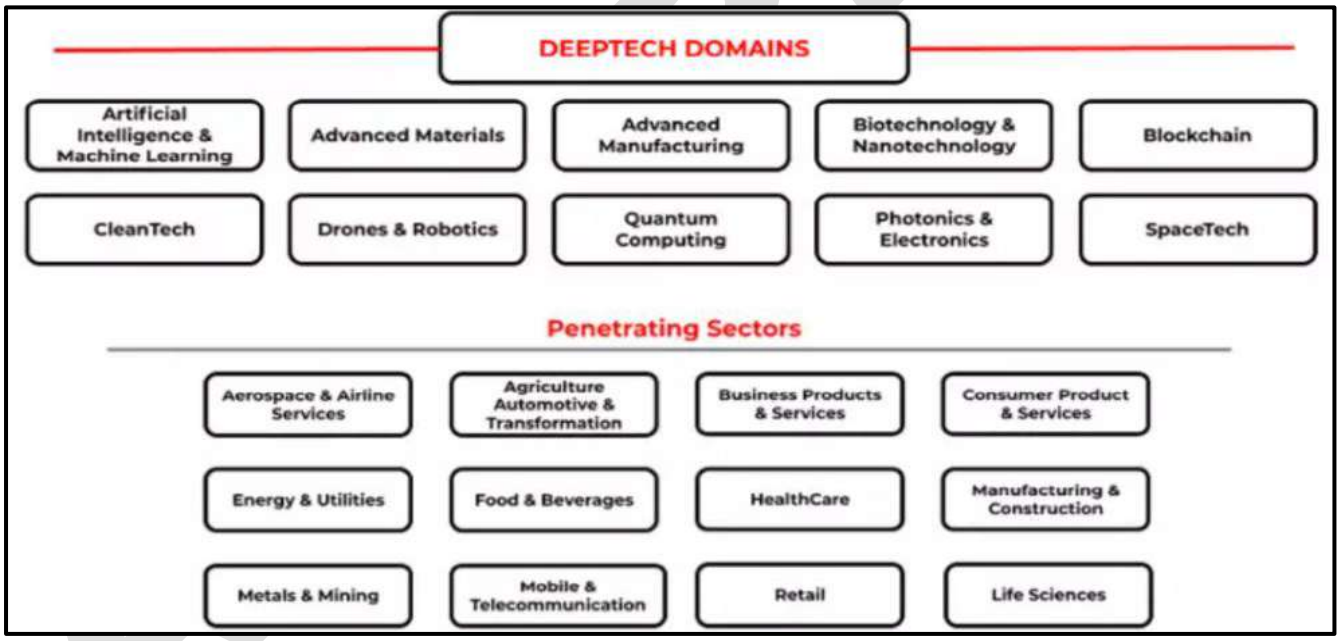
GS-III SCIENCE & TECHNOLOGY

Context

- India is making a concerted push for self-reliance in military technology, semiconductors and science-based businesses. It is trying to develop the Deep Tech Ecosystem.

Deep Tech

- Deep tech is a set of cutting-edge, groundbreaking technologies based on scientific discoveries, engineering, medicine, physics and mathematics.
- It aims at solving the most complex challenges in the world around us. Examples: AI, advanced materials, blockchain, biotechnology, robotics, drones, photonics and quantum computing.



The issue of Funding in Deep Tech Sector

Venture Capital

- Globally, venture capital doesn't want to invest when it comes to Deep Tech. The Indian venture capital ecosystem is not even willing to discuss it.
- There is a market failure as venture capital is not invested in Deep Tech Ecosystem.

Government Funding

- In the United States, Israel and North Atlantic Treaty Organization countries, government is still the largest source of funds for Deep Tech. But in India government money funding is not at all enough.

Reluctance of Investors

- Investors in India are not even willing to discuss Deep Tech. Also investing in fundamental technology does not fit the 10-year fund return cycle because it takes much longer to mature.

Limited source of Funding

- While the Government of India is changing with the launch of the Indian Semiconductor Mission and the Ministry of Defence's flagship iDEX and TDF schemes, depending solely on an already stretched pool of funding is not the solution to galvanise the ecosystem.

Way Forward: India Strategic Fund

- India will need to build world-class deep tech capabilities in certain sectors. For that there can be **a "India Strategic Fund".** This implies that certain innovations in the existing corporate social responsibility (CSR) budgets and high net worth (HNI) tax breaks will incentivise capital flowing into strategic tech.
- India strategic Fund can boost a nascent Indian Deep Tech ecosystem.

CSR Budget

- CSR has traditionally been utilised for the social sector. However, this growing corpus should also be used for the development of strategic technology. Large corporations can be incentivised to use some of this budget to serve the strategic needs of the nation. The Government should allow these funds to flow into certain strategic tech startups.

CSR

Corporate social responsibility (CSR) is a form of self-regulation in business that helps a company be socially accountable to itself, its stakeholders, and the public. The four main types of corporate social responsibility are environmental responsibility, ethical responsibility, philanthropic responsibility, and economic responsibility. The Companies Act, 2013 provides for CSR. Thus, it is **mandatory for the companies to comply with the CSR provisions in India**. Companies are required to spend **a minimum of 2% of their net profit over the preceding three years as CSR.**

HNIs

- HNIs or high net-worth individuals (HNIs) can be offered **tax incentives to make equity investment in the critical technology startups.**
- This would help mitigate the issue felt with lower short-term returns. The **corpus of investment should be tax deductible** and no more than a certain percentage of annual income.

HNIs or high net-worth individuals

- HNIs or high net-worth individuals (HNIs) belong to the financial services sector where a class of individuals has an investible surplus of more than Rs 5 crore, below this threshold. Such investors are categorised as retail as they are measured by their net worth in the financial industry.
- Investible Surplus: Basically, if an individual has a house worth Rs 5 crore, bank fixed deposits worth Rs 1 crore, and a car worth Rs 50 lakh, then he or she is not an HNI. Even though his or her overall net-worth including the house and bank deposits is more than Rs 6 crore, but the investible surplus is only the Rs 1 crore fixed deposit.

Types of HNIs

- High-net-worth individuals (HNWIs): Investors who own liquid assets valued between Rs 5 lakh and Rs 5 crore
- Very-high-net-worth individuals (VHNWIs): Investors who possess liquid assets valued between Rs 5 crore and Rs 25 crore
- Ultra-high-net-worth individuals (UHNWIs): Investors who own more than Rs 25 crore in liquid assets.

Wrapping up

- If correctly aligned with the Government's programmes, CSR funds and tax incentives can boost a nascent Indian Deep Tech ecosystem.
- India has this ambition to be a developed India; an India that is a superpower. Investing in deep, critical technology is the first step for the country to awaken to that ambition.

ARMED FORCES (SPECIAL POWER) ACT (AFSPA)

Context

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

Details

- **Tirap, Changlang and Longding districts in Arunachal Pradesh and the areas falling within the jurisdiction of Namsai and Mahadevpur police stations in Namsai district along the Assam border, are declared as "disturbed areas" under Section 3 of the AFSPA 1958 for a period of six months from October 1, "unless withdrawn earlier"**, the Ministry said in a notification.
- Nine districts and 16 police stations in four districts of Nagaland were being declared as "disturbed areas" after a review of the law and order situation in the State, it added.
- **AFSPA has been extended in Dimapur, Niuland, Chumoukedima, Mon, Kiphire, Noklak, Phek, Peren and Zunheboto districts in Nagaland** and the areas in Nagaland falling within the jurisdiction of i) Khuzama, Kohima North, Kohima South, Zubza and Kezocha police stations in Kohima District; ii) Mangkolemba, Mokokchung-I, Longtho, Tuli, Longchem and Anaki 'C' police stations in Mokokchung District; iii) Yanglok police station in Longleng District; and iv) Bhandari, Champang, Ralan and Sungro police stations in Wokha District for another six months.
- **On April 1, MHA had considerably reduced "disturbed areas" in the States of Assam, Manipur and Nagaland. AFSPA had been applicable in the whole of Nagaland since 1995.**

Armed Forces Special Powers Act (AFSPA)

- The Armed Forces Special Powers Ordinance of 1942was enacted by the British colonial government on 15 August 1942 to suppress the Quit India Movement.
  - After Independence, the Ordinance was imposed by the Indian government to deal with the internal security situation which emerged due to the Partition of India.
- **Article 355 of the Constitution of India confers power to the Central Government to protect every state from internal disturbance.**
- **Armed Forces Special Powers Act (AFSPA) was enacted by the Parliament in 1958.**
- The Act Provides special powers to the Indian Armed Forces to preserve public order in "disturbed areas". AFSPA is to be enacted only when a state, or part of it, is declared as a 'disturbed area'.
- According to the act, once an area is declared as 'disturbed', it remains under the category for a minimum of 6 months.
- In the late 1960s, it was 1st made applicable to the Naga Hills, then part of Assam.
  - One by one, it expanded to the parts of Assam, Nagaland, Manipur, and Arunachal Pradesh.
- In 1983, the law was extended to Punjab and Chandigarh, but it was withdrawn in 1997.
- In 1990, it was applied to Jammu and Kashmir.

Special Powers under AFSPA

According to the Armed Forces Special Powers Act (AFSPA), in an area that is announced as "disturbed", an officer of the armed forces has powers to:

- **Arrest anyone without a warrant** and may use force if needed for the arrest**.**
- If a person acts against law or order in the disturbed area, then **army personnel are allowed to Fire after giving a warning or use other kinds of force even if it causes death.**
- Enter and search any area or shelter to make arrests, they also have the power to destroy that area or shelter.
- Power to stop and search any vehicle or vessel.
- **Any person arrested and taken into custody shall be handed over to the officer in charge of the nearest police station.**
- **Army officers have legal immunity for their actions**. There can be no prosecution or any other legal proceeding against anyone acting under that law.
- **The Government's Power to declare an area as a 'disturbed area' is not under judicial review.**

Present Status

- The Act was amended in 1972 and the powers to declare an area as a "disturbed area" were granted to the Central government along with the States.
- **For only Nagaland and Arunachal Pradesh, the Union Home Ministry issues a "disturbed area" notification to extend AFSPA.**
- **The notification for Manipur and Assam is issued by the State governments.**
- Tripura revoked the Act in 2015 and Meghalaya revoked it in 2018.

- Jammu and Kashmir have had a separate Armed Forces (Special Powers) Act 1990.
- In 2016, the Supreme Court of India ended the immunity of the armed forces from prosecution under AFSPA.

Arguments in the support of AFSPA

- Neither the soldiers nor their superiors have any training in civilian law or policing procedures. That is why a special law like AFSPA needed to legitimize the presence and acts of armed forces in extraordinary situations.
- **Repealing the act will encourage insurgency and militancy and also threaten the peace and unity of the nation.**
- The Army needs such powers because the army is only deployed when national security is at serious risk**. "Extraordinary circumstances demand extraordinary measures".**

Arguments against AFSPA

- The act has been **criticized for human rights** violations in the regions of its enforcement. It provides immunity from human rights abuses and fuels cycles of violence.
- **This law started a Vicious cycle of Violence in the North East**: The use of the AFSPA drives the demand for more autonomy, giving the people of the North East more reason to secede from a state which enacted such powers and these agitations justify the use of the AFSPA from the point of view of the Indian Government.
- The Second Administrative Reforms Commission (ARC) recommended the repeal of the Armed Forces Special Powers Act, 1958. It commented that its **scrapping would remove sentiments of discrimination and alienation among the people of North-East India.**

Way Forward

- The Supreme Court ruled that any encounter carried out by **armed forces under AFSPA should be subjected to thorough inquiry.**
- Supreme Court stated that "It does not matter whether the victim was a common person or a militant or a terrorist, nor does it matter whether the aggressor was a common person or the state. The law is identical for both and is equally applicable to both. This is the necessity of democracy and there is a requirement of protection of the rule of law and protecting individual liberties".
- In 2013, the Supreme Court created a committee under Santosh Hegde, the committee suggested **making the Armed Forces Special Powers Act (AFSPA) more humane, and the security forces more accountable.**

INS ARIHANT

GS-III SECURITY & DEFENSE

Context

- India successfully tested a nuclear-capable ballistic missile from its **solitary nuclear-powered submarine INS Arihant**, and promptly declared that having an 'assured retaliatory capability' was in tune with the country's `credible minimum deterrence' against the first-use of nuclear weapons by an adversary.

Details

About the test:

- A brief statement by the defence ministry did not identify the submarine-launched ballistic missile (SLBM) tested from the 6,000-tonne INS Arihant, which became fully operational in 2018
- **SLBM tested was the B-O5 or K-15 missile with a strike range of 750-km.**
- INS Arihant is armed with the short-range K-15 missiles. Developmental trials of the K-4 SLBM (with a 3,500-km range) have been completed but it is yet to be fully inducted.
- This is the first time the launch of an SLBM from INS Arihant has been announced by the government.

Significance:

- **The successful user training launch of the SLBM by INS Arihant is significant to prove crew competency and validate the SSBN (naval parlance for nuclear-propelled submarines armed with nuclear-tipped ballistic missiles) programme, a key element of India's nuclear deterrence capability.**
- A robust, survivable and assured retaliatory capability is in keeping with India's policy to have 'credible minimum deterrence' that underpins its 'no-first use' commitment.

Nuclear Triad:

- INS Arihant does give some teeth to the weakest leg of **India's existing nuclear triad – the capability to fire nukes from land, air and sea –** but much larger SSBNs that can carry longer range missiles are required to make it more credible.
- The other two legs of the triad are, of course, **much more robust with the induction of the land-based Agni series of ballistic missiles as well as fighters like Sukhoi-30MKIs, Mirage-2000s and Rafales that are capable of dropping nuclear gravity bombs.**
- Under the Rs 90,000 crore top-secret advanced technology vessel (ATV) project, India is currently building three more SSBNs to

follow INS Arihant, which is propelled by an 83 MW pressurized light-water reactor at its core.

- **The second such submarine, INS Arighat, is slated to become fully operational next year after some delay**. The vessel will be followed by two 7,000-tonne SSBNs, currently called S-4 and S-4*, under the ATV project. There is also the plan to build 13,500-tonne SSBNs with much more powerful 190 MW reactors.
- **Concurrently, the K-4 SLBM is to be followed by the K-5 and K-6 missiles in the 5,000 to 6,000-km class.** All this will decidedly narrow the gap with countries like the US, Russia and China, which have much larger SSBNs with over 5,000-km range missiles.
- Much more capable SSBNs will give India's deterrence posture greater credibility because they are considered the most secure, survivable and potent platforms for retaliatory strikes after a surprise first-strike by an adversary.

About Arihant:

- INS Arihant, **a 6,000-tonne submarine is the lead ship of India's Arihant class of nuclear-powered ballistic missile submarines built under the Advanced Technology Vessel (ATV) project.**
- INS Arihant is propelled by an 83 MW pressurised light-water reactor at its core with enriched uranium fuel.
- It's India's **first indigenously built nuclear submarine.**
- It is a 'Ship Submersible Ballistic Nuclear Submarine' (SSBN). SSBN's are those class of submarines which can go deep beneath the ocean making them virtually undetectable for months, they also carry nuclear-tipped ballistic missiles.
- It is capable of carrying ballistic missiles with nuclear warheads.
- **It is presently armed with the K-15 Sagarika missiles with a range of 750 km.**
- Later, it will also be armed with K-4 missiles, being developed by the DRDO, which are capable of striking targets at a distance of up to 3,500 km. These 'K' series of missiles are named after former President APJ Abdul Kalam.

GRADED RESPONSE ACTION PLAN (GRAP)

Context

- **The Commission for Air Quality Management (CAQM) said that measures under 'Stage-1' of the Graded Response Action Plan (GRAP) will be enforced in the NCR with immediate effect.** The order came after Delhi's AQI deteriorated to be in the 'poor' category. Other parts of the NCR, including Gurgaon, Noida and Greater Noida, also recorded 'poor' air quality.

What is the Graded Response Action Plan?

- GRAP is a set of emergency measures that kick in to prevent further deterioration of air quality once it reaches a certain threshold.
- Stage 1 of GRAP is activated when the AQI is in the 'poor' category (201 to 300), and On Wednesday, for instance, the AQI in Delhi was 211.
- The second, third and fourth stages will be activated three days ahead of the AQI reaching the 'very poor' category (301 to 400), 'severe' category (401 to 450) and 'severe +' category (above 450) respectively. For this, the CAQM is relying on air quality and meteorological forecasts by the Indian Institute of Tropical Meteorology (IITM) and the India Meteorological Department (IMD).
- Measures being imposed under the previous categories will continue even when the subsequent category is activated, that is, if measures under Stage-2 are activated, measures under Stage-1 will continue to remain in place.

How is the GRAP different this year?

- The CAQM revised the Graded Response Action Plan earlier this year.
- **The GRAP was first notified in January 2017 by the Ministry of Environment, Forest and Climate Change.**
- **This was based on a plan that was submitted by the Central Pollution Control Board (CPCB) in November 2016.**
- According to the notification, the task of implementing the GRAP fell on the now dissolved Environment Pollution (Prevention and Control) Authority for the NCR. From 2021 onwards, the GRAP is being implemented by the CAQM.
- In the version of the GRAP that was notified in 2017, measures kicked in after pollution concentrations reached a certain level.
- **This year, measures are pre-emptive and will kick in based on forecasts in an attempt to prevent the AQI from deteriorating further. The older version of the GRAP was enforced based only on the concentration of PM2.5 and PM10.**
- **This year, GRAP is being enforced based on the AQI, which takes other pollutants also into account, such as ozone, sulphur dioxide and oxides of nitrogen.**

What are the measures that will be enforced this year?

- Some of the measures in the revised GRAP are also different this year. For the first time, it specifies that State governments in the NCR may impose restrictions on BS-III petrol and BS-IV diesel four wheelers under Stage-3, or when the AQI is likely to reach the 'severe' category.
- In the 'severe +' category, GRAP imposes a ban on plying of four-wheelers in Delhi and NCR districts bordering Delhi, except for BS-VI vehicles and those plying for emergency or essential services. Under this category, there will also be a ban on the movement of Delhi registered, diesel-operated medium and heavy goods vehicles in Delhi, with exceptions for those carrying essential commodities or providing essential services.
- Restrictions on some construction activities will also set in earlier in the revised GRAP. A ban on construction activities (except for those involving railways, projects of national security, hospitals, metro services, and linear public projects like highways, roads) will be imposed under the 'severe' category. In the previous plan, the construction ban was implemented only in the 'severe +' category.
- Construction activities on linear public projects like highways, roads, flyovers, pipelines and power transmission, will be banned under the 'severe +' category this year.
- Under the 'severe +' category, State governments may consider additional emergency measures like the closure of schools, plying of vehicles on an odd-even basis, and decide on allowing public, municipal and private offices to work on 50% strength and the rest to work from home.
- The revised GRAP also has a set of measures for the public to follow – under the 'poor' category, this includes keeping vehicle engines tuned, ensuring PUC certificates are updated and switching off vehicle engines at red lights. Under the 'very poor' category, it is suggested that citizens use public transport and replace air filters in their automobiles.
- Under the 'severe' category, a recommendation is made to work from home if possible, and not use coal and wood for heating. Under the 'severe +' category, GRAP advises people with chronic diseases and children and the elderly to avoid outdoor activities.

Who will implement and enforce the GRAP?

- **The CAQM has constituted a sub-committee for the operationalization of the GRAP.**
- This body includes officials from the CAQM, member secretaries of pollution control boards of Uttar Pradesh, Delhi, Haryana, Rajasthan, the Central Pollution Control Board, a scientist from the IMD and one from the IITM, and Dr T K Joshi, Health Advisor, Centre for Occupational and Environmental Health, Maulana Azad Medical College.
- The sub-committee is required to meet frequently to issue orders to invoke the GRAP.
- The orders and directions of the CAQM will prevail in case of any conflict between directions issued by the State governments and the CAQM.
- Measures under the different categories of the plan are to be enforced by the pollution control boards of the NCR states and the concerned departments and agencies, including the traffic police, the Transport Department and road owning and construction agencies.
- Actions under Stages II, III and IV will be invoked three days in advance of the AQI reaching the projected level

Stage 1 (AQI 'Poor' – 201 to 300)

1. Stopping all construction and demolition activities with plot size of 500 square metres or more which have not been registered on dust mitigation monitoring portals
2. mechanised sweeping, water sprinkling on roads
3. enforcing guidelines on use of anti-smog guns at construction sites
4. enforcing ban on open burning of waste and PUC (pollution under control norms) for vehicles
5. DISCOMs to minimise power supply interruptions in NCR
6. Encourage offices to start unified commute for employees to reduce traffic

Stage 2 (AQI 'Very poor' – 301 to 400)

1. Not allowing coal/firewood in tandoors at hotels
2. stopping use of diesel generator sets except for essential and emergency services (hospitals, railways, metro services, airports, water pumping stations, "projects of national importance")
3. enhance parking fees to discourage private transport
4. augment CNG/ electric bus and metro services by procuring additional fleet and increasing the frequency of service

Stage 3 (AQI 'Severe' – 401 to 450)

1. Ban on construction and demolition activities except railway, metro, hospitals, sanitation projects etc, linear public projects like highways, roads, flyovers
2. closure of industries that have PNG supply and are not running on approved fuels. In industrial areas that don't have PNG supply, industries not running on approved fuels will operate only for five days a week
3. State governments in NCR may impose restrictions on BS III petrol and BS IV diesel four wheelers

Stage 4 (AQI 'Severe +' – more than 450)

1. Stop entry of truck traffic into Delhi (except for essentials, CNG and electric trucks)
2. Ban on plying of Delhi registered diesel medium and heavy goods vehicles in Delhi, except for essentials
3. Ban on plying of 4-wheeler diesel vehicles in Delhi and districts of NCR bordering Delhi, except BS-VI vehicles and vehicles used for essential or emergency services
4. State Governments may consider additional emergency measures like closure of schools, plying of vehicles on odd-even basis
5. NCR State governments to decide on allowing public, municipal and private offices to work on 50% strength and the rest to work from home
6. Ban C&D activities in linear public projects such as highways, roads, flyovers

LIVING PLANET REPORT 2022

GS-III ENVIRONMENT & ECOLOGY

Context

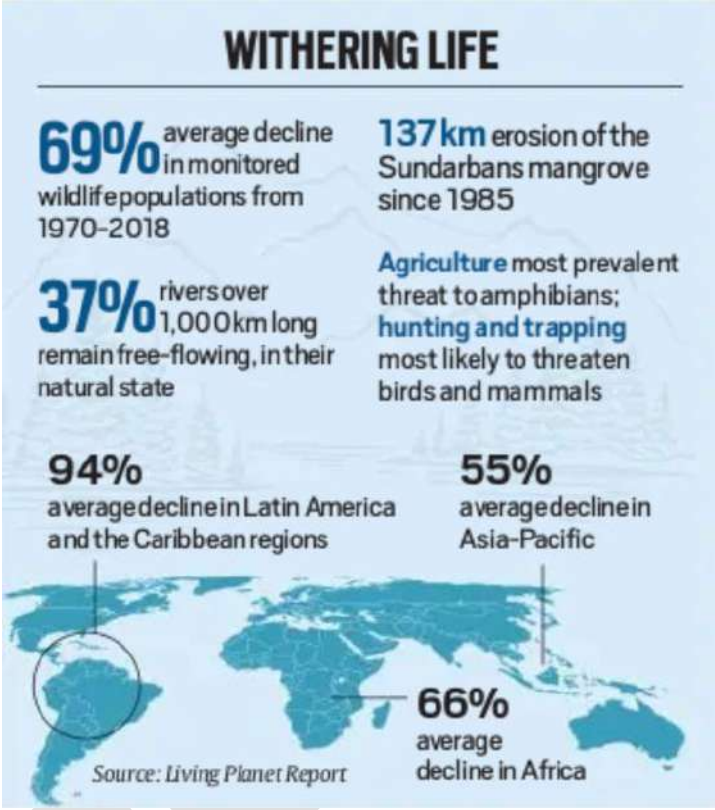
- Monitored wildlife populations — including mammals, birds, amphibians, reptiles and fish — have seen a 69-per cent drop between 1970 and 2018, according to the latest Living Planet Report, released by the World Wildlife Fund (WWF).

