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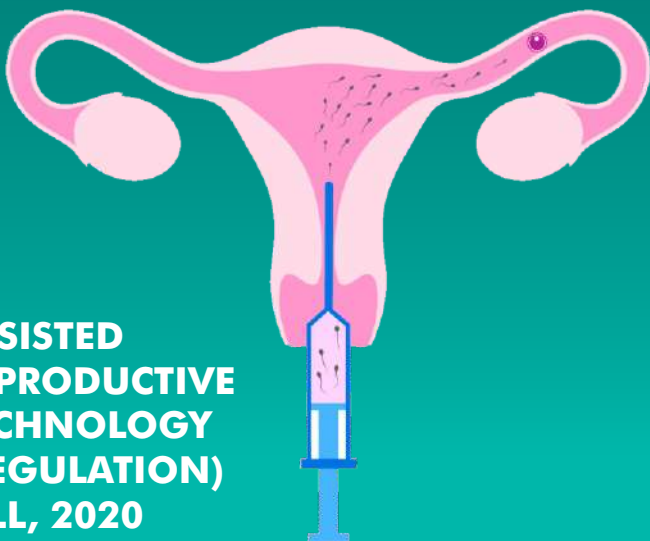
APTI PLUS

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TH EDITION

HONEY FARMER PRODUCER ORGANIZATIONS



**ASSISTED
REPRODUCTIVE
TECHNOLOGY
(REGULATION)
BILL, 2020**



**GLOBAL
HEALTH
SECURITY
INDEX 2021**

A MONTHLY PERIODICAL FOR ASPIRANTS OF UPSC EXAMINATION



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GENERAL STUDIES - I

PAIKA REBELLION OF ODISHA

GS-I MODERN HISTORY

Context

- The 1817 Paika rebellion of Odisha could not be called the first war of Independence.

Who were Paikas?

- The Paikas were peasant militias of the Gajapati rulers of Odisha who offered military services to the king.
- They were categorised into the following categories:
 - Praharis were sword-fighting experts.
 - Banuas were excellent matchlock marksmen.
 - Dhenkias were the battlefield archers.
- For the military services they provided to the kingdom of Khurda, they were given rent-free land.

The rebellion

Background

- The British established themselves in Odisha when the East India company dethroned the King of Khurda, Raja Mukunda Deva in 1803.
- The following year, in 1804, the king planned a rebellion against the British and roped in the Paikas for the same.
- But the plan was discovered by the British who confiscated his entire territory.
- The Paikas lost their estates when the new colonial establishments and land revenue settlements of the British came into force.



The revolt

- The continuous interference in the economy and revenue systems led to exploitation and oppression of the peasants and farmers eventually triggering a rebellion against the British.
- A large number of Paikas were mobilized under the leadership of Bakshi Jagabandhu Bidyadhar, who then confronted the British on April 2, 1817.
- The Paika Rebellion, also called the PaikaBidroha was an armed rebellion against Company rule.
- Government buildings in Banapur were set on fire, policemen killed and the British treasury looted.
- Over the next few months, the revolt continued but was eventually overpowered by the British army.
- Bidyadhar was imprisoned in 1825 and died while still in jail four years later.

Can it be called the first war of Independence?

The demand

- Paika rebellion preceded the Sepoy Mutiny of 1857 by at least 40 years and from this rises the demand for recognising this as India's first war of independence.
- In July 2017, the Odisha government decided to formally ask the Centre to declare the rebellion as the "first war of independence in Indian history". 2017, marked the 200th anniversary of the Paika Rebellion.

Government's take

- Since the uprisings violently clashed with European colonialists and missionaries on many occasions, their resistance is sometimes seen as the first expression of resistance against colonial rule – and therefore considered to be "nationalist" in nature.
- But the fundamental issue that arose with the Paika revolt was the revenue policy, which remained unchanged.
- Thus, it cannot be considered the first war of independence – said the Culture Ministry in consultation with the Indian Council of Historical Research (ICHR) under Ministry of Education.
- However, from a historical point of view, it can be said that the PaikaBidroha had set an example for the classes as well as the masses in India to follow later on.
- The Paika rebellion is a landmark in the history of the freedom struggle in India.