Details

Findings:

- Stating that there has been "an average 69% decline in monitored wildlife populations over the 48-year period" up to 2018, the report stated: Latin America and the Caribbean regions have seen the largest decline of monitored wildlife populations globally, with an average decline of 94% between 1970 and 2018.

- During the same period, monitored populations in Africa plummeted by 66%, while Asia Pacific's monitored populations fell by 55%.
- The WWF has found that freshwater populations have declined the most, with an average 83% decline between 1970 and 2018.
- The IUCN Red List shows cycads — an ancient group of seed plants — are the most threatened species, while corals are declining the fastest, followed by amphibians.
- Around the world…the main drivers of wildlife population decline are habitat degradation and loss, exploitation, the introduction of invasive species, pollution, climate change and disease.
- Land-use change is still the biggest current threat to nature, destroying or fragmenting the natural habitats of many plant and animal species on land, in freshwater and in the sea.
- However, if we are unable to limit warming to 1.5°C, climate change is likely to become the dominant cause of biodiversity loss in the coming decades.
- About 50% of warm water corals have already been lost and a warming of 1.5 degrees Celsius will lead to a loss of 70-90% warm water corals. The Bramble Cay melomys, a small Australian rodent, was declared extinct after sea-level rise.



- Despite their importance, mangroves continue to be deforested by aquaculture, agriculture and coastal development at a rate of 0.13% annually, the report noted. It stated that many mangroves are degraded by over-exploitation and pollution, alongside natural stressors such as storms and coastal erosion.
- Only 37% of rivers that are over 1,000 km long remain free-flowing, or in their natural state, including rivers in India that are largely no longer free-flowing. This, the report noted, has threatened migration of fish.
- The Living Planet Report has found that agriculture is the most prevalent threat to amphibians (animals that live both on land and in water), whereas hunting and trapping are most likely to threaten birds and mammals.
- Geographically, Southeast Asia is the region where species are most likely to face threats at a significant level, while the Polar regions and the east coast of Australia and South Africa showed the highest impact probabilities for climate change, driven in particular by impact on birds.
- The global abundance of 18 of 31 oceanic sharks have declined by 71% over the last 50 years, and the report said that by 2020 three-quarters of sharks and rays were threatened with extinction.

India specific:

- According to WWF-India programme, **the country has seen a decline in population of the likes of honeybees and 17 species of freshwater turtles in this period**.
- The report finds that the **Himalayan region and the Western Ghats are some of the most vulnerable regions in the country in terms of biodiversity loss**, and where increased biodiversity loss is expected in future if temperatures are to increase.
- **Projects like the recent cheetah translocation are therefore good in preservation of species, and India has seen successes such as Project Tiger, or (projects for) the one-horned rhino and lions**. There is an umbrella effect on all other species living in that habitat due to conservation of these species.

About:

- The **biennial report, produced by the Zoological Society of London**, measures how species are responding to pressure in the environment due to biodiversity loss and climate change.
- This year's report **has tracked 32,000 species populations of 5,230 species, with 838 species and just over 11,000 new populations added**.
- There has been a significant increase in the number of fish species (481) that have been added to the Living Planet Report.

World Wildlife Fund for Nature:

- It is the world's leading conservation organization and works in more than 100 countries.
- It was established in 1961 and is headquartered at Gland, Switzerland.
- Its mission is to conserve nature and reduce the most pressing threats to the diversity of life on Earth.
- WWF collaborates at every level with people around the world to develop and deliver innovative solutions that protect communities, wildlife, and the places in which they live.

Zoological Society of London:

- Founded in 1826, Zoological Society of London is an international conservation charity working for wildlife conservation.

VULTURES

GS-III ENVIRONMENT & ECOLOGY

Context

- Vultures mostly forage outside Protected Areas (PAs). If threats such as poison-laced carcasses are removed from these places, the decline in vulture populations can be stemmed, a study by the University of York in the UK has noted.

About

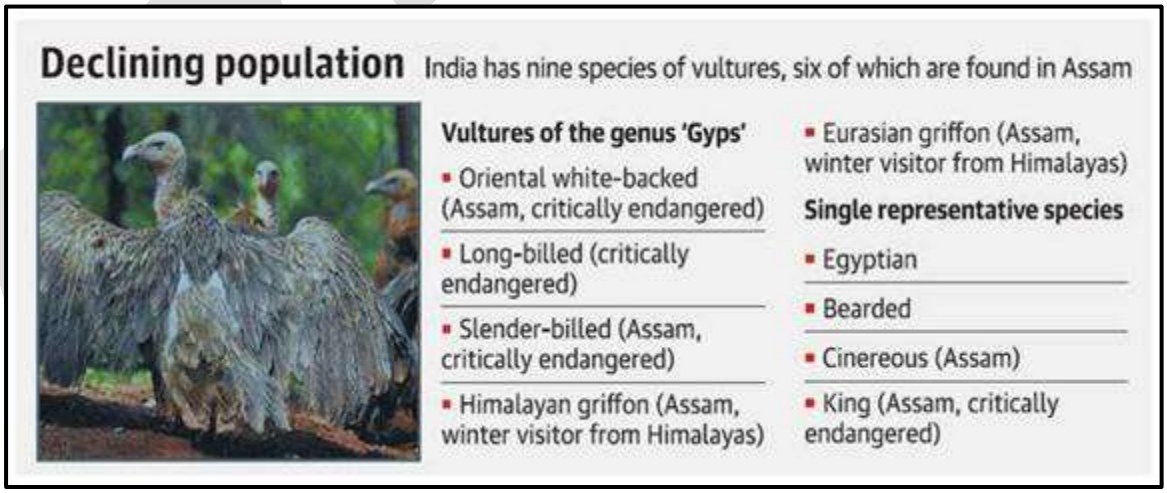
- Vultures are an ecologically vital group of birds that face a range of threats in many areas that they occur. Populations of many species are under pressure and some species are facing extinction.
- The International Vulture Awareness Day has grown from Vulture Awareness Days run by the Birds of Prey Programme of the Endangered Wildlife Trust in South Africa and the Hawk Conservancy Trust in England, who decided to work together and expand the initiative into an international event.
- It is now recognised that a co-ordinated international day will publicise the conservation of vultures to a wider audience and highlight the important work being carried out by the world's vulture conservationists.

Why vultures are important to protect nature?

- **Vultures, as carcass feeders, hold the key for a natural mechanism of infection control.**
- Vultures are the scavengers who do the **work of cleaning up, and keeping the ecosystem healthy.** The beauty is, **despite feeding on infected carcass, vultures do not get infected.**
- The acids in their stomach are potent enough to kill the pathogen. Thus, the **chain of infection is broken.** It invisibly controls the spread of harmful pathogens causing deadly anthrax, cholera, foot and mouth disease, rabies and distemper.
- The birds also **prevent the contamination of water sources**, especially in the wild.
  - When animals die near watering hole, there is an imminent danger of contamination resulting in a quick spread of infections and mass death.
  - But vultures devour the carcasses in totality thereby preventing a tragic mishap.

In India, we have nine species of vultures

- One can spot the **long-billed vulture (Indian vulture), red-headed vulture, white-rumped vulture and the Egyptian vulture in the Nilgiris Biosphere of the Western Ghats**.
- In the last four years, the population has grown by may be 10 percent. Restoring the population is an uphill task as **vultures are slow breeders**.
- If they become extinct, there will be a **huge ripple effect**. Other scavengers like rats and dogs may take over, temporarily, but with that comes problems like increased incidence of rabies.



NSAIDS as a major threat to vultures in India

- The rampant use of the three non-steroidal anti-inflammatory drugs (NSAIDS) threatens to undo the Centre's two decades of work to arrest the dwindling vulture population in the wild.
- The three drugs—**aeclofenac, ketoprofen and nimesulide**—were introduced as **alternatives to diclofenac**, that India banned in 2006 for animal use because it caused widespread vulture deaths.
- The country's vulture population crashed from over **40,000 in 2003 to 18,645 in 2015**, as per the last vulture census conducted

by intergovernmental body Bird Life International.

- India's **vulture conservation action plan for 2020-25** recommends a **ban on the veterinary use** of the three drugs.
- India is also a **signatory to the Convention on Migratory Species' Multi-species Action Plan to Conserve African-Eurasian Vultures,** which recognises NSAIDS as a major threat to vultures in India.
- The vulture action plan recommends **meloxicam over diclofenac. Tolfenamic acid** is the other safe option.

Diclofenac

- **Diclofenac, a drug used to treat cattle, was linked to kidney failure in vultures** and a decline in the bird's population.
- Though the drug was **banned in 2006**, it is reportedly still available for use.
- Diclofenac, that are potentially toxic to vultures being used by vets for treating cattle. The drugs make their way into the vulture's system as they feed on carcasses.
- Three of India's vulture species of the genus 'Gyps'— the long-billed (Gyps indicus) and the slender-billed (G. tenuirostris) had declined by 97%, while in the white-rumped (G. bengalensis) declined nearly 99% between 1992 and 2007.

'Action Plan for Vulture Conservation 2020-2025'

- It proposes to establish Vulture Conservation Breeding Centres in Uttar Pradesh, Tripura, Maharashtra, Karnataka and Tamil Nadu.
- There would also be a conservation breeding programme for the Red Headed vulture and Egyptian vulture, and at least one "Vulture Safe Zone" in every State for the conservation of the remnant populations.
- There would be four rescue centres in different geographical areas:
  - Pinjore in north India,
  - Bhopal in central India,
  - Guwahati in northeast India and
  - Hyderabad in south India, as well as regular surveys to track population numbers, the plan envisages.

ECO-SENSITIVE ZONE

GS-III ENVIRONMENT & ECOLOGY

Context

- The Supreme Court indicated it may consider taking up Kerala's review of the Supreme Court's judgment to have a one-km eco-sensitive zone ringing protected forests, national parks and wildlife sanctuaries across the country along with a plea for clarification sought by the Centre.

What was the SC judgment that has caused an uproar in Kerala?

- The Supreme Court directed that **every protected forest, national park and wildlife sanctuary across the country should have a mandatory eco-sensitive zone (ESZ) of a minimum one km starting from their demarcated boundaries.**
- Environment Ministry guidelines show that the purpose of declaring ESZs around national parks, forests and sanctuaries is to create some kind of a "shock absorber" for the protected areas.
- These zones would act as a transition zone from areas of high protection to those involving lesser protection.
- A three-judge Bench highlighted how the nation's natural resources have been for years ravaged by mining and other activities.
- The judgment observed that the **government should not confine its role to that of a "facilitator" of economic activities for the "immediate upliftment of the fortunes of the State".**
- The State also has to act as a trustee for the benefit of the general public in relation to the natural resources so that sustainable development could be achieved in the long term.
- In a series of directions, the court held that **in case any national park or protected forest already has a buffer zone extending beyond one km, that would prevail.**
- **In case the question of the extent of buffer zone was pending a statutory decision, then the court's direction to maintain the one-km safety zone would be applicable until a final decision is arrived at under the law.**
- The court directed that **"mining within the national parks and wildlife sanctuaries shall not be permitted".**
- It held the **Principal Chief Conservator of Forests and Home Secretaries of States responsible for the compliance of the judgment.**
- The Principal Chief Conservator for each State and the Union Territory has also been directed to make a list of subsisting structures within the ESZs and submit reports to the apex court in three months.

Eco-Sensitive Zones (ESZs)?

- Eco-Sensitive Zones or Ecologically Fragile Areas **are areas within 10 kms around Protected Areas, National Parks and Wildlife Sanctuaries.**

- ESZs are **notified by MoEFCC, Government of India under Environment Protection Act 1986.**
- In case of places with sensitive corridors, connectivity and ecologically important patches, crucial for landscape linkage, even area beyond 10 km width can also be included in the eco-sensitive zone.
- The basic aim is to regulate certain activities around National Parks and Wildlife Sanctuaries so as to minimise the negative impacts of such activities on the fragile ecosystem encompassing the protected areas.
- **Prohibited activities:** Commercial mining, saw mills, industries causing pollution (air, water, soil, noise etc), establishment of major hydroelectric projects (HEP), commercial use of wood, Tourism activities like hot-air balloons over the National Park, discharge of effluents or any solid waste or production of hazardous substances.
- **Regulated activities:** Felling of trees, establishment of hotels and resorts, commercial use of natural water, erection of electrical cables, drastic change of agriculture system, e.g. adoption of heavy technology, pesticides etc, widening of roads.
- **Permitted activities:** Ongoing agricultural or horticultural practices, rainwater harvesting, organic farming, use of renewable energy sources, adoption of green technology for all activities.

Why are Eco-Sensitive Zones created?

- According to the guidelines issued by the Environment Ministry on February 9, 2011, ESZs are created as "shock absorbers" for the protected areas, to minimize the negative impact on the "fragile ecosystems" by certain human activities taking place nearby. Furthermore, these areas are meant to act as a transition zone from areas requiring higher protection to those requiring lesser protection.
- The guidelines also state that the ESZs are not meant to hamper the daily activities of people living in the vicinity, but are meant to guard the protected areas and "refine the environment around them".
- To do so, the guidelines list the activities prohibited in an ESZ, such as commercial mining, saw mills, commercial use of wood, etc., apart from regulated activities like felling of trees. Lastly, there are permitted activities like ongoing agricultural or horticultural practices, rainwater harvesting, organic farming, among others.

COMPRESSED BIO GAS

GS-III ENVIRONMENT & ECOLOGY

Context

- Recently, Asia's largest Compressed Bio Gas plant inaugurated in Sangrur, Punjab by Union Minister.

Compressed Biogas

- Biogas is an **environmentally-friendly, renewable energy source**. It's produced when organic matter, such as food or animal waste (agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, sewage treatment plant waste, etc) is broken down by microorganisms in the absence of oxygen, in a process called anaerobic digestion.
- Then the Bio-Gas is purified to remove hydrogen sulphide (H2S), carbon dioxide (CO2), water vapour and compressed as **Compressed Bio-Gas (CBG), which has methane (CH4) content of more than 90%.**
- CBG has calorific value and other properties similar to CNG and hence can be utilized as green renewable automotive fuel. Thus, it can replace CNG in automotive, industrial and commercial areas, given the abundance of biomass availability within the country.
- The potential for Compressed Bio-Gas production from various sources in India is estimated at about 62 million tonnes per annum.

Benefits of CBG

- There are multiple benefits from converting agricultural residue, cattle dung and municipal solid waste into CBG on a commercial scale:
  - Responsible waste management, reduction in carbon emissions and pollution
  - Additional revenue source for farmers
  - Boost to entrepreneurship, rural economy and employment
  - Support to national commitments in achieving climate change goals
  - Reduction in import of natural gas and crude oil
  - Buffer against crude oil/gas price fluctuations

CBG Plant at Sangrur, Punjab

- The CBG Plant at Sangrur, is spread across an area of 20 acres (approx.). The plant's present production is about 6 TPD CBG, but soon this plant will process 300 Tons Per Day of paddy straw at max. capacity to produce 33 TPD of CBG using 8 digesters of 10,000 cubic meters.

Benefits of this plant at Sangrur

- This plant will consume 100,000 tons of paddy straw, which will be procured from 6-8 satellite locations within a 10 km radius of the plant. There shall be daily production of about 600-650 Tons of FOM (Fermented Organic Manure), which **can be used for organic farming**. The CBG Plant shall also provide **direct employment to 390 and indirect employment to 585 people.**
- It will also provide a **much-needed alternative to stubble burning.** The CBG Plant **will reduce stubble burning of 40,000 – 45,000 acres of fields,** translating into an **annual reduction of 150,000 tons of CO2 emissions**. This will not only ensure that the citizens of Sangrur, Punjab, breathe in cleaner air but also **contribute towards India's COP26 Climate Change targets** of total projected carbon emissions by one billion tonnes from now to 2030 Achieving the target **of net zero emissions by 2070.**
- The Compressed Bio Gas (CBG) plant in Sangrur is **a step in achieving objectives of the Sustainable Alternative Towards Affordable Transportation (SATAT) scheme.**

Final Thought

- CBG plants are a huge **leap forward in arriving at a win-win situation for farmers and the environment**.

SATAT SCHEME

Sustainable Alternative Towards Affordable Transportation (SATAT) is **an initiative aimed at setting up of Compressed Bio-Gas production plants** and make CBG available in the market for use as a green fuel. The Scheme targets entrepreneurs to set up Compressed BioGas plants and later sell this fuel so obtained to Oil Marketing Companies as automotive or industrial fuel. The initiative was launched **in 2018 by the Ministry of Petroleum & Natural Gas.**

There are 4 clear-cut objectives of the SATAT scheme. They are as follows -

- Decreasing dependence on import of fuel.
- Making use of more than 62 million metric tonnes of waste generated each year in India.
- Boosting job creation in the country.
- Reducing vehicular emissions and harmful emissions from the burning of agricultural waste.

Read: *https://www.iasgyan.in/daily-current-affairs/biogas*

MISSION LIFE

GS-III ENVIRONMENT & ECOLOGY

Context

- The Prime Minister, Shri Narendra Modi attended a bilateral meeting with UN Secretary-General, H.E. Mr Antonio Guterres and subsequently launched Mission LiFE at the Statue of Unity, Ekta Nagar, Kevadia, Gujarat.

Details

PM on Mission LIFE:

- The Prime Minister remarked, **The mantra of Mission Life is 'Lifestyle For Environment'**.
- Emphasizing the benefits of Mission LiFE, the Prime Minister said that **it connects the powers of the people for the protection of this earth, and teaches them to utilise it in a better way**.
- He underlined that Mission LiFE **makes the fight against climate change democratic, in which everyone can contribute within their capacity.**
- **Mission LiFE believes that the environment can be protected by making changes in our lifestyle**
- **Mission LiFE makes us all trustees of the environment**. A trustee is someone who does not allow indiscriminate use of resources. A trustee works as a nurturer and not as an exploiter
- The Prime Minister elaborated that **Mission LiFE emboldens the spirit of the P3 model i.e. Pro Planet People.** Mission Life, unites the people of the earth as pro planet people, uniting them all in their thoughts.
- **It functions on the basic principles of 'Lifestyle of the planet, for the planet and by the planet'.**
- The Prime Minister **quoted the Atharvaveda and recited, "'Mata Bhumiah Putroham Prithivyah' that is, the earth is our mother and we are her children."**
- The Prime Minister threw light on the **concept of 'Reduce, Reuse and Recycle' and circular economy and mentioned that it has been a part of the lifestyle of Indians for thousands of years.**

India's commitment to addressing climate change:

- The total forest cover is 21.71% of the total geographical area in 2021, compared with 21.67% in 2019
- India's forest cover is increasing and so is the population of lions, tigers, leopards, elephants and rhinos.
- The annual per capita carbon footprint in India is only about 1.5 tonnes, compared to the world average of 4 tonnes per year.
- Initiatives like Ujjwala Yojana, 75 'Amrit Sarovars' in every district and unprecedented emphasis on waste to wealth.
- Today India has the fourth largest capacity for renewable energy in the world. India's renewable energy capacity has increased by about 290 percent in the last 7-8 years

- India has also achieved the target of achieving 40 percent of the electric capacity from non-fossil-fuel sources 9 years ahead of the deadline.
- India had also achieved a target of 10 percent ethanol blending in petrol, and that too 5 months before the deadline.
- Through the National Hydrogen Mission, India has moved towards an environment-friendly energy source. This will help India and many countries of the world to achieve their goal of net zero
- Highlighting the global campaign of One Sun, One World, One Grid, the Prime Minister remarked that India now wants to increase its partnership with the world even more while strengthening its resolve towards such goals.
- By leading the creation of the Coalition for Disaster Resilient Infrastructure, India has conveyed its concept towards environmental protection to the world. Mission LiFE is the next step in this series

Background:

- Mission LiFE aims at following a three-pronged strategy for changing our collective approach towards sustainability.
- **First is by nudging individuals to practise simple yet effective environment-friendly actions in their daily lives (demand); second is by enabling industries and markets to respond swiftly to the changing demand (supply) and; third is to influence government and industrial policy to support both sustainable consumption and production (policy).**
- The idea of LiFE was introduced by India during the 26th United Nations Climate Change Conference of the Parties (COP26) in Glasgow in 2021.
- The idea promotes an environmentally conscious lifestyle that focuses on 'mindful and deliberate utilisation' instead of 'mindless and wasteful consumption.
- **With the launch of the Mission, the prevalent "use-and-dispose" economy governed by mindless and destructive consumption will be replaced by a circular economy, defined by conscious and deliberate consumption.**

What are the Other Related Initiatives?

- National Afforestation Programme (NAP)
- National Mission for a Green India (GIM)
- National Action Plan on Climate Change (NAPCC)
- National Biodiversity Action Plan
- Rural Livelihood Schemes: Recognition of natural resources intrinsically linked to rural livelihoods is also reflected in flagship schemes like the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and the National Rural Livelihood Mission (NRLM).

GREAT INDIAN BUSTARDS

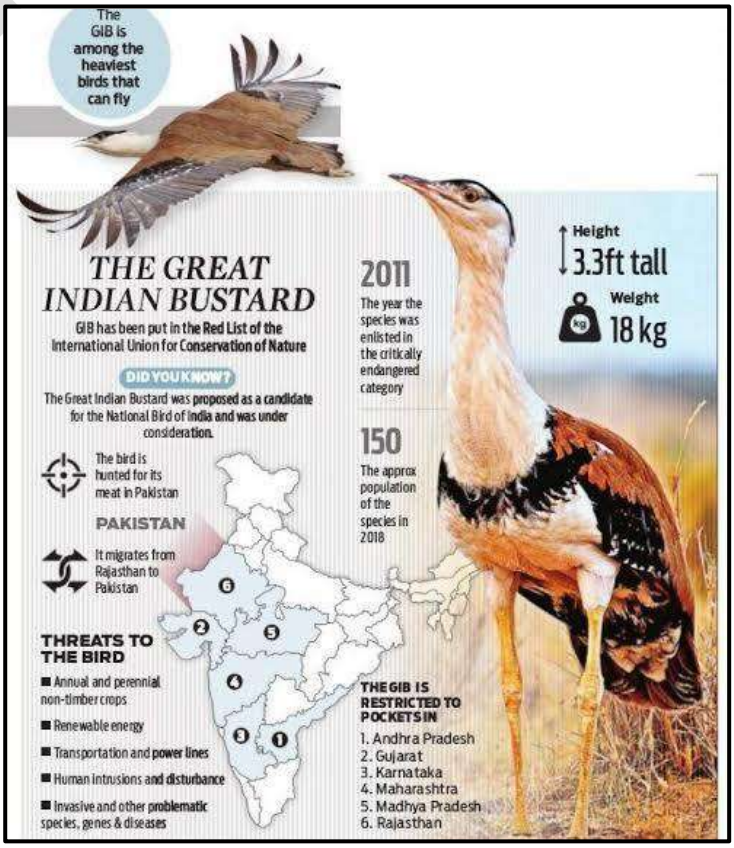
GS-III ENVIRONMENT & ECOLOGY

Context

- The recent sighting of three Great Indian Bustards (GIBs) deep in Pakistan's Cholistan desert has given rise to speculation that the endangered birds might have flown across the international border from India's Desert National Park (DNP).