RAJA SUHALDEV, RANI BHABANI

GS-I CULTURE & HERITAGE

Context

- PM Modi referred to several historical episodes including the battle between SalarMasud and Raja Suhalddev and the conflict between Governor-General Warren Hastings and Raja Chait Singh.
- He also mentioned the contributions of historical figures like Rani Bhabani from Bengal.

Raja Suhalddev

- Suhalddev was a legendary king from Shravasti, **known to have defeated and killed the Ghaznavid general Ghazi Miyan at Bahraich in 1034 CE.**
- He is mentioned in the 17th century Persian-language historical romance **Mirat-i-Masudi**.
- During the reign of Jahangir (r. 1605–1627), Abd-ur-Rahman Chishti penned Mirat-i-Masudi, a Persian hagiography in praise of Ghazi Miyan, a Turkic commander.
- Suhalddev is mentioned in the same chronicles, as the **eldest son of King Mordhwaj of Shravasti and Miyan's chief antagonist in the Bahraich region.**

Chait Singh

- Chait Singh was a ruler of Kingdom of Benares in northern India.
- He belonged to the **Narayan dynasty of Bhumihaar Brahmins.**
- Maharaja Balwant Singh's elder son, Rana'atwaAwal-i-Martabat Raja Sri Chait Singh Sahib Bahadur, succeeded to the throne as the next Raja of Benares in 1770.

Rani Bhabani

- Rani Bhabani was a Hindu zamindar, also known as the **'Queen of Natore' during the British colonial era** in what is now of Rajshahi, Bangladesh.
- The **number of temples, guesthouses and roads she constructed across Bengal** is in hundreds.
- She also built **numerous water tanks, alleviating the acute water problem of her subjects.**
- She was also interested in the spread of education and **donated generously to many educational institutes.**

HORNBILL FESTIVAL

GS-I CULTURE & HERITAGE

Context

- To protest the killings of civilians by the security forces in Mon district on Saturday, eight of the 17 tribes in Nagaland have announced their withdrawal from the annual Hornbill Festival.

About

- It is also called the **'Festival of Festivals'**.
- The first edition of the festival – which is named after the Indian hornbill was **held in 2000.**
- It hosts a colorful mixture of dances, performances, crafts, parades, games, sports, food, fairs and religious ceremonies.

Festivals of Northeast

Losar	Arunachal Pradesh	Anthurium	Mizoram
Saga Dawa	Sikkim	Kharchi Puja	Tripura
AmbubachiMela	Assam	ChapcharKut	Mizoram
Dree Festival	Arunachal Pradesh	Wangala Festival	Meghalaya
MoatsuMong	Nagaland	Ziro Festival of Music	Arunachal Pradesh
RassMahutsav	Assam	Kang Chingba	Manipur
Cheiraoba	Manipur	Myoko Festival	Arunachal Pradesh
Aoling festival	Nagaland	Judima Festival	Assam
Shillong Autumn Festival	Meghalaya	Yaoshang	Manipur
Lui-ngai-ni	Manipur	Torgya Festival	Arunachal Pradesh
Sanken Festival	Arunachal Pradesh	DehingPatkai Festival	Assam
Bihu Festival	Assam	Majuli Festival	Assam
Losoong	Sikkim	Behdienkhlam	Meghalaya
Nongkrem Dance Festival	Meghalaya	JunbeelMela	Assam

ANIMAL SPORTS IN INDIA

GS-I CULTURE & HERITAGE

In News

- The Supreme Court allowed Maharashtra to hold bullock cart races in the state till the pendency of the matter before the constitutional Bench of the apex court.

Sequence of events

- Bullock cart races were banned in Maharashtra after the Supreme Court declared that the race as violative of the provisions of the central act in 2014.
- After the Tamil Nadu government enacted a law to regulate jallikattu (taming of the bull), there was a demand to revive bullock races in Maharashtra.
- In April 2017, the Maharashtra assembly had passed a legislation for resumption of bullock cart races across the state.
- The Bill titled 'The Prevention of Cruelty to Animals (Maharashtra Amendment) Bill' was passed unanimously with the support of all parties.
- The Bill regularised the bullock race.

Arguments against such games

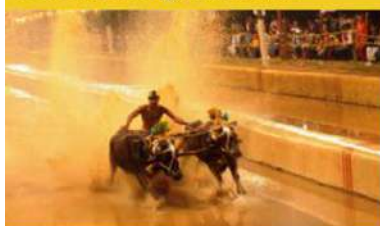
- In 2014, the Supreme Court had ruled that the Prevention of Cruelty to Animals Act, 1960, "over-shadows or overrides the so-called tradition and culture".
- The court drew upon Upanishadic wisdom and advised Parliament to "elevate rights of animals to that of constitutional rights so as to protect their dignity and honour".
- Documentation done by the Animal Welfare Board of India, a statutory body under the Centre, and animal rights groups like PETA, that served as evidence that in many such animal games like Jallikattu animals were physically and mentally tortured.
- Hundreds of people have lost their lives in the last two decades.

The case for culture and tradition

- There exists tangible evidence to show that this battle between man and beast is a cultural representation.
- The political economy of such games is about showcasing the quality of cattle, the breeding skills of cattle rearers, the centrality of cattle in an agrarian economy, and the power and pride they bring to farmers.
- Such games are a cultural manifestation of this political economy.
- As a tradition, it links an agrarian people to the elemental aspect of their vocation.

INDIA'S HISTORY OF ANIMAL SPORTS

Buffalo racing, Karnataka



- Called '**kambala**'
- Buffaloes **race in paddy fields** filled with slush and mud

Bulbul fighting, Assam

- Organised on **Magh Bihu day**
- Bulbuls fed concoction of **intoxicating substances** to make them aggressive



Cock fighting, Andhra Pradesh



- Mega sport during **Sankranti**, stakes run into **hundreds of crores of rupees**
- Blade is often tied** to the bird's limbs to chop off rival

Bullock cart racing, Maharashtra



- Entertainment sport in **rural areas**

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APATANI TEXTILE

GS-I CULTURE & HERITAGE

Context

- An application seeking Geographical Indication (GI) tag for the Arunachal Pradesh Apatani textile product has been filed.

Apatani weave

- The Apatani weave comes from the **Apatani tribe of Arunachal Pradesh** living at Ziro.

- The woven fabric of this tribe is **known for its geometric and zigzag patterns** and also for its angular designs.
- The tribe predominantly **weaves shawls known as jig-jiro and jilan or jackets called supuntarii**.
- The people here **use different leaves and plant resources for organic dying the cotton yarns in their traditional ways**. And **only women folk are engaged in weaving**.

Handloom

- The traditional handloom of this tribe is a type of loin loom, **which is called Chichin**, and is similar to the traditional handloom of the Nyishi tribe.
- It is portable, easy to install and operated by a single weaver, especially the female member of the community.

About Apatani Tribe

- The Apatani, or (Tanw, Tanii) are a tribal group of people living in the Ziro valley in the Lower Subansiri district of Arunachal Pradesh.
- The Apatanis, have a distinct civilization with systematic land-use practices and rich traditional ecological knowledge of natural resources management and conservation, acquired over the centuries.
- Their **wet rice cultivation system** and their agriculture system are extensive even without the use of any farm animals or machines. So is their sustainable social forestry system.
- **UNESCO has proposed the Apatani valley for inclusion as a World Heritage Site** for its "extremely high productivity" and "unique" way of preserving the ecology.
- Major festivals – **Dree and Myoko**.
- In July, the agricultural festival of Dree is celebrated with prayers for a bumper harvest and prosperity of all humankind.
- **Paku-Itu, Daminda, Piree dance, etc.**, are the main cultural programmes performed in the festival.

To read about to complete list of GI Tags,

Visit: <https://www.iasgyan.in/blogs/complete-list-of-geographical-indications-gi-tags-in-india-as-of-2021>