Details

- The GIB — the State bird of Rajasthan — is considered India's most critically endangered bird and is protected under the Wildlife Protection Act.
- Its population of about 150 in Rajasthan accounts for 95% of its total world population.
- The captive breeding of GIBs was taken up in the DNP through a project executed by the Dehradun-based Wildlife Institute of India in 2019. As many as 24 GIB chicks are being reared in DNP by a team supported by the International Fund for Houbara Conservation of United Arab Emirates.
- As Rajasthan shares the international border with Pakistan's Sindh and Punjab provinces, it is suspected that the GIBs might have flown across to the neighbouring country's desert amid fears that they could become easy prey for the poachers there.



Great Indian Bustard (GIB)

- GIB is one of the most **critically threatened species** in India, with less than 150 birds left in the wild.
- GIBs are **one of the heaviest flying birds** in India.
- Experts say only two districts in Rajasthan — **Jaisalmer and Barmer** — have a breeding GIB population in the wild.
- The bird can also be found in **very small numbers in Gujarat, Madhya Pradesh, Karnataka, Maharashtra and Andhra Pradesh.**

Steps taken by the Government for protection of Great Indian Bustards in the country

- A site for establishment of a Conservation Breeding Centre for the Great Indian Bustard has been identified at Kota District, Rajasthan, under the project '**Habitat Improvement and Conservation Breeding of Great Indian Bustard-an integrated approach**'.
- A satellite **conservation breeding facility** with incubator, hatcher, chick rearing and housing for captive birds has been set up at Sam, **Jaisalmer, Rajasthan**.
- The Great Indian Bustard is **listed in Schedule-I of the Wild Life (Protection) Act, 1972,** thereby, according it highest degree of legal protection from hunting.
- Important habitats of Great Indian Bustards are designated as National Parks/Sanctuaries for their better protection.
- The species has been identified for conservation efforts under the component **'Species Recovery Programme' of the Centrally Sponsored Scheme (CSS)-Development of Wildlife Habitat**.
- The Ministry with financial support from National Authority for **Compensatory Afforestation Funds has sanctioned an outlay of Rs. 33.85 crores** for the duration of five years for the programme '**Habitat Improvement and Conservation Breeding of Great Indian Bustard-an integrated approach'** to build up captive population of Great Indian Bustard.
- Ministry has also constituted a Task Force for suggesting Eco- friendly measures **to mitigate impacts of power transmission lines and other power transmission infrastructures** on wildlife including the Great Indian Bustard.
- The Great Indian Bustard has been **included in the Appendix I of Convention on Migratory Species (CMS)** of the basis of proposal submitted by India. It was also the **mascot of the prestigious 13th CMS Conference of Parties held in Gandhinagar** giving wider publicity for the conservation of the species.

BLUE FLAG BEACHES

GS-III ENVIRONMENT & ECOLOGY

In News

- International eco-label "**Blue Flag", has been accorded to two new Indian beaches; Minicoy Thundi Beach and Kadmat Beach- both in Lakshadweep**, with this the number of beaches certified under the Blue Flag certification increased to 12 in India.

Blue Flag

- It is an **internationally recognized eco-label that is accorded based on 33 criteria. These criteria are divided into 4 major heads namely;** Environmental education and information, Bathing water quality, Environmental management, and Conservation and safety services on the beaches.
- Blue Flag beaches are **considered the cleanest beaches in the world.**
- It is accorded by the international jury composed of eminent members - United Nations Environment Programme (UNEP), United Nations World Tourism Organization (UNWTO), and Denmark-based NGO Foundation for Environmental Education (FEE) and International Union for Conservation of Nature (IUCN).
- The mission of Blue Flag is **to promote sustainability in the tourism sector, through environmental education, environmental protection and other sustainable development practices.**

BEAMS program

- **Under the Integrated Coastal Zone Management Project, the Ministry of Environment, Forest & Climate Change (MoEFCC) has piloted the Beach Environment & Aesthetic Management Service (BEAMS) Programme.**

- The objective of the BEAMS program is to abate pollution in coastal waters, promote sustainable development of beach facilities, protect & conserve coastal ecosystems & natural resources, and seriously challenge local authorities & stakeholders to strive and maintain high standards of cleanliness, hygiene & safety for beachgoers in accordance with coastal environment & regulations.
- Under this programme**, various activities related to pollution abatement, beach awareness, aesthetics, safety, surveillances services and environmental education, etc**., have been done at identified beaches aimed to achieve international standards for Blue Flag Beach Certification.
- A total of 12 beaches situated in 6 States and 4 Union Territories have been developed at par with the best international beaches with safe and ecologically sustainable infrastructure, acceptable bathing water quality, self-sustaining energy supply and environmentally sound services/management measures.

- **Beaches that have been conferred with internationally recognized Blue Flag Certification are;**
  - Shivrajpur, Devbhumi Dwarka District, Gujarat
  - Ghoghla (Diu) Dadara Nagar Haveli and Daman & Diu
  - Padubidri, Udupi District, Karnataka
  - Kasarkod, Karwar District, Karnataka
  - Kappad, Kozhikode District, Kerala
  - Kovalam, Kanchipuram District, Tamil Nadu
  - Eden, Puducherry District, Puducherry
  - Rushikonda, Vishakhapatnam District, Andhra Pradesh
  - Golden, Puri District, Odisha
  - Radhanagar (Havelock), Andaman & Nicobar Islands
  - Minicoy Thundi Beach in Lakshadweep
  - Kadmat Beach in Lakshadweep

KERCH STRAIT

PLACES IN NEWS

Context

- The recent attack on the Kerch Strait Bridge has highlighted that nowhere in Ukraine is Russia invulnerable.

About

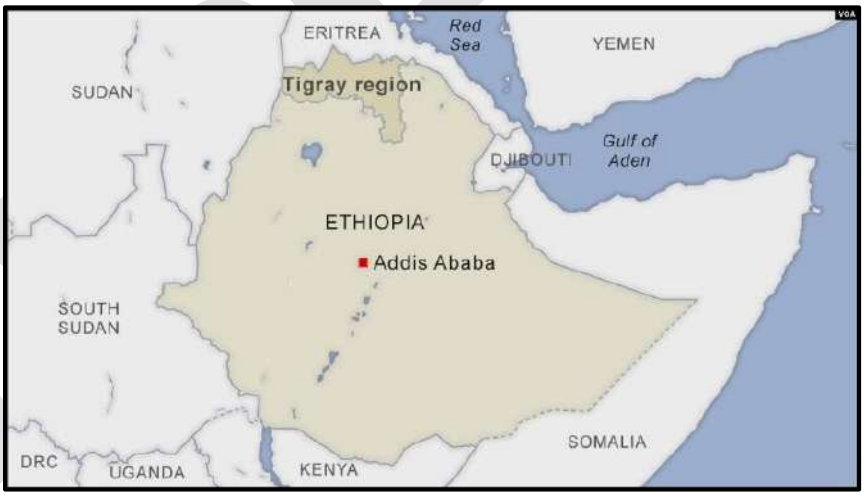
- The Kerch Strait is a **strait in Eastern Europe**.
- It **connects the Black Sea and the Sea of Azov**, separating the Kerch Peninsula of Crimea in the west from the Taman Peninsula of Russia's Krasnodar Krai in the east.
- It serves as the gateway into the Sea of Azov, which borders Russia and Ukraine**. A bilateral treaty gives both countries the right to patrol the waters.** It is also the site of a new, 19-km (12-mile) bridge built by Russia.

TIGRAY

PLACES IN NEWS

Context

- Recently, the first formal African Union-led peace talks between an Ethiopian government team and Tigray forces in South Africa took place.



Details

- Tigray is the **northernmost regional state in Ethiopia.**
- Tigray is bordered by **Eritrea to the north, Sudan to the west, the Amhara Region to the south and the Afar Region to the east and southeast.**
- Tigray region is known for its mountainous terrains that have often helped the people protect their territory from invaders, such as the Greeks, the Turkish, and the Italians.
- The Tigray Region is the homeland of the **Tigrayan, Irob and Kunama peoples.**
- Tigray has a **subtropical climate** and is among the driest regions of Ethiopia.

About Ethiopia

- Ethiopia, is a landlocked country in Africa. It is situated in the strategic Horn of Africa region.
- It is **bordered by Eritrea, Djibouti, Sudan, Somalia, and Kenya.**
- The Oromo is the largest ethnic group in the country, & Amhara - the second largest.
- The Tigrayans, meanwhile, constitute around 6-7 per cent and are an ethnic minority.

APTI PLUS

Academy for Civil Services Pvt. Ltd.

OUR BADGE SHINES ON YEAR AFTER YEAR WITH TOP PERFORMANCES BY OUR STUDENTS IN **OAS 2020**

7 STUDENTS IN TOP 10

TEJASWINII BEHERA
RANK 1

SUBHANKARI S. DAS
RANK 2

DEBABRATA KAR
RANK 4

DEBABRATA M.
RANK 5

ABHISMITA T.
RANK 6

SUBHASHREE R.
RANK 7

TAPATI R.
RANK 10

TANMITA K.
RANK 12

ABHIJEET S.
RANK 13

BIBHUPRASAD S.
RANK 15

ANAKAR N.
RANK 19

SHUBHARANJAN N.
RANK 22

RASMIRANJAN M.
RANK 23

SUBRAT KUMAR S.
RANK 26

ALFA JENA
RANK 27

SANTRUPTA S.
RANK 29

SURYA SHANKAR
RANK 31

TRUPTIMAYEE J.
RANK 32

SWAHA M.
RANK 34

ANUPAM A.
RANK 37

AMIT RANJAN H.
RANK 41

KUNI JENA
RANK 45

SOVAN SRITAM P.
RANK 48

DIPTI PRAKASH B.
RANK 52

SABYASACHI S.
RANK 53

ABHISEK S.
RANK 56

AISHWARYA P.
RANK 57

BRAHMANANDA B.
RANK 58

BIKASH R.
RANK 60

SHUBHASHREE S.
RANK 64

PRAGNYA P.
RANK 69

TRUPTI D.
RANK 70

SONALI P.
RANK 72

AMRUT R.
RANK 73

SANTOSH B.
RANK 75

MUNA S.
RANK 76

AVISEKH S.
RANK 80

DEBASHIS N.
RANK 83

MANOJ M.
RANK 84

SANDEEP M.
RANK 87

SUPARNA B.
RANK 88

SAURANJEETA M.
RANK 90

SOUMYARANJAN M.
RANK 98

ASHIS M.
RANK 99

PREETI B.
RANK 109

TARANANTA B.
RANK 110

SATYASANTI M.
RANK 112

NITUSHREE M.
RANK 113

SATYAJIT M.
RANK 115

RAJENDRA J.
RANK 118

RUTUPARNA R.
RANK 122

GOPAL KRISHNA D.
RANK 123

AKANKSHYA D.
RANK 126

ASIT RANJAN S.
RANK 127

SANJIB KUMAR N.
RANK 128

SUPRIYA P.
RANK 131

SAYANTIKA S.
RANK 134

ANSHUMAN S.
RANK 135

SAMYOGITA S.
RANK 139

DEBASMITA S.
RANK 144

CHANDAN N.
RANK 149

CHIRANJIBI S.
RANK 150

BISWAJIT D.
RANK 151

JOGAMAYA S.
RANK 152

SASWAT SOVEN M.
RANK 153

AMLAN S.
RANK 154

SANDEEP SEKHAR J.
RANK 155

BIBHUTI BHUSANA B.
RANK 156

PRAGNYA D.
RANK 157

SATYAJIT N.
RANK 160

HIMADRI S.
RANK 163

PRARTHANA P.
RANK 164

SWAGATIKA R.
RANK 165

SUBHRA JYOTI S.
RANK 166

ANSUMAN P.
RANK 167

TAPAS KUMAR M.
RANK 168

ANNAPURNA N.
RANK 169

SAMBIT S.
RANK 171

MADHURI B.
RANK 174

NIHAR RANJAN D.
RANK 176

URMILA P.
RANK 179

MURALIDHAR P.
RANK 182

KALLOLA M.
RANK 184

DIBYAJOTI P.
RANK 185

TANMAYA P.
RANK 188

ARANYAK S.
RANK 190

ARCHANA G.
RANK 191

SASWATI S.
RANK 192

ASIT KUMAR S.
RANK 196

FALGUNI K.
RANK 199

SUBHAKALYANI M.
RANK 200

EKANSH D.
RANK 201

TARINI JYOTI M.
RANK 202

SHAKTI PRASAD N.
RANK 204

B.SALONI
RANK 205

SUDHANSU S.
RANK 206

SUKANYA R.
RANK 207

THEPLIN S.
RANK 211

SARTHAKA B.
RANK 213

AKASH KUMAR P.
RANK 216

AMIT KUMAR B.
RANK 217

and
many more...

305+ SELECTIONS IN OAS 2020

Congratulations!!

You have made us all proud

ADMISSIONS OPEN FOR
IAS/OAS
JAYDEV VIHAR,
BHUBANESWAR, ODISHA
99383 86166
82606 77707

SHORT NEWS ARTICLES

GS-I

CULTURE & HISTORY

Shyamji Krishna Varma

Context

- **Prime Minister Narendra Modi pays tribute to Shyamji Krishna Varma on his birth anniversary, October 4.**

Details

- Shyamji Krishna Varma (1857 – 1930) was an Indian freedom fighter, lawyer, and journalist.
- **Indian Home Rule Society (IHRS)** was an Indian organization founded in London in 1905 that sought to promote the cause of self-rule in British India. The organization was founded by Shyamji Krishna Varma, with support from Bhikaji Cama, Dadabhai Naoroji, and S.R. Rana.
- He founded **India House** in London. It was a student residence that existed between 1905 and 1910 and was opened to promote nationalist views among Indian students in Britain.
- He founded **Indian Sociologist** in London. The monthly Indian Sociologist became an outlet for nationalist ideas.

Kashi-Tamil Sangam

Context

- The Union government recently announced **a month-long programme to "strengthen" and "rekindle" the cultural and civilization bond between Tamil Nadu and Varanasi (Uttar Pradesh).**
  - The programme named 'Kashi-Tamil Sangamam' will be held from 16th November to 16th December.

Details

- The programme would be organized **as a part of the 'Ek Bharat Shreshtha Bharat' initiative.**
- Under the programme, 2,500 people divided into 12 groups would travel to Varanasi. In Tamil Nadu, people would visit Chennai, Rameswaram and Coimbatore.
  - The groups would include students, teachers, artisans, etc.
- For this Programme, the knowledge partners would be IIT-Madras and the Banaras Hindu University (BHU), and the Uttar Pradesh government would be the host State.

Ek Bharat Shreshtha Bharat

- **"Ek Bharat Shreshtha Bharat" was announced by the Prime Minister on 31st October 2015 on the occasion of the 140th birth anniversary of Sardar Vallabhbhai Patel.**
- The Finance Minister announced the initiative in his Budget Speech for 2016-17.
- Through this innovative measure, the knowledge of the culture, traditions and practices of different States and UTs will lead to an enhanced understanding and bonding between the States, thereby strengthening the unity and integrity of India.
- All States and UTs will be covered under the programme.
- **The pairing of States/UTs at the national level and these pairings will be in effect for one year, or till the next round of pairings.**
- The State/UT level pairings would be utilized for state-level activities. District-level pairings would be independent of the State level pairings.
- The activity will be very useful to link various States and Districts in annual programmes that will connect people through exchanges in areas of culture, tourism, language, education trade etc. and citizens will be able to experience the cultural diversity of a much larger number of States/UTs while realizing that India is one.

Objectives of the initiative

- **To celebrate the Unity in Diversity of our Nation and to maintain and strengthen the fabric of traditionally existing emotional bonds between the people of our Country**.
- Promote the spirit of national integration through a deep and structured engagement between all Indian States and Union Territories through a year-long planned engagement between States.
- To promote the rich heritage and culture, customs and traditions of either State for enabling people to understand and appreciate the diversity that is India, thus fostering a sense of common identity.

- To create an environment which promotes learning between States by sharing best practices and experiences.

Tulu and Kodava

Context

- **Speakers of Tulu and Kodava have opposed the draft of the Kannada Language Comprehensive Development Bill, 2022, which aims to ensure the "extensive use and propagation" of Kannada.** They have sought that various dialects spoken within Karnataka too should get protection under the ambit of the Bill.

Details

The controversy:

- In a bid to give a legal framework and teeth to various rules and regulations on giving primacy to Kannada, the **S.R. Bannurmath-headed committee submitted the draft of the Kannada Language Comprehensive Development Bill, 2022**, to the government which was tabled in the recently concluded legislature session.
- The Bill provides for penalties for violations of rules, with fines prescribed for various offences.
- **Tulu and Kodava language activists have termed the Bill "a threat to minority languages" in the State.**
- According to State Reorganization Act, 1956, Kodava and Tulu languages were used as part of the administration in their respective districts.
- The Bill only gives importance to Kannada and to use English for administrative purposes like communication with the Union government or in courts etc., but there is no mention of Kodava and Tulu. This will further increase the fear among the native speakers about the language vanishing.
- **Karnataka as a heterogeneous State should have protected its subaltern languages and cultures in general, and Kodava, Tulu and Konkani in particular, in all spheres as per Articles 347, 350, 350A and 350 B under 7th Amendment to the Constitution R/w State Reorganization Act, 1956.**

Who all speak Tulu in India now and what is its history?

- Tulu is a **Dravidian language** spoken mainly in two coastal districts **Dakshina Kannada and Udupi of Karnataka and Kasaragod district of Kerala.**
- As per the 2011 Census report, there are 18,46,427 Tulu-speaking people in India.
- Some scholars suggest Tulu is among the earliest Dravidian languages with a history of 2000 years.
- Tulu has a rich oral literature tradition with folk-song forms like paddana, and traditional folk theatre yakshagana.
- Tulu also has an active tradition of cinema with around 5 to 7 Tulu language movies produced a year.

About Kodava Takke

- A language in the **Dravidian** group
- The **original** language of the Kodagu district in **Southern Karnataka**
- UNESCO has classified the language as an **Endangered** Language.
- It has **no separate script** and is traditionally written using the **Kannada script**.
- According to the 2001 census, Kodava takke is spoken by **just 166,187 people**.

Chola Dynasty

Context

- In all the buzz around the Tamil film Ponniyin Selvan:1 or PS1, **actor Vikram spoke about the progressiveness of the Chola era, mentioning the architectural marvels and temples, the social setup of the time, and how cities were named after women.**

Details

- The Chola kingdom stretched across present-day Tamil Nadu, Kerala, and parts of Andhra Pradesh and Karnataka.
- **During the period of the Cholas' rise and fall (around the 9th to 12th century AD), other powerful dynasties of the region would also come and go, such as the Rashtrakutas of the Deccan who defeated the Cholas, and the Chalukyas of the Andhra Pradesh region whom the Cholas frequently battled.**
- **The dynasty was founded by king Vijaylaya, described as a "feudatory" of the Pallavas** by historian Satish Chandra in the book 'The History of Medieval Era'.
- Despite being a relatively minor player in the region among giants, Vijaylaya laid the foundation for a dynasty that would rule a major part of southern India.
- **One of the biggest achievements of the Chola dynasty was its naval power, allowing them to go as far as Malaysia and the Sumatra islands of Indonesia in their conquests.**
- Chandra writes the domination was such that the Bay of Bengal was converted into a "Chola lake" for some time.
- **While the extent of this domination is disputed, the Cholas had strong ties with merchant groups and this allowed them to undertake impressive naval expeditions.**
- **Maintaining a strong army and naval resources made sense for the Cholas, because the period from the 9th to the 10th**

century was a violent time, where kingdoms would go to war with each other frequently.

- Succession wars were natural, and this is a focus of PS1, which is set in the time after the Rashtrakutas defeated the Cholas.
- There was a post-war period of churn, but this was accompanied by cultural sophistication as well
- That sophistication is reflected in the meticulous records kept by the Cholas in form of inscriptions on the walls of temples built by them, and on copper plates, though this was not unique.
- **Another feature is how the practice of building grand temples, common to the dynasties of the region around this time, was "ramped up in an unprecedented way" by the Cholas.**
- The grand Brihadeeswara temple of Thanjavur, built by the Cholas, was the largest building in India in that period. Additionally, artworks and sculptures were commissioned by Chola kings and queens, including the famous bronze Nataraja idols.
- Earlier, the Rashtrakutas had built the Kailasanatha temple in Maharashtra's Aurangabad — the largest monolith structure (carved from a single rock) of its time.
- Undoubtedly, the Cholas were instrumental in ushering in a new period in Indian history, but both their achievements and failings need to be noted to have a better picture of their rule.
- For example, **the role of women in the royal family is being brought to focus given their impact on public life, but that is not to suggest that ordinary women wielded equal power as men – a situation comparable to what we see even today, where power among women is concentrated in a few.**
- When the Chola King Rajadhiraja came to power in 1044, he was able to "subdue" Pandyan and Kerala kings, and presumably to celebrate these victories performed the Ashvamedha sacrifice.
- **The Chola rulers sacked and plundered Chalukyan cities including Kalyani and massacred the people, including Brahmans and children…They destroyed Anuradhapura, the ancient capital of the rulers of Sri Lanka. These are "blots" in Chola history.**

National Conference on Project Mausam

Context

- With the objective of promoting further research and broadening our understanding of this subject, the ASI organized a two-day National Conference at India Habitat Centre, New Delhi on 7th and 8th October, 2022. **Christened "Jaladhipurayatra: Exploring Cross- Cultural Linkages along the Indian Ocean Rim Countries", the Conference incorporated manifold aspects of maritime exchanges and interactions.**

Details

- In an attempt to understand the Monsoon Winds and other climatic factors and the ways in which these natural elements impacted, at different periods of history, the interactions between different countries in the Indian Ocean region, **'Project Mausam' was launched by the Ministry of Culture at UNESCO's 38th World Heritage Committee Meeting held at Doha, Qatar, in 2014.**
- Currently, the **Project is being administered by the Archaeological Survey of India (ASI).**
- Project 'Mausam' is a Ministry of Culture project to be implemented by the Indira Gandhi National Centre for the Arts (IGNCA), New Delhi as the nodal coordinating agency with the support of the Archaeological Survey of India and National Museum as associate bodies.
- Focusing on monsoon patterns, cultural routes and maritime landscapes, Project 'Mausam' is examining key processes and phenomena that link different parts of the Indian Ocean littoral as well as those that connect the coastal centres to their hinterlands.
- At the macro level, it aims to re-connect and re-establish communications between countries of the Indian Ocean world, which would lead to an enhanced understanding of cultural values and concerns;
- At the micro level, the focus is on understanding national cultures in their regional maritime milieu.
- The Project scope falls under several themes to be explored through various UNESCO Culture Conventions to which the Government of India is a signatory with the Ministry of Culture and ASI as nodal agency.

Modhera Sun Temple

Context

- **Prime Minister Narendra Modi will be declaring Modhera in Gujarat as a 24 x 7 solar-powered village on October 9.**

Details

- **Under this, this first-of-its-kind project, Solar Rooftops have been set up in over 1300 rural houses at iconic Modhera village at the cost of 80 crore rupees.**
- It is India's first grid-connected megawatt-hours (MWh) scale battery energy storage system.
- This has resulted in more than 60 to 100 percent reduction in power bills.
- **PM will visit Modhshwari Goddess temple and the world-famous Modhera Sun temple.**

- The Modhera Sun Temple was made by King Bhima I of the Chalukya dynasty in the early 11th century.
- It is a temple made to honour the Sun God in Modhera village of Mehsana district on the bank of River Pushpavati.
- The temple is designed in such a way that during every equinox, the first ray of the rising sun would fall on a diamond placed on the head of the Sun God. This would also light up the shrine with a golden glow.
- The Sabha Mandap stands on 52 pillars, signifying the 52 weeks in a year. There are carvings of the sun on the walls to show its unity with air, water, earth and space.
- In 2014, Modhera Sun Temple entered the list of UNESCO World Heritage Sites.
- It enjoys the same significance as other two well-known sun-temples in Kashmir (Martand) and Orissa (Konark).
- The Gujarat Tourism hosts a three-day dance festival every year, known as the Uttarardha Mahotsav, at the temple every January after Makar Sankranti festival.

GEOGRAPHY

Sukapaika River

Context

- The National Green Tribunal (NGT) has directed the Odisha government to revive a dead river- Sukapaika by earmarking dedicated fund for the purpose.

Sukapaika

- Sukapaika is **one of the several distributaries of the mighty Mahanadi river in Odisha**. It **branches away from the Mahanadi at Ayatpur village in Cuttack district** and flows for about 40 kilometres before rejoining its parent river Mahanadi at Tarapur in the same district- Cuttack. In the process, it drains a large landmass comprising over 425 villages in three blocks — **Cuttack Sadar, Nischintakoili and Raghunathpur.**

Melting of Arctic Ice

Context

- An analysis of data gathered over 26 years confirmed a strong correlation between the accelerated rate of melting Arctic ice in the region and the rate of ocean acidification.

Findings

- An international team of researchers has found an "extraordinary increase" in ocean acidification and a strong correlation with the increasing rate of Arctic ice melting. This "perilous combination" **threatens the survival of plants, shellfish, coral reefs and other marine life and biological processes** throughout the planet's ecosystem.
- Scientists have predicted that by 2050 Arctic Sea ice will no longer survive the increasingly warm summer seasons. As a result of this sea-ice retreat each summer, the ocean's chemistry will grow more acidic, with no persistent ice cover to slow or otherwise mitigate the advance.

Implications

- A combination of Ocean Acidification and Melting of Arctic Ice **creates life-threatening problems for the enormously diverse population of sea creatures, plants and other living things that depend on a healthy ocean for survival.** For example, crabs live in a crusty shell built from the calcium carbonate prevalent in ocean water. Polar bears rely on healthy fish populations for food, fish and sea birds rely on plankton and plants and seafood is a key element of many humans' diets. Ultimately, ocean acidification in these distant waters **impacts the entire world.**

October Storm

Context

- The first tropical cyclone of the post-monsoon season of 2022 is likely to form in the Bay of Bengal - India Meteorological Department (IMD).

Storms in October

- The months of October-November and May-June see storms of severe intensity develop in the North Indian Ocean — comprising the Bay of Bengal and the Arabian Sea. On an average five storms develop in a calendar year.
- In the past 131 years, October saw 61 storms develop in the Bay of Bengal, according to the Regional Specialised Meteorological Centre (RSMC). The east coast, notably Odisha, has faced many of its severest storms in October, including the Super Cyclone of 1999.

Reasons behind prevalence of storms in October

- **After the withdrawal of the Southwest monsoon, there is a rise in ocean heating, which leads to rise in sea surface temperature over the Bay of Bengal.**

- The atmospheric moisture availability over the ocean region, too, is higher. So, when remnant systems from the South China Sea reach the Bay of Bengal, they get conducive conditions, aiding the formation and intensification of cyclones in October.

GS-II
POLITY

'General Consent' For CBI

In News

- The State government of **Maharashtra has reversed the decision of the previous government and restored general consent to the Central Bureau of Investigation (CBI) to investigate cases in Maharashtra**.

About General consent

- **The Central Bureau of Investigation (CBI)** is governed by the Delhi Special Police Establishment (DSPE) Act, 1946, and it **must mandatorily obtain the consent of the state government before beginning to investigate a crime in a state**.
- General consent is normally given by states to help the CBI in a seamless investigation of cases of corruption against central government employees in their states.
- **In the absence of general consent, CBI would have to apply to the state government in every case, and before taking even small actions.**

About Central Bureau of Investigation (CBI)

- The Central Bureau of Investigation (CBI) was **set up in 1963 by a resolution of the Ministry of Home Affairs. Later, it was transferred to the Ministry of Personnel.**
  - The Special Police Establishment setup in 1941 was also merged with the CBI.
- **The establishment of the CBI was recommended by the Santhanam Committee on Prevention of Corruption (1962–1964).**
- **The CBI is not a statutory body.** It derives its powers from the Delhi Special Police Establishment Act, of 1946.
- The CBI is the main investigating agency of the Central Government. It plays an important role in the prevention of corruption and maintaining integrity in administration.
- **It also assists the Central Vigilance Commission and Lokpal.**
- **The CBI investigates crimes of corruption, economic offences and serious and organized crime other than terrorism.**
  - For terrorism: The National Investigation Agency (NIA) has been constituted after the Mumbai terror attack in 2008 mainly for investigation of incidents of terrorist attacks, funding of terrorism and other terror-related crime.
- CBI is headed by a Director. He is assisted by a special director or an additional director.
- The **Central Government appoints the Director of CBI on the recommendation of a three-member committee consisting of;**
  - The Prime Minister as Chairperson
  - The Leader of Opposition in the Lok Sabha
  - The Chief Justice of India or Judge of the Supreme Court nominated by him.

Cases Investigated by the CBI

- **Anti-Corruption Crimes -** Investigate cases under the Prevention of Corruption Act against Public officials and the employees of the Central Government, Public Sector Undertakings, Corporations or Bodies owned or controlled by the Government of India.
- **Economic Crimes -** Investigate major financial scams and serious economic frauds, including crimes relating to Fake Indian Currency Notes, Bank fraud and Cyber Crime, and Smuggling of narcotics, antiques, cultural property and smuggling etc.
- **Special Crimes -** Investigate serious and organized crime under the Indian Penal Code and other laws at the requests of State Governments or on the orders of the Supreme Court and High Courts.
- **Suo Moto Cases -** CBI can suo-moto take up investigation of offences only in the Union Territories.
- The Central Government can authorise CBI to investigate a crime in a State but only with the consent of the concerned State Government.
  - The Supreme Court and High Courts, however, can order CBI to investigate a crime anywhere in the country without the consent of the State.

National Credit Framework

In News

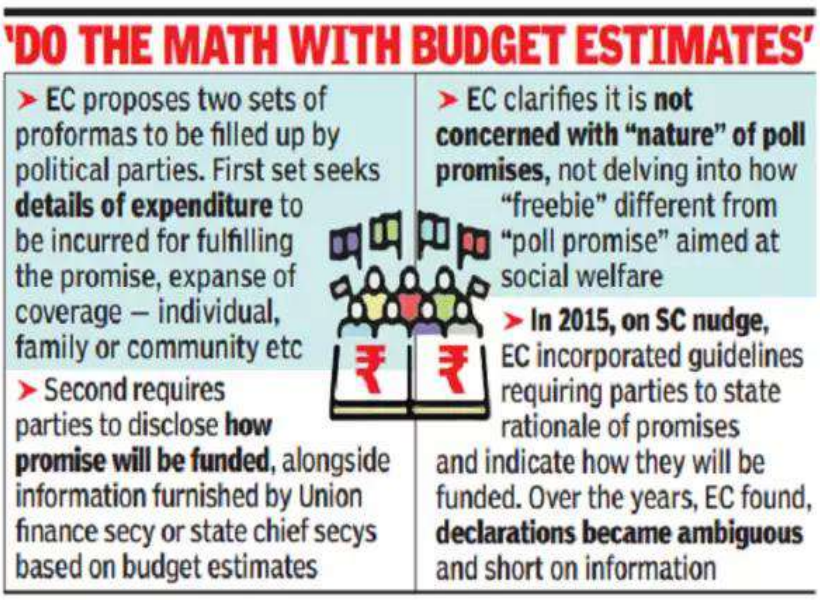
- The **draft of the National Credit Framework (NCrF) was released** by the Union Minister of Education and Minister of Skill Development and Entrepreneurship Shri Dharmendra Pradhan.
- The Government has **invited suggestions on the draft document.**

Key points of the Draft National Credit Framework (NCrF)

- Taking forward the vision of the new National Education Policy (NEP), the Union Government has developed the National Credit Framework (NCrF).
- National Credit Framework is **an umbrella framework for skilling, re-skilling, up-skilling, accreditation and evaluation in educational and skilling institutions and the workforce.**
- The framework will **promote Credits for knowledge acquisition**, hands-on training, and positive social outcomes to achieve the target of 100% literacy in the next 2-3 years.
- NCrF will **promote the integration of credits earned through school education, higher education and vocational and skill education** by encompassing the National Higher Education Qualification Framework (NHEQF), National Skills Qualification Framework (NSQF) and National School Education Qualification Framework (NSEQF).

Objectives

- To **allow students to move between educational institutions and enter and leave the program multiple times.** The Framework is part of the National Education Policy (NEP) 2020.
- Provide Flexibility in the duration of study courses through provisions of multiple entries and exit/work options.
- Allow Institutions to maintain digital records of credits earned by students.
- Promote the **integration of academic and vocational disciplines to ensure flexibility and mobility between the two.**
- Students can choose to study at one institution for a year and then transfer to another institution the following year.
- Allows students to complete courses online and earn credits. Educational institutions have the flexibility to adopt it when they choose.
- To **support dropped-out students to re-enter the education ecosystem.**
- To introduce reforms to incentivize knowledge, skills and experience.



Expected outcome

- National Credit Framework (NCrF) will **establish multidisciplinary and holistic education with flexible curricula.**
- It will open numerous options for students by integrating school and higher education with vocational education and experiential learning to promote skilling and vocational education.
- It will **remove the hard distinction between the education streams and allow for more than one award in the same period by removing the distinction between arts, science, social sciences, commerce, etc.**
- It will bring about a unification of higher education institutions to promote multidisciplinary education, creating a diverse and rich student knowledge base.
- It will **promote strong collaboration between institutions and make credit mechanisms simpler and uniform.**
- It will Increase focus on research and innovation, and Promote digital learning, and open distance learning.
- It will increase the enrolment of students, helping the government to fulfil the national vision of transforming India into the Skill Capital of the World.
- It will **make students more employable by providing a more holistic designed multi/ cross-sectoral skills to youth.**

GOVERNANCE

Viability of Poll Promises

In News

- The **Election Commission of India has proposed changes to manifesto guidelines under the model code of conduct regarding poll promises.**
- The proposed change requires political parties to specify how they will arrange resources for the implementation of the poll promises.
- The Election Commission **proposed disclosures about the promises and their implementation that would help voters make**

informed choices.

- The proposal comes as the result of the debate over freebies, the Supreme Court also hearing a petition seeking regulation of freebies.

Details

- **During election time, Political parties make promises to the voters to provide free electricity/water supply, monthly allowance** for the unemployed, laptops, smartphones, etc.
- These steps are justified as there has been **rising inequality in our country**, therefore some kind of **relief to the population needs to be provided**.
- It promotes socio-economic Growth: **Public Distribution System**, **employment guarantee schemes**, **and support for the social sector: education** and health.

Concern

- Freebies can hurt macroeconomic stability, it distorts expenditure priorities.
- **Negative i**mpact on the public exchequer and most of the states of India do not have strong financial health.
- **Against Free and Fair Election**
- **I**t would lead to the overuse of natural resources, Ex- Free water, electricity, etc.

Way Forward

- **Need to understand the** socio-economic impact of state support on the economy, life quality, and social cohesion in the long run.
- Need to **Differentiate between Subsidies and Freebies,** as targeted subsidies are justified to promote socio-economic development and reduce inequality and for promoting sustainable development, however, irrational freebies need to be regulated as they could challenge the economic stability of the nation.

YUVA 2.0

In News

- P**rime Minister of India launched YUVA 2.0;** a Scheme for Mentoring Young Authors on 2nd October.
- The main objective is to promote reading, writing, and book culture in India.

About Yuva Yojana

- **Pradhan Mantri Mentorships's Scheme for Young writers (PM-YUVA) was launched by the Ministry of Education in May 2021 for young writers up to the age of 30 years.**
- A contest was organised to select 75 young authors. The theme of the contest was 'National Movement of India' with 'Unsung Heroes', "Role of Unknown Places in Freedom Movement' etc as focus areas.
- **Proposals were invited in all 22 scheduled languages and English.**
- The selection was made by a committee constituted by National Book Trust (NBT).
- Mentors have been assigned to guide and develop the selected proposals into full-fledged books.
- **A consolidated scholarship of Rs. 50,000 per month for 6 months per author is to be paid under the mentorship scheme.**
- 10% royalty to be paid by NBT on publication and sale of the books.
- **It has been decided that the books selected under the PM-YUVA Scheme are translated into different Indian languages to ensure the exchange of Indian culture and literature to promote `Ek Bharat Shrestha Bharat'.**

Yuva Yojana Objectives

- Creating International level Youth writers representing the rich heritage of India.
- Engage the youth of the country in rich Indian history and culture.
- **Creating a pool of young authors in the country who will be the modern/ young ambassadors of our Indian Literature.**
- Create young learners for future leadership roles to represent the country on an international level.
- **To help young authors project their ideas on an international platform, therefore allowing them to promote Indian literature and culture globally.**
- Building skilled writers from new aspiring authors in various genres by providing expert mentoring.

Significance of the YUVA Scheme

- The PM Yuva Yojana programme is an innovative approach to creating new writers in the country representing India at a global level.
- Special Mentorship programme of 6 months by expert writers.
- All selected candidates will be given a Scholarship amount of **Rs. 50,000/-** for 6 months.
- Aspiring writers will be provided with an international platform to represent their creative writing skills.
- Budding authors in the country can be the face of young leaders in writing representing the magnificent cultural heritage of India.

Rubber Board

In News

- The **Rubber Board chairman has suggested measures such as promoting the Micro, Small and Medium Enterprises (MSMEs),** export of latex-based products, import restriction of compounded rubber, and empowerment of rubber producers' societies are suggested to help improve the domestic market.
- The total rubber area in the country during 2022-23 is around 8, 52,000 ha.

Details

- **After a moderate post-pandemic revival, the price of natural rubber has crashed** to a 16-month low of ₹150 per kg (RSS grade 4) in the Indian market.
- The current fall in prices is attributed primarily to weak Chinese demand and the European energy crisis. This is along with high inflation and an import glut, among other things.
- While the unremitting zero COVID strategy in China, which consumes about 42% of the global volume, has cost the industry dearly, analysts have also flagged the acceleration of imports.
- **India is currently the world's fifth largest producer of natural rubber while it also remains the second biggest consumer of Rubber globally**. About 40% of India's total natural rubber consumption is currently met through imports.

Rubber Board

- Britishers introduced Commercial cultivation of natural rubber in India.
- The government passed the Rubber (Production and Marketing) Act, of 1947, and established the Indian Rubber Board.
  - The Rubber Production and Marketing (Amendment) Act, 1954, amended the name of the Board as The Rubber Board.
  - It is a statutory organization that functions under the administrative control of the **Ministry of Commerce and Industry**.
- **Responsibility of the Board:**
  - To advise the Union Government on all matters relating to the development of the rubber industry, including the import and export of rubber.
  - To prepare and furnish reports relating to the rubber industry as may be required by the Central Government from time to time.

Rubber plant

- **Hevea brasiliensis**, or rubber tree or rubber plant, is a flowering plant belonging to the spurge family Euphorbiaceae. The milky latex extracted from the tree is the primary source of natural rubber.
- **brasiliensis** is a tall deciduous tree.
- The tree requires a **tropical or subtropical climate with a minimum of about 1,200 mm per year of rainfall,** and no frost. If frost does occur, the results can be disastrous for production.
- In the wild, the tree can reach a height of up to 140 feet (43 m).
- In plantations, the trees are generally smaller for two reasons:
- Trees grow more slowly when they are tapped for latex, and
- Trees are generally cut down after only 30 years, because **latex production declines as trees age**, and they are no longer economically productive.
- The natural rubber tree takes between **seven and ten years to deliver the first harvest.**
- As latex production declines with age, rubber trees are generally felled when they reach the age of 25 to 30 years.
- Originally, the South American rubber **tree grew only in the Amazon rainforest.** Gradually, rubber was extensively propagated in the British colonies including India.

Online News Dissemination

In News

- Recently, **the News Broadcasters and Digital Association (NBDA) approached the Competition Commission of India (CCI) against Google.**
  - NBDA has raised concern that Google had deprived them of their justifiable revenue acquired from news dissemination on the tech giant's platforms.

Concerns raised by News Broadcasters and Digital Association (NBDA)

- **Google controls 94% of the search engine market share in India** and People shifting towards news consumption online or app-based consumption.
- In India, the traditional newspaper industry sustained itself on a business model wherein advertisement revenue accounts for two-thirds of its total revenue.
  - With the increasing number of online news platforms, there is an increased dependency of news publishers on digital advertisement revenues.
- **More than 50% of the total traffic on news websites is routed through Google. Its algorithms determine which news websites would be prioritized in the search list.**

- Google is dominant in both markets; online web search services and digital advertising services.
- Google's conflicts of interest, as Google represents the buyer and the seller in the same transaction.

Google's arguments

- Like every organization, Google also needs revenues to manage "a complex and evolving business" such as maintaining data centers, further technological investments, enabling innovations that increase publisher revenue and maximizing advertiser return on investment, among other things.

Steps taken by other countries

- The **European Publishers Council filed an anti-trust complaint against Google** with the European Commission, challenging its existing "ad tech stranglehold" over press publishers.
- Australia **introduced the 'Media Bargaining Code' to address Google's control of Search engines.**

Way Forward

- Net neutrality is the principle that Internet service providers (ISPs) must treat all Internet transmissions equally, offering users and online content providers consistent rates irrespective of content, website, platform, application, type of equipment, source address, destination address, or method of communication.
- Internet content must ensure freedom of speech and democratic participation, promotes competition and innovation, and prevents dubious services.
- Need to regulate and prevent Internet content from being misused, ensure open standards, transparency, lack of Internet censorship, and low barriers to entry.
- In the year 2018, **the Indian Government unanimously approved new regulations supporting net neutrality, guaranteeing free and open Internet.**

One Nation One Police Uniform

About

- **The Prime Minister of India suggested the idea of "One Nation, One Uniform" for Indian police forces** while addressing the first Chintan Shivir (brainstorming session) of state home ministers and top police officers.
- He stated that the 'One Nation, One Uniform' for police is just an idea. **The Union government is not trying to impose.**
  - He suggested that all the states should think it over.
- **His suggestion is in line with his more comprehensive attempt to introduce a uniform set of policies across the country**.
  - Recently, the Union Ministry of Chemicals and Fertilisers announced to implementation of the "One Nation One Fertiliser" scheme.
  - In 2019, Union Government introduced the "One Nation One Ration Card" scheme.
  - PM repeatedly suggested the implementation of "One Nation, One Election", and adopting a single voter list for all polls.

Present Status

- Police personnel in India are usually associated with khaki colour uniforms, which also differ in varying degrees in different regions.
- **State governments decide on the uniform. For example:**
  - The Kolkata Police wear white uniforms.
  - Puducherry Police constables wear bright red caps with their khaki uniforms.
  - Delhi Traffic Police personnel wear white and blue uniforms.

Way Forward

- The Indian Constitution puts **police forces under the jurisdiction of state governments,** and each of the 28 states has its police force.
  - Both 'public order' and the 'police' are placed under the State List.
- Currently, it is **unclear how the Prime Minister's suggestion would be implemented even if the state government were to take it seriously.**

SOCIAL JUSTICE

Project SALT

About

- The World Bank has extended an unconditional loan of $250 million to the Supporting **Andhra's Learning Transformation (SALT) project.**
  - The SALT project is **the first project in the school education sector to be financed by the World Bank without any precondition.**

- It is an innovative project for teachers' training, promoting state-level assessment and establishing effective education management and information system.
- **It would focus on important key areas such as;**
  - Strengthening the foundation of learning.
  - Teacher-student interactions.
  - Improving the quality of teaching.
  - Organizational capabilities
  - Providing quality services
  - Strengthening the involvement of social organisations.
- The scheme is **integrated with the SamagraShikshaAbhiyan.**
- An IAS (Indian Administrative Service) officer and a joint director-level officer would be appointed to supervise the scheme.
- Steps would be taken to **set up schools in all districts across the state for physically challenged children.**

Single Integrated Pensioners Portal

About

- The Union Ministry of Personnel, Public Grievances and Pensions has launched Single Integrated Pensioners' Portal.
- The portal was **developed in collaboration with the State Bank of India (SBI).**
- It aimed to **promote "Ease of Living" for the Central Government Pensioners.**
- The Minister also launched Bhavishya 9.0 with its integration with the Pension Disbursing Banks.
  - **BHAVISHYA, a Portal for Pension Payment and Tracking System integrated with the Pension Seva portal of SBI.**
  - It will enable Pensioners to get all information and services in one place with a single login.
  - 'Bhavishya' platform was made mandatory for all central government departments on 01.01.2017.
- Recently, BHAVISHYA has been rated as the 3rd best portal among all Government service portals by the National e-Governance Service Delivery Assessment (NeSDA).

Pasmanda Muslims

About

- 'Pasmanda' **is a Persian word that denotes the 'ones left behind'**. The word is used to define the depressed classes among Muslims.
  - Backwards, Dalit and tribal Muslims use the word Pasmanda as an umbrella identity.
  - In 1998, "The term Pasmanda Muslim was first used by Ali Anwar Ansari when he founded the Pasmanda Muslim Mahaz.
- While Islam does not allow the creation of social hierarchies, the existence of caste categories is a reality for Muslims across India.