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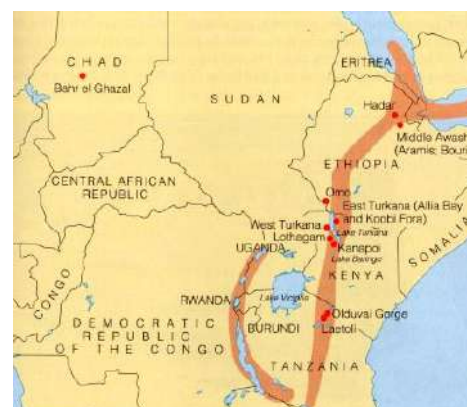
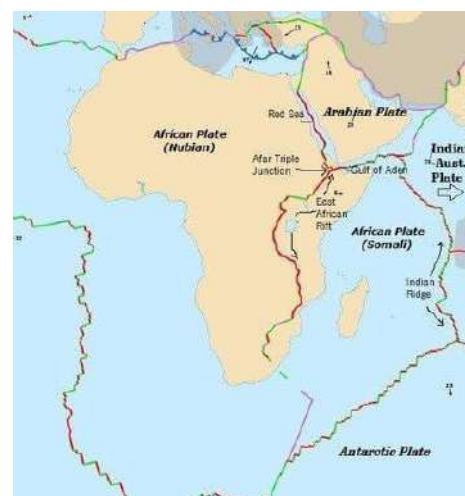
GS-I GEOGRAPHY

- The water levels of lakes in Kenya's Great Rift Valley increased significantly, hurting local communities and biodiversity.
- Climate change, human activities and an active tectonic belt are to blame for this crisis, according to a new report.

- A rift valley is **a lowland region that forms where Earth's tectonic plates move apart**, or rift.
- Rift valleys are found both on land and at the bottom of the ocean, where they are created by the process of seafloor spreading.
- Rift valleys differ from river valleys and glacial valleys in that they are **created by tectonic activity and not the process of erosion**.

- The Great Rift Valley is 7,000 kilometres in total length that runs from the **Beqaa Valley in Lebanon which is in Asia to Mozambique in Southeast Africa.**
- It is a merging of separate though related rift and fault systems.
- The divergent plate boundary which extends from the **Afar Triple Junction southward across eastern Africa, is in the process of splitting the African Plate into two new separate plates.**
- Geologists generally refer to these incipient plates as the **Nubian Plate and the Somali Plate.**
- In Kenya, Uganda and the fringes of South Sudan, the Great Rift runs along two separate branches.
- The East African Rift follows the Red Sea to the end before turning inland into the Ethiopian highlands, dividing the country into separate mountainous regions.
- The Western Rift, **also called the Albertine Rift, is** bordered by some of the highest mountains in Africa, including the **Virunga Mountains, Mitumba Mountains, and Ruwenzori Range.**
- It contains the Rift Valley lakes, which include some of the deepest lakes in the world (up to 1,470 metres deep at Lake Tanganyika).
- Much of this area lies within the boundaries of national parks such as **Virunga National Park** in the Democratic Republic of Congo, Rwenzori National Park and Queen Elizabeth National Park in Uganda, and Volcanoes National Park in Rwanda.
- Lake Victoria is considered to be part of the rift valley system although it actually lies between the two branches.
- All of the African Great Lakes were formed as the result of the rift, and most lie in territories within the rift.

- The Rift Valley lakes are a series of lakes in the East African Rift valley that runs through eastern Africa from Ethiopia in the north to Malawi in the south, and includes the African Great Lakes in the south.
- These include some of the world's oldest lakes, deepest lakes, largest lakes by area, and largest lakes by volume.
- The World Wide Fund for Nature has designated these lakes as one of its Global 200 priority ecoregions for conservation.
- The major Rift Valley lakes are as follows:



CYCLONE JAWAD

GS-I GEOGRAPHY

In News

- Cyclone Jawad has formed in the Bay of Bengal and is expected to reach Paradip, on the Odisha coast soon.
- The cyclone will briefly gain in strength and becomes a 'severe' cyclonic storm, but is unlikely to make a conventional landfall.
- This cyclone is expected to be much less intense than recent ones such as Titli, and nowhere near extreme ones such as Failin, Fani, Hudhud.

The name

- Cyclone Jawad — pronounced as 'jowad' — was proposed by Saudi Arabia.
- With this, Cyclone Jawad has become the fifth cyclone of 2021.
- The name means generous or merciful in Arabic.

MOUNT SUMERU

GS-I GEOGRAPHY

In News

- Rescuers in Indonesia raced to find survivors in villages blanketed by molten ash after the eruption of Mount Semeru killed at least 14 persons and left dozens injured.