Details

- **Indian Muslim society can be broadly classified into;**
  - Ashrafs (the "noble" elite or "honourable ones")
  - Ajlafs (backwards Muslims)
  - Arzals (Dalit Muslims)
- Ashrafs claim to be the descendants of Muslims who migrated from the Islamic homelands of Arabia, Persia, Turkey, and Afghanistan, or of upper-caste converts from Hinduism.
- Ajlafs are the middle-caste converts who were involved in occupations that are considered ritually "clean"; weavers, tailors, vegetable sellers, etc.
- Azaleas belong to the lowest, "untouchable" castes — like the scavengers, washermen, barbers, butchers, beggars, etc.
- **The RajinderSachar Committee was formed in 2005 to study the social, economic and educational condition of Indian Muslims and highlighted 3 groups among Muslims**:
  - Those without any social disabilities, the Ashrafs.
  - Those equivalents to Hindu OBCs, the Ajlafs.
  - Those are equivalent to Hindu SCs, the Arzals.
- The **Justice Ranganath Mishra Commission stated that the caste system impacted all religious communities in India, including Muslims**.
- In the absence of a caste census, no specific caste-based data are available.

Hatti Community

In News

- Recently the Union Government announced bringing the Hatti community under the Scheduled Tribes list.
- The demand to declare the Trans-Giri region as a tribal area is old, and the demand is linked with another demand for Scheduled Tribe (ST) status for the Hatti community which lives in the Trans-Giri region.
- The list of **Major STs in Himachal Pradesh includes;**
  - Gaddis
  - Gujjars
  - Kinnaras (Kinnauras)
  - Lahaulas
  - Pangwalas, and some other smaller tribes.
- The bulk of the tribal population lives in remote, high-altitude areas in the districts of Lahaul, Spiti, Kinnaur, and Chamba.
- The tribal population of the state was 3.92 lakh (about 6% of the total) in 2011.

Hatti community

- The Hattis are a close-knit community.
- **Harris people take their name from their traditional occupation** of selling home-grown crops, vegetables, meat, and wool at small-town markets known as 'haats'.
- Hatti men traditionally dress in distinctive white headgear on ceremonial occasions.
- In Himachal Pradesh, Hattis people live in 154 panchayat areas, and according to the 2011 census; members of the community are around 2.5 lakh.
  - The present-day population of the Hattis is around 3 lakh.
- **They live near the Himachal-Uttarakhand border area in the basin of the Giri and Tons rivers,** both these rivers are tributaries of the Yamuna.
- **The Tons River marks the border between the two states.**
  - Hattis live in the Trans-Giri area in Himachal Pradesh and JaunsarBawar in Uttarakhand.
  - Both have a similar tradition, and inter-marriages are common among them.
- A rigid caste system operates in the community;
  - The Bhat and Khash are so-called upper caste people.
  - The Badhois are so-called lower caste people.
  - Inter-caste marriages between these 2 castes are discouraged.
- The Hattis people are governed by a traditional council called 'khumbli' which is similar to the 'khaps' of Haryana, they decide community matters.

Tribal Area

- The **Indian Constitution states two types of areas:**
  - Scheduled Areas in terms of the 5th Schedule of the Constitution.
  - Tribal Areas in terms of the 6th Schedule.
- "The "Tribal Areas" are also mentioned under Article 244(2) of the Constitution.
- **For the declaration of Scheduled Areas, the criteria followed are:**
  - The predominance of the tribal population.
  - Closeness and reasonable size of the area.
  - Presence of a viable administrative unit such as a district, block or taluk.
  - Economic backwardness of the area as compared to neighbouring areas.

INTERNATIONAL RELATIONS

East Asia Summit

Context

- India participated in the 6th East Asia Summit Education Minister's Meeting held in Hanoi, Vietnam.

About East Asia Summit

- The East Asia Summit is a premier leaders-led forum in the Indo-Pacific region.
- Since its inception in 2005, it has played a key role in the strategic and geopolitical evolution of east Asia.
- Apart from the 10 ASEAN member states, East Asia Summit **includes India, China, Japan, the Republic of Korea, Australia, New Zealand, the United States and Russia.**
- **India, being a founding member of the East Asia Summit**, is committed to strengthening the East Asia Summit and making it

more effective for dealing with contemporary challenges.

- ASEAN-India summits are held annually and provide the opportunity for India and ASEAN to engage at the highest levels.

Interpol General Assembly

Context

- India hosted the 90th General Assembly of the International Criminal Police Organization, INTERPOL from 18th to 21st of October in New Delhi.
- The General Assembly is INTERPOL's supreme governing body, comprising representatives from each of 195 member countries. It meets once a year.
- India is one of the oldest members of Interpol and joined the organization in 1949. All member countries of INTERPOL have agreed to ensure and promote the widest possible assistance between all criminal police authorities in the prevention and suppression of ordinary law crimes.
- The role of INTERPOL is to enable police around the world to work together to make the world a safer place.

About INTERPOL

- International Criminal Police Organization is an **international organization that facilitates worldwide police cooperation and crime control.**
- With 194 member states, it the world's largest police organization.
- **India is also a member state. India will host the 91st Interpol General Assembly in 2022.**
- It is the **world's largest police organization**.
- Contrary to popular belief, **INTERPOL is itself not a law enforcement agency.**
- It provides **investigative support, expertise, and training to law enforcement** worldwide, focusing on following major areas
  - transnational crime: terrorism, cybercrime, organized crime, crimes against humanity, child pornography, drug trafficking and production, political corruption, intellectual property infringement, and white-collar crime.

HEALTH

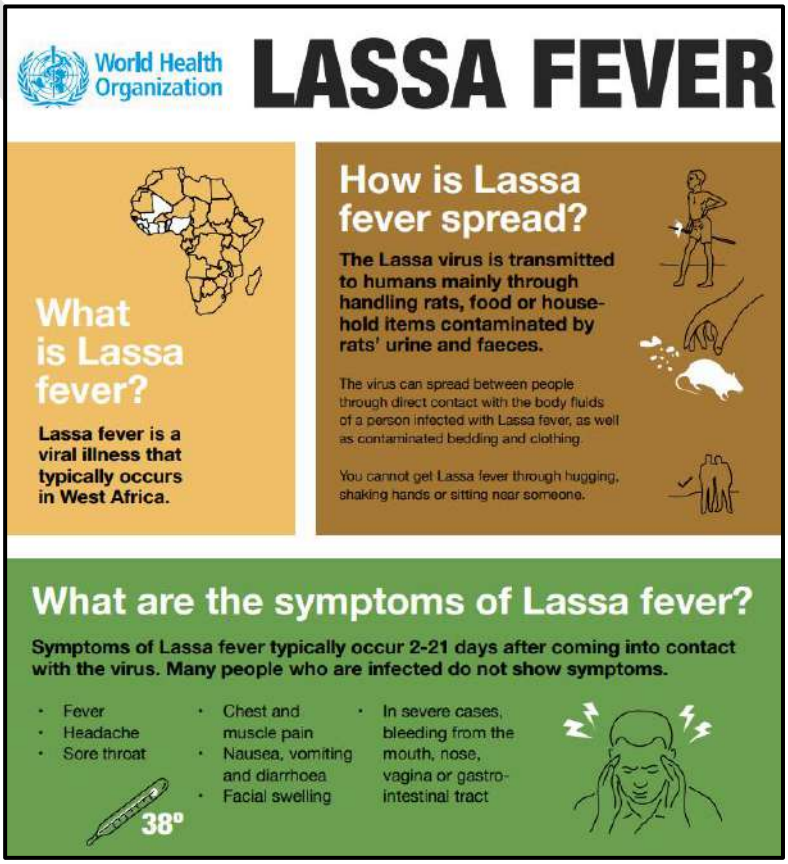
Lassa Fever

Context

- A recently published study has found that Climate change will aid the spread of Lassa fever.

Details

- **About:** Lassa fever, also known as Lassa hemorrhagic fever (LHF), is a type of **viral hemorrhagic fever**. It is an animal-borne, or zoonotic, acute viral illness.
- **Cause:** It is caused by the Lassa virus. The Lassa virus is a member of the ***Arenaviridae*** family of viruses.
- **Transmission:** It is spread by the **common African rat.** Humans usually become infected through direct contact or exposure to the excreta of infected Natal multimammate rat (***Mastomysnatalensis***) **rats.**
- **Occurrence:** It is endemic in parts of West Africa including **Sierra Leone, Liberia, Guinea and Nigeria.**
- **Symptoms:** See Infographic.
- **Vaccine:** There is **no vaccine.**
- **Prevention:** Avoiding contact with rats not only in places where the disease is endemic, maintaining hygiene, keeping food in rat-proof containers and laying down rat traps.



Hyperactivity Disorder

Context

- The US Food and Drug and Drug Administration (FDA) announced a shortage of Adderall.
- Adderall is a **drug for the treatment of ADHD and narcolepsy**, a sleep condition that causes daytime sleepiness.

Attention-deficit/hyperactivity disorder

- ADHD is one of the **most common neurodevelopmental disorders of childhood.** It is usually first diagnosed in childhood and often lasts into adulthood.
- Children with ADHD may have trouble paying attention, controlling impulsive behaviors (may act without thinking about what the result will be), or be overly active. It may contribute to low self-esteem, troubled relationships and difficulty at school or work.
- Treatments include medication and talk therapy. Many adults remain undiagnosed, and symptoms can cause difficulty at work, home or relationships. Symptoms can appear different at older ages, for example, hyperactivity can appear as extreme restlessness.

Adderall

- Adderall is the brand name for the formulation that consists of **a combination of dextroamphetamine and amphetamine**.
- Adderall belongs to the class of drugs known as stimulants and **increases the levels of dopamine and norepinephrine in the brain**.
- For people diagnosed with ADHD, **Adderall can help improve focus, concentration, impulse control and hyperactivity, because of its effects on the central nervous system.**

GS-III
ECONOMY

Monetary Policy Committee

Context

- Reserve Bank of India said that it would hold an additional Monetary Policy Committee (MPC) meeting on November 3, 2022. This meeting has been called as the RBI has failed to maintain the consumer price index (CPI) inflation target within the 2-6 per cent band for three consecutive quarters, or nine straight months — January to September 2022.

Details

- While making the announcement, the RBI said the meeting is being scheduled under the provisions of Section 45ZN of the Reserve Bank of India (RBI) Act, 1934.
- The central bank also referred to Regulation 7 of the RBI Monetary Policy Committee (MPC) and Monetary Policy Process Regulation, 2016.
- **This is the first time since the RBI adopted an inflation-targeting monetary policy regime in 2016 that an MPC meeting has been called under the provisions of Section 45ZN of the Act.**
- This section says that in case the RBI fails to meet the inflation target, it has to present a report to the government explaining the reasons for the failure. In the report, the central bank will have to mention the remedial actions it proposes to take, and an estimated time within which the inflation target will be achieved following the timely implementation of the proposed remedial actions.
- The Regulation 7 of the RBI MPC and Monetary Policy Process Regulations, 2016 states that a separate meeting is required to be scheduled as part of the normal policy process to discuss and draft the report to be sent to the government.
- Although the MPC is responsible for maintaining the inflation target, the report will be written by the RBI. However, the MPC will be consulted — and hence, the RBI has scheduled the additional MPC meeting on November 3.
- The report is required to be sent to the government within one month from the date on which the RBI failed to meet the inflation target.

Monetary Policy Committee

- **About:** MPC is a government-constituted body of the RBI, which is responsible for framing the monetary policy of the country, using the tools like repo rate, reverse repo rate, bank rates etc.
- **Proposal:** **Urjit Patel Committee** was the first committee who proposed the Monetary Policy Committee (MPC).The **first meeting** of MPC was conducted on 3rd October **2016 in Mumbai**.
- **Mandate:** Prime objective of RBI MPC is to determine the policy interest rate required to achieve the inflation target.
- **Act:** RBI Act, 1934 empowers the RBI to take Monetary Policy Decisions.
- **Meetings:** The meetings of the Monetary Policy Committee are held at **least 4 times a year** (specifically, at least once BIMONTHLY) and it publishes its decisions after each such meeting.

- **Composition:** The committee comprises **six members - three officials of the Reserve Bank of India and three external members nominated by the Government of India.**
- **The Governor of Reserve Bank of India is the chairperson ex officio** of the committee.
- **Term: each member has tenure of four years.**
- **Confidentiality:** They need to observe a "silent period" seven days before and after the rate decision for "utmost confidentiality".
- **Decision:** Decisions are taken by majority with the Governor having the casting vote in case of a tie. MPC decisions are taken by voting, where a simple majority (4 out of 6) is necessary for a decision to be passed.
- **Inflation targets:**
  - Targeted consumer price index (CPI) inflation rate is= **4%**
  - Upper tolerance limit of inflation is= Target inflation rate + 2% = **(4% + 2%) =6%**
  - Lower tolerance limit of inflation is= Target inflation rate – 2% = **(4% – 2%) =2%**
  - Targeted consumer price index (CPI) inflation rate period from = **April 1, 2021**
  - Targeted consumer price index (CPI) inflation rate period up to = **March 31, 2026**

Read: https://www.iasgyan.in/daily-current-affairs/monetary-policy

Telecom Technology Development Fund Scheme

Context

- Recently, Universal Service Obligation Fund (USOF), a body under the Department of Telecommunications, officially launched **Telecom Technology Development Fund (TTDF) Scheme.** The scheme is aligned with Prime Minister, Shri. Narendra Modi's clarion call of adding Jan Anusandhaan in the new phase of Amrit Kaal.

Details

- Telecom Technology Development Fund (TTDF) **aims to fund R&D in rural-specific communication technology applications** and form synergies among academia, start-ups, research institutes, and the industry to build and develop the telecom ecosystem.
- Additionally, the Scheme aims to promote technology ownership and indigenous manufacturing, create a culture of technology co-innovation, reduce imports, boost export opportunities and creation of Intellectual Property.
- Under the scheme, USOF is also targeting to develop standards to meet countrywide requirements and create the ecosystem for research, design, prototyping, use cases, pilots, and proof of concept testing, among others.
- The scheme entails grants to Indian entities to encourage and induct indigenous technologies tailor-made to meet domestic needs.

Read about USOF: *https://www.iasgyan.in/daily-current-affairs/universal-service-obligation-fund*

Global Energy Monitor Report

Context

- On average, India's coal mines use only two-thirds of the capacity with some large ones using only 1% - Global Energy Monitor (GEM) Report.

Background

- India's 427 Metric Tonnes Per Annum of planned coal mine capacity place it second in the world after China with 596 MTPA.
- But India's coal mines use only two-thirds of the capacity with some large ones using only 1%.
- In some major mining regions, like Jharkhand and Odisha, the industry has over 100 million tonnes in unused capacity at active mine sites, amounting to over 40% of unused mine capacity in those States.
- All these suggest that 99 of India's coal mine projects, expected to yield 427 MTPA (million tonnes per annum), under development are unnecessary and **opening new coal mines wouldn't contribute to easing short-term supply-crunches**.

Observations made by the Report on opening New Mines

Coal Mines and Displacement

- Coal mines under development threaten to displace at least 165 villages and affect 87,630 families, of which 41,508 families live in areas where the predominant population is tribal communities.

Coal Mines and Agriculture and Forests

- Coal mines under development also **threaten 22,686 hectares (ha) of agricultural land and 19,297 ha of forest**.

Coal Mines and Water needs

- Coal Mines under development will consume at least **168,041 kilolitres of water per day, comparable to the daily water needs of over one million people, at a time of severe water stress in the country.**

Contradicts India's Net Zero Target of 2070

- On the heels of India's announcement of a net zero target of 2070, these new mines **increase India's likelihood of stranded assets, delay a clean energy future**—and in the process **pose irreversible impacts on India's rural communities and**

environments.

Would exacerbate Water Shortage

- Water shortages would be exacerbated by the new coal projects, increasing demand by 1,68,041 kilolitres per day. Of 427 MTPA in new capacity, 159 MTPA (37%) will be located in high-risk water zones, while 230 MTPA (54%) is planned for zones with extreme water-risk.

Final Thought

- New mines can't make the industry's old problems go away. It is **not a panacea**. Opening new mines today could intensify the sector's weaknesses and inefficiencies tomorrow, especially as competition from renewables and conflicts over land use continue to emerge.

Global Energy Monitor
Global Energy Monitor is a San Francisco-based non-governmental organization which catalogs fossil fuel and renewable energy projects worldwide. GEM shares information in support of clean energy and its data and reports on energy trends are widely cited by governments, media, and academic researchers.

Important Links pertaining to Coal Industry:
https://www.iasgyan.in/daily-current-affairs/coal-industry
https://www.iasgyan.in/blogs/coal-sector
https://www.iasgyan.in/daily-current-affairs/indias-changing-commitment-over-coal
https://www.iasgyan.in/daily-current-affairs/coal-crisis
https://www.iasgyan.in/daily-current-affairs/indias-coal-usage

Doom Loop

Context

- **Recently, the European Central Bank (ECB) called an emergency meeting for a doom loop.** Many economists have warned that Europe may be headed for a doom loop

Details

What is a doom loop?

- **A doom loop is the circle of vulnerability where a country's banking system can be severely hurt by volatility in the economy.**

Impact

- A country is at risk of a doom loop when a shock to one part of its economic system is amplified by its effect on another.
- **Thus resulting in a contraction in lending provided by the banks.**
- This contraction in credit, in turn, slows the domestic economy, resulting in a further deterioration in the price of the sovereign's bond issues.
- A government under financial stress may have to cut spending or raise taxes when the economy is weak. That in turn can aggravate fiscal problems.
- The circle can also be activated by external forces such as a slowdown in global economic activity due to natural recession or trade friction.

AGRICULTURE

Pokkali Rice

Context

- Curtain will come down on this year's Pokkali rice cultivation cycle with a harvest festival on Thursday at the Nedungad field collective near Nayarambalam on Vypeen island.

About Pokkali rice

- It is **a salt water-resistant variety** that grows tall.
- It is **cultivated in the coastal regions of Kerala.**
- Pokkali is an ancient farming practice where one season of rice farming is alternated with another season of prawn culture. Hence, pokkali rice is a part of the **'one fish and one rice'** annual cycle.
- The prawn seedlings feed on the leftovers of the harvested crop, while the rice crop, which gets no other fertiliser or manure, draws nutrients from the prawns' excrement and other remnants.
- Rice farming and prawn farming are mutually complementary. They are useful in climate- resilient agriculture as they can

withstands flooding.

- A storehouse of nutrition, they are rich in fibre and protein content, antioxidants with benefits of vitamin E, and minerals such as iron, boron and sulphur
- **Pokkali rice has a geographical indication (GI) tag since 2007.**

Sugar Production in India

Context

- In Sugar Season (Oct-Sep) 2021-22, **a record of more than 5000 Lakh Metric Tons (LMT) sugarcane was produced in the country.**

Details

- Out of 5000 Lakh Metric Tons (LMT) sugarcane about 3574 LMT of sugarcane was crushed by sugar mills to produce about 394 LMT of sugar (Sucrose).
- Out of this, 35 LMT sugar was diverted to ethanol production and 359 LMT sugar was produced by sugar mills.
- **With this, India has emerged as the world's largest producer and consumer of sugar as well as the world's 2nd largest exporter of sugar.**
- The season has proven to be a watershed season for Indian Sugar Sector. All records of sugarcane production, sugar production, sugar exports, cane procured, cane dues paid and ethanol production were made during the season.

Final Thought

- The success story of sugar industry is the outcome of synchronous and collaborative efforts of Central and State Governments, farmers, sugar mills, ethanol distilleries with very supportive overall ecosystem for business in the country.

Must read: ***https://www.iasgyan.in/blogs/sugarcane-industry-38***

Rythu Bharosa Kendras

Context

- An **Ethiopian delegation visited Andhra Pradesh to study the RythuBharosaKendras (RBKs) and to understand how they work.**
- The Ethiopian delegation will possibly sign a Memorandum of Understanding (MoU) with the state government and Centre to transfer the knowledge.

Rythu Bharosa Kendras

- **They are unique seeds-to-sales, single-window service centres for farmers in Andhra Pradesh.**
- They sell pre-tested quality seeds, certified fertilizers and animal feed.
- Farmers can purchase or hire farm equipment, and even sell their produce at the prevailing Minimum Support Price (MSP).
- **They also provide services like soil testing and also make recommendations**; on which crops to sow, and the quantity and type of fertilizer to be used.
- The **state government pays crop insurance, procures grains and makes payments to farmers through these Kendras.**
- The state government set up more than 10,700 centres.
- **Objectives:**
  - Increase in Agriculture output.
  - Improve the quantity and quality of yields.
  - Reduce production costs.
  - Provide newer skills to farmers.

Significance

- They encourage **interaction between farmers, agriculture scientists, and agriculture officers at the village level.**
- Theydisplay new farm equipment and also **provide training to farmers.**
- They provide information about soil and weather conditions, which help farmers to change their cropping patterns and reap benefits.
- They **eliminate spurious seeds and uncertified or harmful fertilizers,** which can cause crop damage and failures.
- **These centres are staffed by agriculture and horticulture graduates** and they help farmers to decide the crops they should cultivate scientifically.
- They aid farmers in selling their produce at MSPs, through supporting systems of e-cropping, and geo-tagging.

SCIENCE & TECHNOLOGY

Black Cocaine

Context

- Recently, the Narcotics Control Bureau (NCB) arrested a Bolivian woman from Mumbai airport for allegedly carrying black cocaine.

About Black Cocaine

- Black cocaine is a **mixture of regular cocaine base or cocaine hydrochloride with various other substances to turn it black in colour.** These other substances are added because-
  - It makes smuggling easier by disguising it as metal moulds or asphalt or toner or fertilizer.
  - It interferes with color-based drug tests.
  - It makes the mixture undetectable by drug sniffing dogs.
- Since it is usually black, it is generally **smuggled as toner, fingerprint powder, fertilizer, pigment, metal moldings, or charcoal.**
- Black cocaine was first seized in Spain in 2008.

Extraction

- The pure cocaine base can be recovered from the mixture by extraction **using common organic solvents such as methylene chloride or acetone**. This is then converted to cocaine hydrochloride.

NCB

The Narcotics Control Bureau is an Indian central law enforcement and intelligence agency **under the Ministry of Home Affairs.** The agency is tasked with combating drug trafficking and the use of illegal substances under the provisions of Narcotic Drugs and Psychotropic Substances Act.

Established in 1986, it is responsible for coordination with the Indian state governments and other central departments, implementation of India's international obligations with regard to drug trafficking, and assisting international and foreign drug law enforcement agencies.

Green Crackers

Context

- According to the National Green Tribunal (NGT), green crackers are permitted only in cities and towns where air quality is moderate or poor.

About Green Crackers

- The CSIR-National Environmental Engineering Research Institute (CSIR NEERI) has defined green crackers **as firecrackers made with a reduced shell size, without ash, and/or with additives such as dust suppressants to reduce emissions with specific reference to particulate matter.**
- These crackers come **without barium compounds** through which crackers get the green colour. It is a metal oxide that contributes to air and noise pollution.
- According to reports, **green crackers cause 30 per cent lesser particulate matter pollution as compared to traditional crackers.** On bursting green crackers, water vapour is released which helps in settling down the dust emitted. While **regular firecrackers emit around 160 decibels of sound, green crackers produce between 110 and 125 decibels of sound.**

Green crackers in India

- In India, green crackers were launched in 2019 and currently, there are three types of green crackers: SWAS (Safe Water Releaser), STAR (Safe Thermite Cracker), and SAFAL (Safe Minimal Aluminium). To identify green crackers, one can look for the CSIR NEERI logo on the fireworks packaging.