About

- Semeru, or Mount Semeru is an active volcano in East Java, Indonesia.
- It is located in a subduction zone, where the Indo-Australian plate subducts under the Eurasia plate.
- It is the highest mountain on the island of Java.
- This stratovolcano is also known as Mahameru, meaning "The Great Mountain" in Sanskrit.



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GENERAL STUDIES - II

EVOLUTION OF CONSTITUTION

GS-II POLITY

Context

- Recently, on 26th November the Constitution Day was celebrated by the Parliament. It was on this day, 72 years ago that the Constitution of India was adopted by the Constituent Assembly.

Evolution of Our Constitution

- The **evolution of Constitution begins with the Objective Resolution. The ideals of French Revolution i.e., Liberty, Equality, Fraternity have been** the foundational values.
- The **curse of untouchability, caste system has been attempted to be removed** by incorporating the ideas of social justice under Article 15.
- The **presence of Dr. Ambedkar allowed for diversity of views.**
- Dr. Ambedkar **did not agree with many of the methods of national movement such as civil disobedience, non-cooperation.** This allowed for different ideas in the Constitution as well.

Interpretation of constitution by judiciary over the years

Text as Phase one

- The Supreme Court **adopted a textual approach, focusing on the plain meaning of the words used in the Constitution.**
- In A K Gopalan Case, Supreme court **decided that Articles 19 (Right to freedom), Art. 21 (Right to life) and Art. 22 (Protection against arbitrary arrest and detention) covered different** subject matters and were to be read as separate codes rather than being read together.
- The Court read that the **Constitution literally concluded that there was no limitations** on parliament to amend the constitution.

Phase two- The structure

- Appeals to the text of the Constitution **were gradually overtaken by appeals to the Constitution's overall structure and coherence.**
- In the leading case of **Kesavananda Bharati v. State of Kerala (1973)** Supreme Court concluded that the Parliament's power to amend the Constitution did not extend to **altering its "Basic structure"**. And what constitutes basic structure is completely defined by the Court.
- Court also **categorically rejected the Gopalan approach in favour of a structuralistic one** in Maneka Gandhi v. Union of India (1978).
- The Court **conceived of the fundamental rights as a cohesive bill of rights rather than a miscellaneous grouping of constitutional** guarantees.
- The right to life was incrementally interpreted to include a wide range of rights such as clean air, speedy trial and free legal aid.
- This phase paved the way for court to play proactive role in governance of the country.
- In both the phases, significant decisions involving the interpretation of the Constitution were entrusted to Constitution Benches (comprising five or more judges of court) and were carefully (even if incorrectly) reasoned.

Eclecticism as phase three

- Supreme Court's **interpretive philosophy turned far more result-oriented** than it had ever been.
- Court often surrendered its **responsibility of engaging in a thorough rights** reasoning of the issues before it.

Reasons behind decline of reasoning within the court

- Court strength **grew from 8 to 32. Court began to sit in the bench of 2 or more judges.**
- It effectively **transformed itself into a "polyvocal" group of about a dozen sub-Supreme Courts.**
- The Court **began deciding cases based on a certain conception of its own role** — whether as sentinel of democracy or protector of the market economy.
- It side-lined **reason-giving in preference to arriving at outcomes that match** the Court's perception.
- Different Benches adopted inconsistent interpretive approaches based on their conception of the Court's role.

Impact of failure of court

- It led to serious **doctrinal incoherence and inconsistency across the law.**

Phase four-Purpose

- The Court has **acknowledged as critical to its interpretive exercise the purpose for which the Constitution has been enacted.**
- The Court is **now beginning to interpret the Constitution in accordance with its revolutionary and transformative potential.**
- With about a dozen significant Constitution Bench decisions from the Supreme Court since September 2018, there has **been a renaissance in decision-making by Constitution Benches.**
- It includes cases like **striking down the section 377 and the criminal offence of adultery and including the office of the Chief Justice of India within the scope of the Right to Information Act.**

Way Forward

- The intricate workings of the Constitution can be understood by the learners through the understanding of the concept of 'We the People' and 'Basic Structure Doctrine'. The Constitution of India has not imposed accountability on the Judiciary deliberately to allow for independence of the judiciary so that it would be functioning within the domains of Constitutionalism.