Microbial Interactions in ISS

Context

- Researchers at IIT Madras and NASA have studied the interactions between microbes in the International Space Station (ISS).

Need of such studies

- During spaceflight, crews may have altered immunity and limited access to terrestrial medical facilities. Therefore, studying the microbes inhabiting the space station becomes important to understand the risks associated with short-term and long-term space travel on the health of astronauts.

The recent study and its Findings

- The present study was motivated by the earlier observations of the dominance of ***Klebsiellapneumoniae*** on the surfaces of the ISS. This pathogen has been known to cause pneumonia and other nosocomial infections.
- The researchers were broadly interested in understanding how this bacterium affects the growth of other microbes in the vicinity.
- The study found that ***Klebsiellapneumoniae***, a major microbe that resides on the ISS, is beneficial to various other microbes also present on the ISS, especially the bacteria from the ***Pantoea genus***. However, it was found that its presence was hampering the growth of ***Aspergillus fungus.***
- Members like ***E coli, Salmonella***, etc, which are also present in the human gut was found to be the most beneficial among the other microbes present on the ISS.

Significance of the recent study

- The study will help devise strategies for the disinfection of space stations to minimize any potential impact of microbes on the health of astronauts. Keeping an eye on what microbes are on the ISS and learning how they adapt in microgravity continues to help us protect astronaut health.

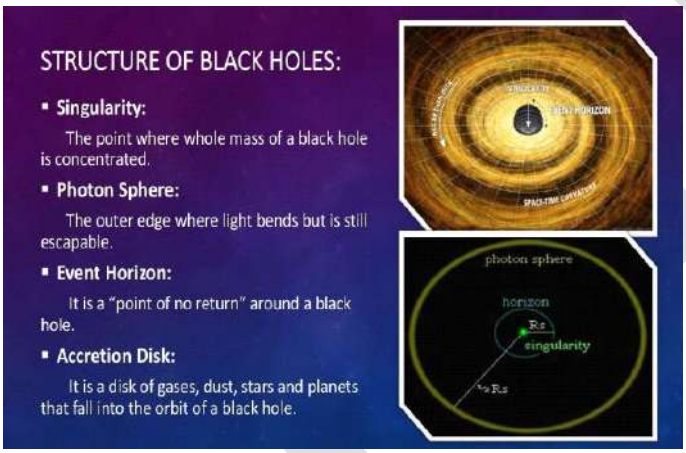
Supermassive Black Hole

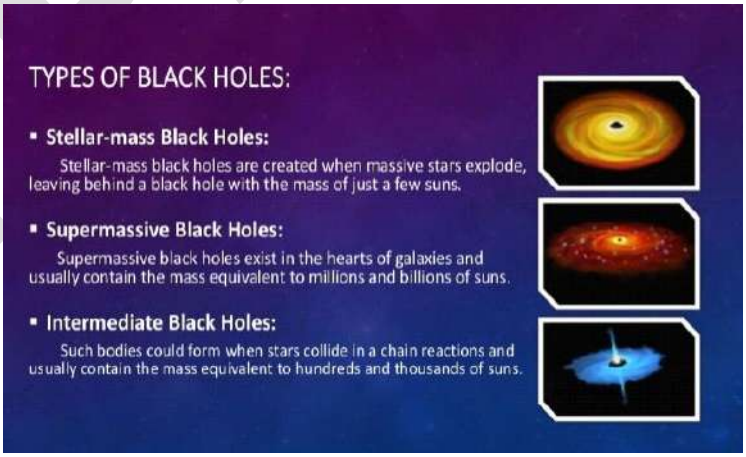
Context

- A rare supermassive black hole has been spotted by a team of Indian researchers. The supermassive black hole occupies the centre of the RAD 12 galaxy, which is elliptical or egg-shaped.

Black Hole

- A black hole is a region of spacetime where gravity is so strong that nothing – no particles or even electromagnetic radiation such as light – can escape from it. The smallest black holes formed when the universe began. Stellar black holes are made when the centre of a very big star falls in upon itself, or collapses. When this happens, it causes a supernova. A supernova is an exploding star that blasts part of the star into space.
- Supermassive black holes were made at the same time as the galaxy they are in.





About

- A supermassive black hole is **a type of black hole with its mass being on the order of millions to billions of times the mass of the Sun (M⊙).**
- They **typically exist at the centre of large galaxies,** including the centre of our own galaxy, the Milky Way.

Overhauser Magnetometer

Context

- Indian scientists have developed an Overhauser Magnetometer, one of the most accurate magnetometers extensively used by all magnetic observatories around the world.

Magnetometer

- A magnetometer is a **device that measures magnetic field or magnetic dipole moment.** Different types of magnetometers measure the direction, strength, or relative change of a magnetic field at a particular location.

Overhauser magnetometers

- These magnetometers, produce magnetic resonance in a known sample in the magnetic field to be measured. It measures the sample's resonant frequency, and then **calculates and displays the field strength.**
- Overhauser magnetometers **use proton precession signals to measure the magnetic field**. It uses the principle of **Earth's field nuclear magnetic resonance (EFNMR)** to measure very small variations in the Earth's magnetic field, allowing ferrous objects

on land and at sea to be detected.

- In this, by adding free radicals to the measurement fluid/sample, the nuclear Overhauser effect is exploited. A low power radio-frequency field is used to align (polarise) the electron spin of the free radicals, which then couples to the protons via the Overhauser effect.
- Overhauser magnetometers are more resistant to field gradients than classical proton magnetometers and they **also measure faster.**
- OVH magnetometers are **known for their higher accuracy, higher sensitivity, and efficient power consumption** and hence find applications in all magnetic observatories worldwide as well as in international space programs. It has **so far been imported for such purposes in India.**

Application area

- Archaeological studies.
- Engineering surveys.
- Pipeline mapping.
- Mineral exploration.
- Oil and gas exploration.
- Regional geological surveys.
- Magnetic observatory measurements etc.

NMR ABD EFNMR

NMR instruments utilize an extremely uniform, high magnetic field for polarization of nuclear spins and the detection of the magnetization of spins in the samples. In contrast, Earth's field NMR (EF-NMR) utilizes the globally available Earth's magnetic field for the detection of the magnetization. Nuclear magnetic resonance (NMR) in the geomagnetic field is conventionally referred to as Earth's field NMR (EFNMR). EFNMR is a special case of low field NMR.

Mission DefSpace

Context

- Recently, Prime Minister (PM) Narendra Modi launched Mission DefSpace in Gandhinagar.

About

- The Mission DefSpace is an **initiative aimed at developing innovative solutions for the defence forces in the space sector**.
- Under Mission DefSpace, 75 challenges in the space sector have been identified for private firms to work on.

Significance

- With countries dependent on space systems for both their economic and military security, space defence is a priority. One example is counterterrorism operations depend on GPS and satellite communications systems to power drones for track and strike missions. These space-based communications are also used in surveillance.
- Mission DefSpace will prepare India for future possibilities in space domain and will also increase the country's preparation further.

Medicinal Fungi

Context

- A new study finds that some chemicals secreted by Medicinal Fungi may find use as novel drugs.

Medicinal fungi

- Medicinal fungi are **fungi that contain metabolites or can be induced to produce metabolites through biotechnologyto develop prescription drugs.**
- Compounds successfully developed into drugs or under research include **antibiotics, anti-cancer drugs, cholesterol and ergosterol synthesis inhibitors, psychotropic drugs, immune suppressants and fungicides.**

Metabolites and Metabolism

Metabolism refers to the sum of the chemical reactions that take place within each cell of a living organism and that provide energy for vital processes and for synthesizing new organic material. Metabolism can be conveniently divided into two categories:

Catabolism - the breakdown of molecules to obtain energy.

Anabolism - the synthesis of all compounds needed by the cells.

In biochemistry, a metabolite is an intermediate or end product of metabolism.

The new Research

- Researchers analysed the structure of 1,830 secondary metabolites of medicinal fungi. These chemicals may find use as novel drugs.

- **Secondary metabolites**: Secondary metabolites are chemical compounds that fungi produce when they are stressed. These are not strictly essential and hence the name 'secondary'. They enhance the fungus' ability to survive.
- The secondary metabolites of medicinal fungi have molecular properties, which are **important for drug likeness, similar to approved drugs**. This makes the secondary metabolites of the medicinal fungi suitable for their usage in making novel drugs.

Usage and Applications

- Cordycepin, a secondary metabolite produced by Cordyceps species of fungus, is known to have anti-tumour properties. Several secondary metabolites are known to be beneficial for humans in terms of both therapy and health.
- Similarly, Medicinal fungi like ***Isaria cicadae*** and***Shiraiabambusicola*** which are used in traditional Chinese medicine.

Significance

- The research will further pave the way for identifying potential lead molecules for drug discovery.

SASTRA Ramanujan Prize

Context

- The SASTRA Ramanujan Prize for 2022 will be awarded to Yunqing Tang, Assistant Professor with the University of California, Berkeley, U.S.A.

About

- The SASTRA Ramanujan Prize was founded in 2005 by Shanmugha Arts, Science, Technology & Research Academy (SASTRA) located near Kumbakonam, Tamil Nadu, India, SrinivasaRamanujan's hometown.
- It is awarded every year to a young mathematician judged to have done outstanding work in Ramanujan's fields of interest. The age limit for the prize has been set at 32 (the age at which Ramanujan died), and the current award is $10,000.

Programming Languages running the crypto- economy

Context

- Smart contracts, lets us execute automated actions on blockchains. It is the backbone of the crypto-industry. To create them effectively, programming languages are a must.

Smart Contract

- Smart contracts are digital contracts stored on a blockchain that are automatically executed when predetermined terms and conditions are met. Terms and conditions are written into lines of code.
- The code and the agreements contained therein exist across a distributed, decentralized blockchain network. The code controls the execution, and transactions are trackable and irreversible. They typically are used to automate the execution of an agreement so that all participants can be immediately certain of the outcome, without any intermediary's involvement or time loss.
- Smart contracts permit trusted transactions and agreements to be carried out among disparate, anonymous parties without the need for a central authority, legal system, or external enforcement mechanism.

Programming Languages used in Crypto

- A smart contract failure can cause platform outages, and exploitation of the codes could devalue the entire ecosystem. Programming languages thus, help crypto platforms and protocols run effectively.

C++

- C++ is a programming language commonly associated with Bitcoin.

Solidity

- Solidity is the programming language mainly used on the blockchain platform Ethereum. The language is influenced by C++, Python, and
- JavaScript. It is also known as a 'curly bracket language' as it uses the flower bracket special character.

Rust

- In the crypto world, Rust is commonly associated with the Solana blockchain, which is known for its high speeds and relatively low transaction fees. Polkadotblockchain, which helps to better connect blockchains with each other, also uses Rust.

Python

- Python is a general-purpose programming language. Cryptocurrency is just one of its many use cases. Python is used by developers who are interested in the Bitcoin Core as well as non-Bitcoin cryptocurrencies, known as alt coins.

Haskell

- Cardano, for example. Its smart contract programming language is based on Haskell. Haskell is classified as a purely functional programming language, and is hard to learn.

APTI PLUS

Liquid Water on Mars

Context

- Researchers have found new evidence for the possible existence of liquid water beneath the south polar ice cap of Mars.

Details

- Like Earth, Mars has thick water ice caps at both poles, roughly equivalent in combined volume to the Greenland Ice Sheet.
- However, unlike Earth's ice sheets which are underlain by water-filled channels and even large subglacial lakes, the polar ice caps on Mars have until recently been thought to be frozen solid all the way to their beds due to the cold Martian climate.
- New findings suggest that that at least one area of subglacial liquid water exists on Mars today, and that Mars must still be geothermally active in order to keep the water beneath the ice cap liquid.
- In order to be liquid at cold temperatures, the researchers noted that the water beneath the south pole might need to be really salty, which would make it difficult for any microbial life to inhabit it.
- However, it does give hope that there were more habitable environments in the past when the climate was less unforgiving.

Launch Vehicle Mark 3 (LVM3)

Context

- ISRO's heaviest rocket Launch Vehicle Mark 3 (LVM3 or GSLV Mark 3) took off from Satish Dhawan Space Centre SHAR, Sriharikota. It has successfully orbited 36 satellites of U.K.-based OneWeb Constellation.

Details

- The Launch Vehicle Mark 3 (LVM3) is ISRO's newest **medium-heavy lift launch vehicle**, the heaviest rocket currently in use by India. Formerly called the Geosynchronous Satellite Launch Vehicle Mark III (GSLV Mk III), the rocket is **designed to mainly launch satellites into geostationary orbit at 35,000km.**
- **LVM3 is a three-stage vehicle**, while the PSLV, which launches to low earth polar orbits, is a four-stage vehicle. The 43.5 metre LVM3 **weighs around 644 tonne.**
- The GSLV Mk-II can place up to 2,500kg in geosynchronous orbits and up to 5,000kg to low earth orbit. By comparison, the **LVM3 can lift 4,000kg to GTO and up to 8,000 kg to LEO.**

Note: *Currently, America's SpaceX's non-human rated Falcon Heavy, a super-heavy lift vehicle, is the heaviest rocket that is operational.*

Must Read Articles:

https://www.iasgyan.in/daily-current-affairs/satellite-launch-vehicles
https://iasgyan.in/daily-current-affairs/small-satellite-launch-vehicle

DEFENSE & SECURITY

Kamikaze Drones

Context

- **Three kamikaze drones struck the small town of Makariv, situated west of the Ukrainian capital Kyiv.**

Details:

What are Kamikaze drones?

- These are small unmanned aircraft packed with explosives that can be flown directly at a tank or a group of troops that are destroyed when it hits the target and explodes.
- **The name comes from the World War 2 era's feared Japanese kamikaze pilots, who conducted suicide attacks by intentionally crashing their explosive-filled aircraft into enemy targets.**
- The modern drone versions have the capability of surpassing traditional defences to strike their targets and are also cheaper than their larger counterparts.
- The small lethal drones are difficult to detect on radar, and through the use of facial recognition, can be programmed to hit targets without human intervention.

Which countries have such drones?

- Some countries have admitted to using such armed drones, while others have been accused of utilising them to carry out covert attacks. According to the US military, Iranian-backed militias have used small drones in 10 attacks on US bases in Iraq this year.
- Azerbaijan had used small Turkish-made drones against the Armenian military in the last few years, shifting the prolonged stalemate over a disputed enclave decisively in Azerbaijan's favour.
- There have been also multiple occasions where Russia has used such suicide drones to launch attacks in Ukraine following their invasion. Iranian-backed Houthi rebels also used them to blow up Saudi oil facilities in 2019.

- Although the US Kamikaze might be the most advanced in this class of drones, Russia, China, Israel, Iran and Turkey all have some versions of it.
- The US kamikaze drones are cheaper than most other drones made in the country, and come in two sizes.
  - **Switchblade 300 suicide drone:** It weighs about five pounds (2.26 kilograms), can fly for up to 15 minutes at a time, and is designed to be carried in a backpack.
  - **Switchblade 600:** It weighs about 50 pounds, can fly for up to 40 minutes, and is known as a "loitering missile" that can hover around an area for some time and target armoured vehicles.

Hawk Air Defence

Context

- The United States is considering retrieving older HAWK air defence equipment from storage to send to Ukraine which is facing a heavy barrage of Russian drone-fired and cruise missiles

Details

- The **HAWK interceptor missiles would be an upgrade to the Stinger missile system,** which is a smaller, shorter-range air defence system.
- The US sent the shoulder-fired anti-aircraft Stingers to Ukraine early on in the war, and then placed orders for more stocks of the missiles with Raytheon Technologies Corp. after they demonstrated great success in stopping Russian air assaults.

PATRIOT predecessor

- HAWK, short **for 'Homing All the Way Killer',** entered service with the US Army in 1959, during the Vietnam war.
- It underwent upgrades over the decades that followed, including a major one in 1971 that produced the so-called I-HAWK (or improved HAWK), with a kill probability of 85%.
- The HAWK system was the predecessor to the PATRIOT missile defence system that Raytheon built in the 1990s. US forces largely stopped using HAWK from the early years of the new century.
- The Biden administration would use the Presidential Drawdown Authority (PDA) to transfer the HAWK equipment. PDA allows for the "speedy delivery of defence articles and services from Department of Defence stocks to foreign countries and international organisations to respond to unforeseen emergencies".
- Military assistance under PDA does not require Congressional approval, and could "begin arriving within days — or even hours — of approval".

Dirty Bomb

Context

- In Russia's latest advocacy campaign over its invasion of Ukraine, Moscow has focused on accusations that Kyiv might be planning to use a so-called "dirty bomb" – a conventional explosive device laced with toxic nuclear material.

Details

- Dirty bombs **do not create city-flattening atomic explosion but are designed to spread toxic waste**.
- Security experts have worried about them mostly as a form of terrorist weapon to be used on cities to cause havoc among civilians, rather than as a tactical device for use by warring parties in conflict.
- **Immediate health impact would probably be limited**, since most people in an affected area would be able to escape before experiencing lethal doses of radiation.
- But the **economic damage could be massive** from having to evacuate urban areas or even abandon whole cities.
- **A bomb using radioactive caesium from a misplaced or stolen medical device might require the evacuation of an area of several city blocks, making it unsafe for decades.**
- A piece of radioactive cobalt from a food irradiation plant could, if blasted apart in a bomb in New York, contaminate a 380 square mile (1,000 square km) area and potentially make the island of Manhattan uninhabitable.
- Kyiv and its Western allies say Moscow's allegation that Ukraine would intentionally make some of its own territory uninhabitable is absurd, especially at a time when Ukrainian forces are recapturing territory on the battlefield.
- In a joint statement, the United States, Britain and France called the Russian allegations "transparently false" and warned Moscow against using them as a "pretext" for escalation.

Light Combat Helicopter

Context

- Indian Air Force has formally inducted the indigenously developed multi-role Light Combat Helicopter (LCH), **Prachand**.

Details

- The Helicopter is suitable for operating in high-altitude battlefields, and capable of destroying enemy air defence and engaging in counter-insurgency operations.

- The Limited Series Production version of the light combat helicopter has around 45 per cent indigenous content by value. In due course, it will increase to more than 55 per cent for the Series Production version.
- The LCH is the **only attack helicopter in the world** which can land and take off at an altitude of 5,000 meters with a considerable load of weapons and fuel.
- Designed as a **twin-engine**, it has the maximum take-off weight of 5.8 tonnes, maximum speed of 268 kilometers per hour, range of 550 kilometers.
- It has an endurance of over three hours and service ceiling — the maximum density altitude to which it can fly — of 6.5 kilometres.
- It is powered by two French-origin Shakti engines manufactured by the HAL.
- As far as weapons systems are concerned, a 20 mm turret gun, 70 mm rockets and air-to-air missile systems are onboard.

Joint Anti-Terror Exercise

Context

- **India is currently hosting the multilateral anti-terror exercise 'Manesar Anti-terror 2022' scheduled from October 8 to 13.**

Details

- It is under the framework of Shanghai Cooperation Organisation (SCO) Regional Anti-Terrorist Structure (RATS).
- It is stage 2 of the exercise and the Stage-1 of the Exercise was conducted from July 27 to August 1 by the National Counter Terrorist Forces of SCO Member Countries in their respective territories.
- The exercise is aimed at exchanging expertise, best practices and build synergy between the Counter Terrorism Forces of the SCO RATS Member Countries to enhance capabilities for conducting Anti-Terrorist operations and countering other security threats collectively.
- **Regional Anti-Terrorist Structure (RATS) one of the permanent organ of the Shanghai Cooperation Organisation and has its headquarters in Tashkent, Uzbekistan.** The objective of SCO RATS is to facilitate cooperation and coordination against Terrorism, Extremism and Separatism.

Agni Prime

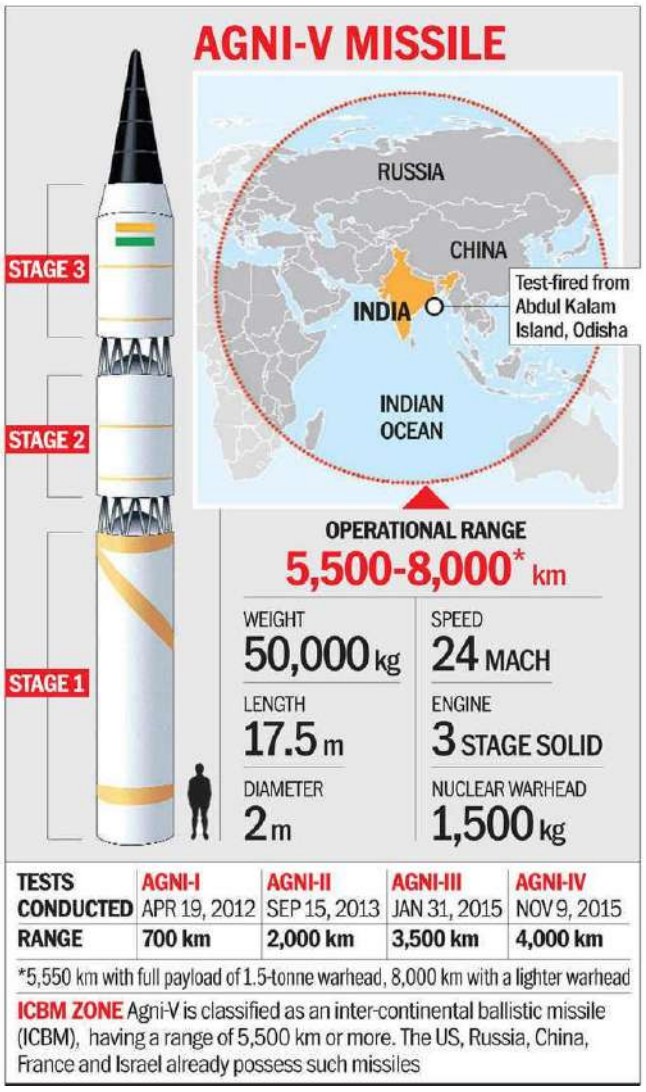
- India successfully test-fired indigenously-developed new generation medium-range ballistic missile Agni Prime from the Odisha coast, Defence Research and Development Organisation (DRDO) sources said.

About Agni Prime

- Agni-P is a **new generation advanced variant of Agni class of missiles**.
- It is a **two-stage canisterised missile** with range capability **between 1,000 and 2,000 km.**
- The ballistic missile **weighs 50 per cent less than Agni 3** and **can be launched from rail and road and stored for a longer period and transported all across the country as per operational requirements**.
- The double stage missile will be **lighter and much sleeker** than its predecessor 'Agni-1'.

Agni Missile Series

- The Agni missile is a **family of medium to intercontinental range ballistic missiles developed by India**, named after one of the five elements of nature.
- Agni missiles are **long range, nuclear weapons capable, surface to surface ballistic missiles**. The first missile of the series,**Agni-I was developed under the Integrated Guided Missile Development Program (IGMDP)** and tested in 1989.
- After its success, **Agni missile program was separated from the IGMDP upon realizing its strategic importance**.
- The family comprises the following:



India-Brazil-South Africa Maritime (IBSAMAR)

Context

- INS Tarkash reached Port Gqeberha (also known as Port Elizabeth), South Africa to participate in the **seventh edition of IBSAMAR**, a joint multinational maritime exercise among **Indian, Brazilian and South African Navies from 10 - 12 Oct 22**.

Details

- The previous edition of IBSAMAR (IBSAMAR VI) was conducted off Simons Town, South Africa from 01 to 13 Oct 18.
- The Indian Navy is represented by the **Teg class guided missile frigate, INS Tarkash, a Chetak helicopter and the personnel from the Marine Commando Force (MARCOS)**.
- The harbour phase of IBSAMAR VII includes professional exchanges such as damage control and fire-fighting drills, VBSS/cross boarding lectures and interaction among special forces.
- The Joint Maritime Exercise will strengthen maritime security, joint operational training, sharing of best practices and building interoperability to address common maritime threats.

Powerex-2022

Context

- Indian Computer Emergency Response Team (CERT-In) in collaboration with Power-CSIRTs (Computer Security Incident Response Teams in Power sector), successfully designed & conducted the Cyber Security Exercise "PowerEX" for 193 invited Power Sector Utilities.

Details

- **The Objective of the exercise was to "Recognize, Analyse& Respond to Cyber Incident in IT & OT Systems".**
- **The theme of the exercise was "Defending Cyber induced disruption in IT & OT infrastructure".**
- Exercise "PowerEX" was hosted by CERT-In on its exercise simulation platform.
- Around 350+ official from various Power Sector Utilities participated in the event.
- Exercise "PowerEX" was successful in meeting its objectives and helped the participants to learn, practice and respond to cyber security incidents.

ENVIRONMENT & ECOLOGY

Pangasiu icaria

Context

- **A new catfish species has been discovered in the river Cauvery near Mettur Dam.**

Details

- **The edible species** has been **named Pangasius icaria (P.icaria) after the Indian Council of Agricultural Research that discovered the species**.
- The species belongs to the Pangasius genus.
- **The genus Pangasius is found in the Gangetic plains but not in peninsular India.**
- For nearly two centuries it was known that Pangasius is represented by only one species in India as well as South Asia and is called Pangasius Pangasius. Around 50 years ago, there was confusion that the species had migrated to peninsular India and did not become like other species.
- A number of species have developed from the same genus and traveled to peninsular India but not Pangasius.
- As a genus the species is cultivable. For a long time now India is cultivating a Vietnamese species.
- India has so far recorded only 3,000 species and there are many more undocumented species waiting to be discovered.

India's impact on Global Warming

Context

- India had 170 million people in 1800, which has risen to 1.4 billion people today. And industrial revolution started only after India's Independence 75 years ago**. While it has helped in reduction of poverty, it has also led to rise in atmospheric carbon dioxide and greenhouse gases.**

Details

- The U.S. Environmental Protection Agency (EPA) has pointed out that since the industrial revolution, which started around 1800, human activities have released large amounts of carbon dioxide (CO_2) due to fuel burning and other 'greenhouse gasses' such as methane, nitrous oxide, and compounds of sulphur, phosphorous, ozone into the atmosphere, changing the earth's climate.

- Atmospheric carbon dioxide levels have increased by over 40%, from 280 ppm in the 18th century to 414 ppm in 2020, and greenhouse gasses level by over these 200 years.
- The Food and Agriculture Organisation (FAO) site points out that India has a rural population that constitutes 70% of the country, and their main occupation is agriculture. This gives a total food-grain production of 275 million tonnes.
- **India is the second-largest producer of rice, wheat, sugarcane, cotton and groundnuts. It, thus, becomes important that India try and reduce its carbon footprint as much as possible, more in its farming sector.**
- Climate-friendly agriculture offers new income sources and is more sustainable and by that India's carbon emissions could drop by 45-62 million tonnes annually.
- Farmers have come up with some admirable methods, with the help of agricultural professionals, by using solar panels in their fields, so that they can avoid diesel for groundwater pumps.
- Indian farmers not only grow rice and wheat but produce other food grains as well. It is healthier for Indians to add more millet in their diet, besides rice and wheat.
- India has about 20-39% vegetarians and 70% of the population eats meat. India, with its many rivers, has a vast coastline which is rich in fish. And fishes have high nutritional value and help in reducing the carbon footprint.

Bannerman's Turaco

Context

- Environmentalists fear the bird, which is already on the International Union for Conservation of Nature Red List of Threatened Species, **could disappear entirely, if the forest disappears**.

Details

- The Bannerman's Turaco is known in the Oku language as the Fen.
- Its heavy, powerful bill is yellow, with a dark red culmen and exposed nostrils.
- It is difficult to spot, but has a loud, distinctive call that can be heard up to 1 kilometre away.
- This bird has a deep cultural value for the people in the Cameroon grassfields.
- It's numbers, now estimated to be 1,500, are **dwindling due to habitat destruction and an ancient tradition of hunting the birds for their spectral feathers.**
- The disappearance of the forest will mean the bird will not have a nest to reproduce, as it lives in the canopy.
- The bird will also starve, as it feeds from a variety of wild fruits from particular tree species which are unique to this forest.
- It should be noted that it is a very shy bird, which is very, very sensitive to human presence within its ecological niche.
- **The Kilum-Ijim Mountain Forest, spanning some 20,000 square kilometers, is one of the last remaining homes of the endemic Bannerman's Turaco bird.**
- This particular bird is endangered.

Land Degradation and Desertification

Context

- With limited funds to deal with the gargantuan task of restoring degraded land and reversing desertification in the country, the **government is now planning to bring convergence between the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).**

Details

- According to the Desertification and Land Degradation Atlas published by the Environment Ministry in 2021, **at least 30% of India's total geographical area is under the category of "degraded land".**
- Jharkhand, Rajasthan, Delhi, Gujarat and Goa have more than 50% of land area undergoing desertification or degradation, while States with less than 10% land degradation are Kerala, Assam, Mizoram, Haryana, Bihar, Uttar Pradesh, Punjab and Arunachal Pradesh.
- Centre has urged the Chief Secretaries of the States to ensure that the two schemes, **(MGNREGS) and the Pradhan Mantri Krishi Sinchayee Yojana,** work in tandem.
- Under the latter, activities such as ridge area treatment, drainage line treatment, soil and moisture conservation, rainwater harvesting, nursery raising, afforestation, horticulture and pasture development are done.
- The Union government now wants the States to undertake these activities using MGNREGS funds, which go towards both material and wage components.
- **In 2019, the government raised its target of restoration of degraded land from 21 million hectares to 26 million hectares by 2030 following a commitment made during the UN Convention to Combat Desertification (COP14). Nearly three years on, the government is nowhere near this target.**
- Though the Ministry has been making efforts to contribute towards meeting the international commitment, the **constraints posed on economy by the pandemic restricted the target to 4.95 million hectares by 2025-26.**
- The Rural Development Ministry is now hoping that by making use of the MGNREGS, which for the financial year 2022-23 has

a budget of ₹73,000 crore, the government can scale up the area to be covered.
- As of now, there is Central allocation of ₹8,134 crore for developing 4.95 million hectares.
- By the Ministry's own estimate, a convergence with the MGNREGS could help take up treatment of about 30% more land than feasible with the current scheme size.

Neelakurinji

Context

- An expert team has identified six varieties of the plant across the region.

Details

- Alongside Strobilanthes kunthiana, the types of neelakurinji flowers that have been identified from the hill ranges include Strobilanthes anamallaica, Strobilanthes heyneanus, Strobilanthes pulnyensis, and Strobilanthes neoasper.
- All these neelakurinji species are endemic to the Western Ghats and spread over nearly 200 acres of the Kallippara hills.
- In fact, the neelakurinji population here can be considered one of the biggest of the species after the protected areas of Munnar. A vast variety of medicinal plants too have been spotted on the hills.
- **The biggest sanctuary of neelakurinji flowers, says isolated flowerings are being reported from other areas, including Bhadrakali Shola at Puthumala and Onamtheri inside the Eravikulam National park.**

Details

- The **Neelakurinji is a shrub of the Acanthaceae family that famously blooms once every 12 years.**
- Researchers who work in the Western Ghats were of the view that while some of the photos did show Neelakurinji flowers, others showed the *Topli Karvy*, another shrub of the *Acanthaceae*
- ***Strobilanthes Is* a genus of about 350 species of flowering plants in the family *Acanthaceae*, mostly native to tropical Asia and Madagascar.**
- The *Topli Karvy* (*Strobilanthes sessilis*), the *Karvy* (*Strobilanthes callosa*) and the Kurinji (*Strobilanthes kunthiana*), all belong to the *Strobilanthes Genus*
- The external resemblance of these flowers being taxonomically related, is very similar. People can often get confused.
- **The *Topli Karvy Is* found more in the northern section of the Western Ghats in Maharashtra. It is called so since it resembles and inverted basket**
- The *Karvy*(*Strobilanthes callosa*) grows on the steepest cliffs where trees can't grow.
- The *Topli Karvy Grows* on the plateaus of the northern Western Ghats on the other hand.
- **The Neelakurinji on the other hand grows in the shola grasslands of the southern Western Ghats, which are not found in Maharashtra**
- Neelakurinji was endemic to the southern Western Ghats and higher reaches of the Eastern Ghats.
- **The shola forests are patches of stunted tropical montane forests surrounded by grasslands in the high elevations of southern India spread over the states of Kerala, Karnataka and Tamil Nadu.**
- These shrubs expend a lot of energy to flower once in 12 years (or in the case of the *Topli Karvy Once* in 11 years). These shrubs die after that.
- The shola forests and grasslands were facing grave threats at the moment largely from anthropogenic activity as well as invasive species and climate change
- Be it any of these shrubs, they are very important for pollinators such as honey bees.

Slender Loris

Context

- **Tamil Nadu notifies India's first Slender Loris sanctuary**.

Details

About the species

- The Slender Lorises (Loris) are a genus of loris **native to India and Sri Lanka.**
- The genus comprises two species - the red Slender Loris found in Sri Lanka and the gray Slender Loris from Sri Lanka and India.
- It is listed as an **endangered species** by the International Union for Conservation of Nature (IUCN) and protected under Schedule 1 of the Indian legislation of the Wildlife (Protection) Act (WPA), 1972.
- Slender Loris has a wide range of ecological roles to play in the terrestrial ecosystem. The species acts as a biological predator of pests in agricultural crops and benefits farmers.
- These small nocturnal mammals (active during the night and sleeping during the day) are arboreal in nature as they spend most of their life on trees.

Location

- They are found in tropical rainforests, scrub forests, semi-deciduous forests and swamps.

- In India, the animal is largely found in the Eastern Ghats of the Karur and Dindigul Forest Divisions.
- According to a census taken in 2016-17 by the Forest Department, the Kadavur Reserve Forest has a population of 3,500 Slender Loris, which is estimated to be around 5,000 currently.

Major threats

- Since it faced major threats such as habitat loss, hunting for the pet trade and road kills, the official felt the need for enhanced protection through a sanctuary.

About the Kadavur Slender Loris sanctuary

- Recognizing the need for immediate conservation of Slender Loris species, the State government designated 11,800 hectares of forest as important habitats for the Kadavur Slender Loris sanctuary.
- This will cover Vedasandur, Dindigul East and Natham taluks in **Dindigul** district and Kadavur taluk in **Karur** district of TN.
- The entire forest in the taluks has been classified as a reserve forest and considered a hotspot in the State for Slender Loris.
- The medium to high temperature in the hill, which has an elevation of about 1,200 m above sea level, is attributed to the growth of Slender Loris.

Koalas

Context

- The koalas are part of a list of 110 'priority species' that the Australian government will try to save from extinction over the next 10 years, the country's environment minister announced

Details

- Australia's koalas have officially been classified as 'endangered'. Government has upgraded the conservation status of the marsupials from 'vulnerable' to 'endangered'.
- **Factors that lead to up gradation of status:** prolonged drought, black summer bushfires, cumulative impacts of disease, spread of chlamydia, a sexually transmitted disease known to cause blindness and cysts in the koalas reproductive tract, urbanisation and habitat loss.
- **Diet:** They survive on a **strict diet of up to a kilogram of eucalyptus leaves** every day. Due to the low nutritional value of these leaves, koalas tend to sleep for extended periods, often up to 18 hours a day, to conserve energy.

Health Impact of Climate Change

Context

- Ahead of this year's United Nations climate change conference (COP27), a major new report has said that the continued dependence on fossil fuels is compounding the health impacts of the multiple crises the world is facing — including the fallouts of the pandemic, the Ukraine war, the cost of living crisis, and climate change.

Details

- New findings presented in the seventh annual global report of the Lancet Countdown on Health and Climate Change reveal that **governments and companies continue to follow strategies that increasingly threaten the health and survival of all people alive today, and of future generations.**
- According to a fact sheet on the specific impacts on India — which uses data from the report but is not itself a part of the report — climate change is affecting almost every pillar of food security:

- The **duration of the growth season for maize has decreased by 2%, compared to a 1981-2010 baseline, while rice and winter wheat have each decreased by 1%.**
- From 2012-2021, infants under one year old experienced an average of 72 million more person-days of heatwaves per year, compared to 1985-2005.
- For the same period, adults over 65 experienced 301 million more person-days.
- This means that, on average, from 2012-2021, each infant experienced an additional 0.9 heatwave days per year while adults over 65 experienced an additional 3.7 per person, compared to 1986-2021.
- From 2000-2004 to 2017-2021, heat-related deaths increased by 55% in India.
- In 2021, **Indians lost 167.2 billion potential labour hours due to heat exposure with income losses equivalent to about 5.4% of national GDP**.
- From 1951-1960 to 2012-2021, the number of months suitable for dengue transmission by Aedes aegypti rose by 1.69%, reaching 5.6 months each year.
- An estimated **over 3,30,000 people died in India due to exposure to particulate matter from fossil fuel combustion in 2020.**
- Among other findings in the report, **45% of urban centres in India are classified as moderately green or above.**
- Warning that governments are not focusing on the issue as much as required, it said that in 2019, India had a net negative carbon price, indicating that the government was effectively subsidising fossil fuels.

Emission Gap Report 2022

Context

- **The UNEP report released, titled 'Emissions Gap Report 2022: The Closing Window – Climate Crisis Calls For Rapid Transformation of Societies', has found that in India and six other top emitters, emissions have rebounded and increased after the pandemic.**

Details

- Ahead of the 2022 United Nations Climate Change Conference, also known as COP27, scheduled to take place in the Egyptian city of Sharm El Sheikh next month, the United Nations Environment Programme (UNEP) said that **the world is falling short of the goals set forth in the Paris Climate Agreement adopted in 2015, and that no credible pathway is currently in place to restrict global warming to under 1.5 degrees Celsius above pre-industrial levels.**
- The UNEP report **has found that in India and six other top emitters, emissions have rebounded and increased after the pandemic.**
- The top seven emitters (China, the EU27, India, Indonesia, Brazil, the Russian Federation and the United States of America) plus international transport accounted for 55 per cent of global GHG (greenhouse gas) emissions in 2020. Collectively, G20 members are responsible for 75 per cent of global GHG emissions
- The global average per capita GHG emissions was 6.3 tonnes of CO2 equivalent (tCO2e) in 2020. The US remains far above this level at 14 tCO2e, followed by Russia at 13 tCO2e, China at 9.7 tCO2e, Brazil and Indonesia at about 7.5 tCO2e, and the European Union at 7.2 tCO2e.
- India remains far below the world average at 2.4 tCO2e.
- For most major emitters, including China, India, the Russian Federation, Brazil and Indonesia, GHG emissions (excluding land use and forestry sectors) rebounded in 2021, exceeding pre-pandemic 2019 levels," the report said.
- UNEP said that the G20 countries have just started to work on meeting their new targets, and collectively, are expected to fall short of their promises for 2030.
- "Policies currently in place, without further strengthening, suggest a 2.8°C hike… To get on track to meet the Paris Agreement goal, the world needs to reduce greenhouse gases by unprecedented levels over the next eight years," the UNEP said.
- Unconditional and conditional NDCs are estimated to reduce global emissions in 2030 by five and 10 per cent respectively, compared with emissions based on policies currently in place.
- To get on a least-cost pathway to limiting global warming to 2°C or 1.5°C, these percentages must reach 30 per cent and 45 per cent respectively. Emissions must continue to decline rapidly after 2030 to avoid exhausting the remaining atmospheric carbon budget.

United Nations Environment Programme (UNEP)

- It is a leading global environmental authority established on 5th June 1972.
- It sets the global environmental agenda, promotes sustainable development within the United Nations system, and serves as an authoritative advocate for global environment protection.
- Headquarters: Nairobi, Kenya.
- Major Reports: Emission Gap Report, Adaptation Gap Report, Global Environment Outlook, Frontiers, Invest into Healthy Planet.
- Major Campaigns: Beat Pollution, UN75, World Environment Day, Wild for Life.

Emissions Gap Report

- It assesses the gap between anticipated emissions in 2030 and levels consistent with the 1.5°C and 2°C targets of the Paris Agreement. Every year, the report features ways to bridge the gap.

Viral Spillover

Context

- Viral spillover risk is increasing with climate change in High Arctic lake sediments- Study by UK's The Royal Society.

What is Spillover?

- Spillover is literally **the transmission of a virus from one "reservoir" species, in which it habitually circulates, to a new "host" species**, in which it can die or adapt and possibly even trigger an epidemic. Examples include SARS-CoV-2, Ebola, HIV, measles and seasonal flu viruses.

Watch this Video: https://youtu.be/lFo_NAHupZY

- Spillover of novel pathogens typically occurs through the intersection of the agent (eg, viruses, bacteria, parasites) with livestock, vectors, wildlife, or even the natural environment.

The recent study

- In this study, it was found that the risk of viral spillovers increases with changes in the environment at a particular location, **driven by global warming.**
- Climate change leads to shifts in species ranges and distributions, new associations can emerge, bringing in vectors that can mediate viral spillovers.
- Climate change could shift the species range of certain viral vectors and reservoirs northwards, and the High Arctic zone (regions of Canada within the Arctic Circle such as the Northern islands) and could become fertile ground for emerging pandemics.

DISASTER MANAGEMENT

Cyclone Sitrang

Context

- Cyclone Sitrang lashed Bangladesh and left at least 35 people dead.

Details

- **Cyclone Sitrang** was a tropical cyclone that affected India and Bangladesh.
- Sitrang originated from an area of low pressure near the Bay of Bengal offshore the Andaman and Nicobar Islands.
- The name Sitrang has been **given by Thailand.**

Category	Sustained Winds (3-min average)
Super Cyclonic Storm	≥120 kt ≥221 km/h
Extremely Severe Cyclonic Storm	90–119 kt 166–220 km/h
Very Severe Cyclonic Storm	64–89 kt 118–165 km/h
Severe Cyclonic Storm	48–63 kt 89–117 km/h
Cyclonic Storm	34–47 kt 63–88 km/h
Deep Depression	28–33 kt 51–62 km/h
Depression	17–27 kt 31–50 km/h

Cyclones that hit India between 2019-2022

- Cyclone Yaas -Bay of Bengal
- Cyclone Amphan- Bay of Bengal
- Cyclone Nivar- Bay of Bengal
- Cyclone Fani- Bay of Bengal
- Cyclone Bulbul- Bay of Bengal
- Cyclone Gulaab- Bay of Bengal
- Cyclone Tauktae- Arabian Sea
- Cyclone Nisarga- Arabian Sea
- Cyclone Gati- Arabian Sea
- Cyclone Vayu- Arabian Sea
- Cyclone Kyar- Arabian Sea
- Cyclone Maha- Arabian Sea
- Cyclon Hikka- Arabian Sea

Read all about Cyclones here: *https://www.iasgyan.in/daily-current-affairs/cyclone-asani*

DATA LOCALIZATION

Introduction

Data localization refers to the act of storing data on any physical device that may be present within the territorial borders of a country where the data has been generated.

Some governments often restrict free-flowing data and the data that could impact government operations in a region. Many governments attempt to protect and promote security across the borders to encourage data localization.

Data Laws in India

As of now, there is only a single mandatory rule for data localization in India. This is governed by the Reserve Bank of India (RBI) and is meant for payment systems. Besides this, other bill drafts are yet to take the form of a law.

The other prominent evidence present in this context is the Data Protection Bill of 2018. The bill itself has got a fixed set of requirements on the data transfer that takes place across the borders. The draft e-commerce policy has clauses on the cross-border transfer of data.

Need

Will help law-enforcement access data for investigations and enforcement.

Proponents highlight security against foreign attacks and surveillance, harkening notions of data sovereignty.

Many domestic-born technology companies, which store most of their data exclusively in India, support localisation.

Reliance Jio has strongly argued that data regulation for privacy and security will have little teeth without localisation, calling upon models in China and Russia.

Instances of cyber attacks and surveillance will be checked.

Recently, many WhatsApp accounts were hacked by an Israeli software called Pegasus. Social media is being used to spread fake news, which has resulted in lynchings, national security threats, which can now be monitored, checked and prevented in time.

Data localisation will increase the ability of the Indian government to tax Internet giants. Strong data protection legislation will also help to enforce data sovereignty.

Advantages

In today's time, data is considered to be the new oil, and this makes it very valuable. If the data is analyzed accurately, then it can form the backbone for any successful business.

Governments looking to implement data localization might be seeking to give their local corporations a competitive edge. The national government can prevent the flow of data to external countries and thus, this data can be made available for the internal use by the domestic companies only. The informational asymmetry caused will prove to be beneficial for local companies.

Data is a national resource, and thus the government holds a right on the revenue that is generated from the data. Similar to the inflow and outflow taxation of goods and services, the movement of data can also undergo taxation.

Disadvantages

Foundation of the Internet lies with the free movement of data. In case the free flow of data is affected by imposing taxes or extreme protectionism, this will eventually destroy the Internet.

Most companies prefer using the Internet as a medium to reach their customers is because it is cheaper and free of excessive regulation. When robust data localization and protection laws are implemented, then there is a high possibility that the Internet may face an abrupt end leading to its 'death'.

Another disadvantage that data localization holds is the security problem that is associated with the storage of data at a single location. The concept of storing data in a single geographical region is entirely opposite to the diversification approach followed by the MNCs.

Also, the citizens of the country are not willing to allow the government to spy on their data. If all the data is stored within the geographical boundaries, then the government can collate all this data and even invade an individual's privacy, if needed.

Way forward

Data Privacy will require a balancing act between personal liberty and sovereign securities such as prevention and investigation of crime and National security threats.

Another legitimate concern of the State that needs to be balanced with the Right to Privacy, recognized in Puttaswamy, is social welfare measures.

The illegitimate commercial gains being enjoyed by enterprises at the cost of privacy of individuals are also likely to vanish due to data localization.

But Data protection is a complex exercise, and the law will need amendments from time to time depending on the problems that crop up. Thus it must be brought into the Statute book expeditiously.