FUNDAMENTAL RIGHTS AND DUTIES

GS-II POLITY

Context

- Government has **advocated the need for integration of duties with right.**
- According to them, the **"fundamental duties" as Article 51A describes them – ought to be treated on a par with the various fundamental rights that the Constitution guarantees.**

Reasons for the Integration

- Country **will be made great only if we create a balance between fundamental duties and fundamental rights.**
- Convergence of the fundamental duties with the rights will lead to establishment of deeper roots in a diverse country of India.

About Rights

- When a person **holds a right, she is owed an obligation by a duty-bearer.**
- **Example1:** when citizens are promised a right against discrimination, the government is obliged to **ensure that it treats everybody with equal care and concern.**
- Example 2: the **guarantee of a right to freedom of speech enjoins the state to refrain from interfering with that liberty.**

Challenges with the Integration

- It puts **forward an idea that our rights ought to be made conditional on the performance** of a set of extraneous obligations.
- **Different people have different conceptions** of duties that citizens must abide by.
- The **Constituent Assembly did not see duty** as an important part of their vision.
- **Fundamental duties in Part IV are vague, ambiguous, and difficult** to be understood by the common man.
- The list of duties is **not exhaustive as it does not cover other important** duties like casting votes, paying taxes, family planning, and so on. In fact, the duty to pay taxes was recommended by the Swaran Singh Committee.
- Such an **approach can infringe on the Right to freedom of speech and expression.**
- Making the rights subject to certain extrinsic duties can be seen as repugnant to a republic's vision.

Views of constituent assembly

- The emphasis on dignity was important, and it guaranteed basic human rights like equality, autonomy, liberty, and others. The idea of contingent rights was considered repugnant.
- But rights were not made absolute, and part III of the constitution also contained limitations of the rights. Any curtailment of rights would thus need legislative sanction and should be reasonable as per the constitution.

Difference between Fundamental Duties and Fundamental Rights

Area of differentiation	Fundamental rights	Fundamental duties
Placement in the Amendment:	The Fundamental Rights are present in Part III of India's Constitution and is guaranteed to the citizens of India.	Fundamental Duties deals in Part IV A of the Constitution of India.
Purpose of the Articles:	Fundamental Rights deals with Articles 12-35 of the Constitution of India.	Article 51-A of the Constitution of India deals with Fundamental Duties.

Native source of Fundamental Rights was borrowed from the Article:	Constitution of the United States of America.	From the Constitution of the former Soviet Union (USSR), Fundamental Duties were taken.
Application:	These rights are defined and applied irrespective of religion, caste, race, place of birth, creed, or gender.	These duties' are defined as the moral obligations of all citizens to uphold India's unity and help promote a spirit of patriotism.

Supreme Court Verdict Related to Fundamental Duties

Case Name	Verdict
A.I.I.M.S. Student's Union v. A.I.I.M.S	It provides valuable guidance and aid to interpretation and resolution of constitutional and legal issues.
Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh	The court held that preservation of the environment and keeping the ecological balance unaffected in a task which not only government but also every citizen must undertake. It is a social obligation of the state as well as of the individuals.

Evolution of Fundamental Duties

- They were not present in the original form of the constitution. They were added after the Swaran Singh Committee recommendations through the 42nd constitutional amendment and Article 51A.
- It encouraged citizens to cherish noble ideas, uphold and protect the sovereignty of India among other provisions.

RIGHT TO FORGOTTEN

GS-II POLITY

Context

- The Centre has informed the Delhi High Court that the Personal Data Protection Bill 2019, which was tabled in Parliament, contains provisions related to the 'right to be forgotten'.

About Right to Forgotten

- The right to be forgotten or the right to erasure is the **concept that individuals have the civil right to request that personal information be removed from the Internet.**
- **There must be a traceable mechanism for making sure that deleted data is also removed from backup storage media.**
- The right "reflects the claim of an **individual to have certain data deleted so that third persons can no longer trace them**" and has been defined as "the right to silence on past events in life that are no longer occurring.