APTI PLUS

ELECTORAL BOND

Introduction

- The Electoral bonds were introduced with the Finance Bill (2017).The Electoral Bond is a bearer instrument like a Promissory Note and an interest-free banking instrument.
- A bearer instrument is a document that authorizes the holder with the right of ownership or title of the property, such as Currency, shares or bonds.
- Unlike normally registered instruments, no record is kept about the owners of bearer instruments or the transfer of ownership. Whoever physically holds the bearer document is assumed to be the owner of the property.
- Electoral bonds may be purchased by a person, who is a citizen of India or established in India.
- Electoral bond would be issued/purchased for any value, in multiples of Rs 1,000 from the specified branches of the State Bank of India (SBI).
- Political parties registered under Section 29A of the Representation of the People Act, 1951 and also secured a minimum of 1% of voters polled in the last general election to the House of the People or the Legislative Assembly of the State are eligible to receive electoral bonds.
- Electoral Bonds can be encashed by an eligible political party only through their bank accounts with the authorized bank.
- Electoral bonds protect the identity of political donors and parties receiving contributions.

Who can receive electoral bonds?

- Issued in multiple values of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh and Rs 1 crore, these bonds can only be encashed by political parties, which had secured at least 1 percent of the votes polled in the most recent Lok Sabha or state election.
- Money received from electoral bonds will be deposited in a bank account verified by the Election Commission. All the transactions for electoral bonds can be done only through that account.

Arguments in favour of Electoral Bond

- It promotes transparency in funding and donation received by political parties.
- It is an important "electoral reform" toward a "cashless-digital economy".
- It is a tool to eradicate black money in political funding.

Arguments against Electoral Bond

- The bonds increase the anonymity of political donations, Citizens will not be able to know who is donating how much money to which political party.
- Promoting corruption and lack of transparency in the accounts of all political parties.
- The electoral bonds scheme has opened floodgates to unlimited corporate donations to political parties and anonymous financing by Indian as well as foreign companies which is a threat to Indian democracy.

Concern

- The Election Commission and the Reserve Bank of India objected to electoral bonds and had advised against the issuance of electoral bonds as a mode for donation to political parties.
- It alleged that almost 99% of electoral bonds purchased are of value one crore and 10 lakh denominations which shows that it is not individual citizens but large corporations which are purchasing these bonds with a view to receiving kickbacks from the government.
- The Election Commission of India filed an affidavit in 2019, saying the government's scheme for political funding has legalized anonymity.
- Many major political parties have not disclosed the amount they received through electoral bonds.
- As the bonds are sold through a public sector bank, the government would easily know who is funding which political party.

Way forward

- Intensive scrutiny: of election expenditure incurred by parties and candidates is needed in order to ensure detection of black money in the system.
- Higher expenditure limit: In order to prevent parties from violating expenditure norms, the Election Commission should allow higher expenditure limit for candidates.
- Simultaneous elections: This should be considered since a shorter campaign period will limit expenses incurred by parties.
- State funding of elections: shall be explored for bringing all parties on a level playing field and to make private donations less relevant.
- National Electoral Fund: as suggested by the former Chief Election Commissioner S.Y. Quraishi shall also be explored, to which all donors can contribute and the funds are distributed among the parties.

APTI PLUS

INDIA'S HEALTH DIPLOMACY AND PHARMA SECTOR

Introduction

- The concept of Global Health (Vaccine) Diplomacy has emerged as a cornerstone for foreign policies of major countries during the Pandemic.
- With India as a pharmaceutical hub and ambitions for regional and global leadership, the GHD has emerged as an integral part of Indian foreign policy in general and in the form of the 'Neighborhood First' policy in particular.
- GHD holds some promise of enabling 'policy coherence' through the determinants of health and human security to ensure that health is seen as a global public good.

Background

- In this context, scholars have witnessed GHD's role in the formulation of International Health Regulations (IHRs), 2005, Framework Convention of Tobacco Control, Universal Health Coverage (Sustainable Developmental Goals, UN Climate Change Conference 2019; UN, 2019 and most recently the COVAX Facility in 2020.
- Researchers have emphasized the critical role of GHD in promoting peace, improving health and well-being, strengthening global leadership and international cooperation, global coordination, negotiating for TRIPS waiver for COVID-19 vaccines, promoting vaccine equity and strengthening the bonds between nations.

About India's Health Diplomacy

- In recent years, India has established itself as the world's 'pharmacy hub', and this claim was proven once again when it delivered COVID-19 vaccines to its citizens, neighbouring nations and across the globe.
- Following the philosophy of humanitarianism through the principle of 'Vasudhaiva Kutumbakam', India has decided to provide the COVID-19 health assistance to its immediate neighbouring countries.
- India always has prepared to help out the countries in emergencies such as tsunamis, floods, earthquakes, even pandemics/endemics and so on.

India's Pharm Sector

- The pharmaceutical industry in India was valued at an estimated US$42 billion in 2021.
- India is the world's third largest provider of generic medicines by volume, with a 20% share of total global pharmaceutical exports.
- It is also the largest vaccine supplier in the world by volume, accounting for more than 50% of all vaccines manufactured in the world.
- Major pharmaceutical hubs in India are: Vadodara, Ahmedabad, Ankleshwar, Vapi, Baddi, Sikkim, Kolkata, etc.

Challenges

- Highly fragmented industry: The Indian pharma industry is highly fragmented. The market is overloaded with generic manufacturers.
- Out of Pocket (OoP) expenditure: It is limiting the access to medicines wherein, that Indian Insurance section does cater to patients in IP, and not in OP (Out Patient scenario), that causes quite a dent.
- Talent Pool: In India, the demand for these services has outstripped supply. There is a huge shortfall in 'Healthcare Manpower' of the country, right from Pharmacists, Nurses and Doctors and related.
- Lack in innovation: India is rich in its manpower and talent. The government needs to invest in research initiatives and talent to grow India's innovation.

Reforms

- To foster an Atmanirbhar Bharat by enhancing the R&D, high-value production capabilities, import substitution and domestic manufacture of active pharmaceutical ingredient (API)the government has introduced a US$2 billion incentive program which will run from 2021-22 to 2027-28.
- In 2019 the Department of Pharmaceuticals announced that as part of the Make in India initiative, drugs for local use and exports must have 75% and 10% local APIs respectively and a bill of material must be produced for verification.
- The Production Linked Incentive (PLI) Scheme for promotion of domestic manufacturing of critical Key Starting Materials (KSMs)/Drug Intermediates (DIs) and Active Pharmaceutical Ingredients (APIs) in India.

Way forward

- India needs user friendly government policy for the common man to establish small scale, raw material manufacturing units/ incubators in all states.
- The government and industry should facilitate the pharmacist community to become entrepreneurs and promote incubators' establishment.
- Raw material produced from small scale units should be properly validated in the testing laboratory of the state to ascertain their quality specifications.
- Small scale produces may be re-processed in another industry or via a chain of industry for quality products that can be used for parenteral / tailor-made formulations.

APTI PLUS

LIVE STREAMING OF SC PROCEEDINGS

Introduction

The Supreme Court of India has decided to live stream its proceedings in important Constitution Bench cases.

Background

In 2018, a Supreme Court bench had agreed to hear a PIL (Public Interest Litigation) aspiring live streaming of judicial proceedings on important matters of constitutional and national importance.

Present Status

- The Supreme Court approved a set of guidelines and also did not allow live streaming in the cases involving: Matrimonial matters. Matters involving juveniles or the protection and safety of the private life of young offenders. Matters of National security.
- It may provide for face distortion of the witness if she/he consents to the broadcast anonymously.
- To protect confidential or sensitive information, including all matters relating to sexual assault and rape.
- Cases which may provoke sentiments and arouse passion and provoke enmity among communities.
- Currently, the Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Orissa, and Patna High Courts live stream their proceedings.

Global Outreach

- In USA: The US Supreme Court has rejected appeals for broadcast of its proceedings, but since 1955 allowed audio recording of oral arguments.
- In Australia: Live or delayed broadcasting is allowed but the practices differ across courts.
- In Brazil: Since 2002, live video and audio broadcast of court proceedings is allowed.
- In Canada: Court Proceedings are broadcast live on Parliamentary Affairs Channel.
- In United Kingdom: Court Proceedings are broadcast live with a one-minute delay on the court's website, but coverage can be withdrawn in sensitive appeals.

Significance

- Broadcasting court proceedings will ensure transparency and greater access to the justice system.
- Citizens have a right to know what arguments are made and the responses of the judges as their judgements bind us all.
- The principle "justice should not only be done but seen to be done".
- Live Steaming would empower, and provide access to citizens who cannot personally come to court due to social, economic, health, or physical disability-related limitations.

Concerns

- The individuality of judges is more likely to become a subject of public debate through live-streaming, creating problems of its own.
- Lawyers aspiring to publicize themselves through their addresses to the Bench.
- It will affect the normalcy of the proceedings.
- Video clips of court proceedings are already on social media platforms with sensational titles and little context, such as "HIGH COURT super angry on IAS/IPS officer".

Way Forward

- Live streaming is neither required in all types of matters nor in all courts.
- Live streaming or videography could be avoided in the matters which have a privacy dimension, such as family matters or criminal matters.
- Any Kind of Misuse of court proceedings video must be dealt with strict law and also need to formulate guidelines to promote the positive impact while curbing the negative one.

APTI PLUS

NOBEL PRIZE

Peace

The Nobel Peace Prize for 2022 has been awarded to human rights advocate Ales Bialiatski from Belarus, the Russian human rights organisation Memorial, and the Ukrainian human rights organisation Center for Civil Liberties, the Norwegian Nobel Committee announced.

Literaturte

The Nobel Prize for Literature 2022 has gone to French author Annie Ernaux, for, according to the Swedish Academy, "the courage and clinical acuity with which she uncovers the roots, estrangements and collective restraints of personal memory".

Ernaux, 82, has seen a sharp increase in popularity in the English-speaking world since 2019, after her seminal work 'The Years', translated by Alison L Strayer, was shortlisted for the Man Booker international prize.

Her book on her illegal abortion in the 1960s, 'Happening' (first published in 2001) has also been in the limelight after abortion rights were curtailed in the US.

Chemistry

This year's Nobel Prize in Chemistry has gone to three scientists who, through their work, have made a strong case for adopting an alternative approach to producing new complex molecules in the laboratory or industry, which minimises waste and increases overall efficiency.

'Click Chemistry' demonstrates its vast potential in the pharmaceutical and other industries.

Physics

The Nobel Prize for Physics 2022 is being shared by three scientists, Alain Aspect, John F Clauser and Anton Zeilinger, for their work on quantum mechanics.

The three conducted a series of experiments on something called entangled quantum states, where two separate particles behave like a single unit. Their pathbreaking results will have implications in the fields of quantum computers, quantum networks and secure quantum encrypted communication. Put simply, quantum computers use quantum mechanics to solve problems too complex for regular computers.

Physiology

Swedish scientist Svante Paabo won the 2022 Nobel Prize in Physiology or Medicine for discoveries "concerning the genomes of extinct hominins and human evolution.

The winner has been credited with transforming the study of human origins after developing approaches to allow for the examination of DNA sequences from archaeological and paleontological remains.

Awarded by

After Nobel's death, the Nobel Foundation was set up to carry out the provisions of his will and to administer his funds.

In his will, he had stipulated that four different institutions—three Swedish and one Norwegian—should award the prizes.

From Stockholm, the Royal Swedish Academy of Sciences confers the prizes for physics, chemistry, and economics, the Karolinska Institute confers the prize for physiology or medicine, and the Swedish Academy confers the prize for literature.

The Norwegian Nobel Committee based in Oslo confers the prize for peace.

Each Nobel Prize consists of a gold medal, a diploma bearing a citation, and a sum of money, the amount of which depends on the income of the Nobel Foundation.

Along with enormous prestige, the prize comes with a 10-million krona ($1.1 million) cash award and a gold medal to be handed out at a ceremony in Oslo, Norway, on December 10, the anniversary of prize founder Alfred Nobel's death.

About

Nobel Prizes are awarded annually from a fund bequeathed for that purpose by the Swedish inventor and industrialist Alfred Nobel.

In the will he drafted in 1895, Nobel instructed that most of his fortune be set aside as a fund for the awarding of five annual prizes "to those who, during the preceding year, shall have conferred the greatest benefit on mankind." (Physics, Chemistry, Medicine, Literature, and Peace).

The first distribution of the prizes took place on December 10, 1901, the fifth anniversary of Nobel's death.

An additional award, the SverigesRiksbank Prize in Economic Sciences in Memory of Alfred Nobel, was established in 1968 by the Bank of Sweden and was first awarded in 1969.

APTI PLUS

PLASTIC WASTE IN INDIA

Context

- Around 3.46 million tonnes per annum (TPA) of plastic wastes were generated during 2019-20, Ashwini Kumar Choubey, minister of state in the ministry of environment, forest and climate change, told the Lok Sabha.
- Approximately 1.58 million TPA of the plastic waste was recycled and 0.16 million TPA was co-processed in cement kilns, he added.
- The minister was referring to the annual report by the central pollution control board for 2019-20.
- Recently, representatives from 175 countries at fifth session of the United Nations Environment Assembly (UNEA-5.2) agreed to end plastic pollution and formulate an internationally binding treaty by 2024.

Causes

- As plastic is less expensive, it is one of the most widely available and overused items in the world today.
- Rapid urbanization and population growth increase the demand of cheap plastics.
- Since it is an affordable and durable material, it is utilized in every other way possible, from packaging materials to plastic bottles and containers, straws to plastic carry bags.
- Plastic takes 400 years and even more to Decompose. The decomposition rate of plastic typically ranges from 500 to 600 years, depending on the type.
- Burning plastic is incredibly toxic and can lead to harmful atmospheric conditions and deadly illnesses.

Impacts

- Plastic-contaminated seafood: Scientists have found micro plastics in 114 marine species, and around one-third of these end up on our plates.
- Upsets the Food Chain: Because it comes in sizes large and small, polluting plastics even affect the world's tiniest organisms, such as plankton.
- Economic impacts: Plastic pollution costs $13 billion in economic damage to marine ecosystems per year. This includes losses to the fishing industry and tourism, as well as the cost to clean up beaches.
- Marine life: The most visible and disturbing impacts of marine plastics are the ingestion, suffocation and entanglement of hundreds of marine species.
- Air Pollution: Burning of plastic in the open air leads to environmental pollution due to the release of poisonous chemicals.

Plastic Waste Management Rules, 2016

- It aims to increase minimum thickness of plastic carry bags from 40 to 50 microns.
- Expand the jurisdiction of applicability from the municipal area to rural areas, because plastic has reached rural areas also.
- Extended Producer Responsibility: To bring in the responsibilities of producers and generators, both in plastic waste management system and to introduce collect back system of plastic waste by the producers/brand owners, as per extended producers responsibility
- Introduced collection of plastic waste management fee through pre-registration of the producers, importers of plastic carry bags/multilayered packaging and vendors selling the same for establishing the waste management system
- Promote use of plastic waste for road construction as per Indian Road Congress guidelines or energy recovery, or waste to oil etc. for gainful utilization of waste and also address the waste disposal issue.

Government steps

- India has pledged to ban all single-use plastics by 2022.
- All offices of central and state governments and major PSUs have been told to prohibit single-use plastic products.
- India has banned imports of solid plastic waste.
- India has passed the Plastic Waste Management Rules, 2016 and introduced the Extended Producer Responsibility.

Way forward

The 3R's +E Strategy:

- **Reduce:** To efficiently reduce plastic pollution, there is an evident need of reducing our usage of plastic.
- **Reuse:** Many plastic items can be reused or used for different purposes. Before throwing plastic items, it is important to consider how they can be reused.
- **Recycle:** Plastic recycling consists of collecting plastic waste and reprocessing it into new products, to reduce the amount of plastic in the waste stream.

Educate: Another crucial solution is education in order to increase awareness and behavioral change.

APTI PLUS

PM KUSUM

About the scheme

The Ministry of New and Renewable Energy (MNRE) has launched the Pradhan MantriKisanUrja Suraksha evem UtthanMahabhiyan (PM KUSUM) Scheme for the installation of solar pumps and grid-connected solar and other renewable power plants in the country.

The scheme aims to add solar and other renewable capacities of 25,750 MW by 2022 with a total central financial support of Rs. 34,422 Crore including service charges to the implementing agencies.

Component

Component A: 10,000 MW of Decentralized Ground Mounted Grid Connected Renewable Power Plants of individual plant size up to 2 MW.

Component B: Installation of 17.50 lakh standalone Solar Powered Agriculture Pumps of individual pump capacity up to 7.5 HP.

Component C: Solarisation of 10 Lakh Grid-connected Agriculture Pumps of individual pump capacity up to 7.5 HP.

Significance

Increase in income: This program provides landowners with a stable and continuous source of income for 25 years by using dry /non-cultivable land.

Employment: It will also help increase green energy production and create jobs in rural areas, later enabling the government sector to solarize pipe wells and pump water irrigation projects.

Cost reduction: Solar pumps save diesel costs for operating diesel pumps and provide farmers with a reliable source of irrigation through solar pumps.

Environmentally Friendly: This program helps prevent harmful pollution from the operation of diesel pumps.

Achieve national goals: This supports India's commitment to increase the percentage of installed electricity capacity from non-fossil fuels to 40% by 2030.

Challenges

Regulation: Very few federal states have started bidding or commissioning projects for solar feed-ins or grid-connected pumps.

Operational and technical: Discoms are more utility than distributed PV (under the program) because of the higher cost of distributed PV and the loss of location benefits due to the exemption from interstate transmission system (ISTS) fees.

Financially: The current barriers to their introduction are concerns about their economic feasibility in the face of high agricultural subsidies, supplying excess electricity when selling water or irrigating additional land.

Lack of Credit: In addition, many unsecured farmers do not have access to bank credit.

Lack of trust: The grid connection model requires the pump to be measured and billed for billing, but lacks trust between the farmer and the nightclub.

Way Forward

Extending the Scheme: Extending PM KUSUM's schedule to 2022 and beyond will allow DISCOM to coordinate this scheme with its electricity procurement plan.

Create a fair competition for distributed solar systems: To counter the prejudice against distributed solar energy, address substation counterparty risk and grid failure risk, and standardize pricing to reflect the higher costs of distributed power plants and solar system ISTS.

Optimize land management: Optimize land management through coordination between departments. This helps reduce delays in leasing or converting farmland for non-agricultural purposes such as solar power.

Innovative solution: The government should innovative solutions to fund the contributions of farmers. Government need out-of-the-box solutions, such as the Karnataka pilot project, a special vehicle for farmers to help farmers install solar power plants on their farms.

Intelligent solution: Build trust by deploying solutions such as smart meters and smart transformers and working with farmers.

APTI PLUS

THEATRE COMMANDS

Context

- India's first Chief of Defence Staff, late General BipinRawat was instrumental in laying down the foundation for joint theatre commands in India.
- His successor, Lt. General Anil Chauhan has now spelt it as his priority area.
- In his maiden communication with the three defence forces, the new CDS asked the Army, the Navy and the Air Force to make a move ahead toward the creation of integrated theatre commands.
- Defence Minister Rajnath Singh announced the setting up of "joint theatre commands" so as to have an enhanced coordination among all three services of the country's armed forces.

About ITC

- Several nations in the world have theatre commands, including the United States and China.
- The idea behind the 'Theatre Command System' is to bring synergy coordination between the three wings of the armed forces… at the same time streamline costs, and have a leaner fighting force with optimal utilisation of resources.
- It's a concept that has its origins in the 1st world war, but became much more prominent during the second one with battles being fought across continents.
- Today, almost all major countries like China, Russia, the US, the UK and France work on a theatre command concept.
- It is a unified commandunder which all the resources of the Army, the Navy and the Air Force are pooled, depending on the threat perception.
- The commands could be geographical— like looking at a border with a particular country — or thematic, like a command for all maritime threats.

Global Reach

- More than 32 countries in the world already have some form of theatre or joint command in place for better integration among the branches of the military.
- Notable among such countries are the US and China.
- According to a report, the US was the first to come up with a theatre command system and "presently possesses six geographical and four functional commands".
- Russia is said to have commenced with the restructuring of its armed forces in 2008 and "has now created four theatre commands".
- China's theatre command system is said to be based on the US model and has "five peacetime geographical commands".
- It is the Chinese Western Theatre Command that covers India.

Advantages of the system

- The theatre command system is intended to bring better synergy between the three branches of the armed forces.
- Instead of separate commands for the army, navy, air force, a unified command will be set up to be led by a single commander.
- Which means that that the military assets that are now split under separate centres of command will be fused into one single command under one operational head who will be responsible for directing and controlling their activities in a given situation.
- But apart from operational synergies, experts point out that a theatre command system will also contribute to more streamlined costs and a leaner fighting force.
- A big chunk of the annual defence budget goes into paying salaries and pensions while outlays do not always grow in line with the actual needs of the armed forces.
- Supporters say that the theatre command system will help remove redundancies and bring greater focus in the allocation of resources.

Challenges for India in its Creation

- According to experts, the key hurdle in integrating the three services under the theatre command system is that of the structure itself: that is who reports to whom and how does the chain of command flow.
- These involve issues of operational command and control over assets.
- Further, budgetary allocations and the distribution of funds have also been pointed out as factors that need to be clearly worked out to enable the setting up of a seamless theatre command system.
- Another issue may be the existing mismatch between the assets of the army, navy and air force.
- According to reports, with fewer perceived resources, the Indian Air Force has concerns about its assets getting spread out thinly over the different theatre commands while it has also been suggested that more clarity is sought on questions of operational control.
- A piece published by the Observer Research Foundation said that the air force "has only 31 operational squadrons against a modest sanctioned strength of 42 (and that) would make it difficult for IAF to permanently station assets in a particular command with territorial boundaries".

Way forward

- Analysis of what is available in the public domain reveals that there are to be a West Land Based Theatre Command, an East Land Based Theatre Command (both headed by the rmy), a Maritime Command (headed by the Navy), Air Defence Command (headed by the Air Force) and Andaman and Nicobar Command with rotational helmsmanship.
- There is a need to address the cognitive dissonance caused by the prevailing mindsets and lack of communication (trust) for integration to succeed.
- Besides the doctrinal base, there needs to be a legal authority like an Act of Parliament to authorise such changes. Authority to direct, control, reward and punish implies legitimate power. In a society subscribing to democratic values, the legitimacy of power wielded in any organisation finds its origin in the elected government.
- India is not NATO or the United States. This fact should be the premise while working on the Theatre Command concept. Indian process should not simply mirror US/NATO/Russia/China approaches but be unique to our geography, threat perception, and future objectives
- Indian planners should also keep in mind that this is not just one-time reform but a continuous process. The Americans started the reforms over hundred years ago and are still continuing. The Russians initially opted for only four 'Joint Strategic Commands'. At a later date, a fifth 'Northern Command' was added to meet specific requirements.

APTI PLUS

APTI PLUS

Academy for Civil Services Pvt. Ltd.

WE CREATES HISTORY ONCE AGAIN !

Record breaking results in **OAS**

Rank 1, 2 & 4 in OAS 2020

TEJASWINI BEHERA
RANK 1

SUBHANKARI S. DASH
RANK 2

DEBABRATA KAR
RANK 4

Rank 1, 2 & 3 in OAS 2019

ASWINI K. PANDA
RANK 1

ANKUR ABHILASH
RANK 2

RASHMIREKHA PATRA
RANK 4

& many more...