About Right to Forgotten in EU Countries

- The right to be forgotten **empowers individuals to ask organisations to delete** their personal data.
- It is **provided by the EU's General Data Protection Regulation (GDPR)**, a law passed by the 28-member bloc in 2018.
- The data **subject shall have the right to obtain from the controller the erasure of personal data concerning him** or her without undue delay and the controller shall have the obligation to erase personal data without undue delay.
- Personal data means, any information relating to an identified or identifiable natural person ("data subject") and "controller means the natural or legal person, public authority, agency or any other body which determines the purposes and means of the processing of personal data.
- After a search engine company as if **Google gets requests under the privacy law to get information deleted, it first reviews and then removes links on country-specific sites within the European Union.**
- Google has so far received more than 8.45 lakh requests to take down 33 lakh internet links, and 45% of the latter have been delisted.

Right to Forgotten in India

- The draft bill framed **by the Justice B. N. Srikrishna Committee has made an explicit reference to the right to be forgotten.**
- The draft bill makes **it clear that the right to be forgotten is not an absolute right and provides for certain exemptions.**

Provision of the Bill related to Right to forgotten

- Section 27 provides an **individual with a right to restrict or prevent continuing disclosure** of personal data.
- Many high courts **have accepted the doctrine of the 'right to be forgotten'** as an essential part of the 'right to privacy'.
- The bill provides that an adjudicating officer think such disclosure can override the freedom of speech and the citizen's right to information. The adjudicating officer would decide based on:
 - Sensitivity of the personal data.
 - Scale of disclosure and the degree of accessibility sought to be restricted or prevented.

- Role of the data principal in public life.
- Relevance of the personal data to the public.
- Nature of the disclosure and of the activities of the data fiduciary.

Pros and Cons of Right to be Forgotten

Pros	Cons
Self-determination of your online presence	Your need for removal may be outweighed by general public's interest in accessing and viewing such information
The ability to remove libelous, embarrassing, and stigmatizing information from a past post or upload	It carries a potential restraint on the freedoms afforded to media, journalists, and other parties under the First Amendment
The removal of illegally uploaded content by a third party, including "revenge porn"	Relatively broad, and undeveloped, with lacking precedent
An opportunity for a fresh start	Google and other search engines may be backed up with requests to remove information, so it may not be removed immediately
Removing personal details that compromise your personal and financial safety	Lack of transparency surrounding important information about businesses or persons
Peace of mind when applying for jobs	Potential restraint on the media, journalism, and other freedom of speech

Way Forward

- The Right to be **Forgotten** requests should be considered by the search engines with a **comprehensive framework** provided by the law.
- This will **ensure limited intervention by the state or a company** in the personal choices of the individuals.
- After all, the entire Internet today is so influential that it can shape lives and opinions in such a way that a person shouldn't be a prisoner of his or her past. People should be able to escape their discreditable criminal history.

NATIONAL COURT OF APPEAL

GS-II POLITY

Context

- Recently, Chief Justice of India has supported for national court of appeal for restructuring of judiciary.

About National Court of Appeal

- The National Court Appeal with regional benches in Chennai, Mumbai and Kolkata is meant to act as final court of justice in dealing with appeals from the decisions of the High Courts and tribunals within their region in civil, criminal, labour and revenue matters.
- In such a scenario, a much-relieved Supreme Court of India situated in Delhi would only hear matters of constitutional law and public law.

Role of National Court of Appeal

- These appellate courts would act as a buffer between the State High Courts and the Supreme Court.
- They would absorb ordinary appeals from the High Courts, not involving constitutional questions of law, and decide them finally.
- These courts, manned by 15 judges each, would stem the flow of all and sundry cases to the apex court and reduce pendency to a great extent.

Criticism of the idea of NCA

- It will not **reduce the litigation**. **Apex courts are not clogged but** subordinate courts are.
- It will **merely add another layer of adjudication**.
- It is **constitutionally impossible because hearing of appeals is a basic structure** (which will be affected)
- It **would be a boon only for advocates**.
- This suggestion **would require an amendment in Article 130 of the Constitution which is impermissible as this would change the constitution of the Supreme Court completely**

Government stand

- Earlier, the Centre rejected proposal for a National Court of Appeal with regional Benches. The Ministry cited three grounds for rejecting the idea

- The Supreme Court always sits in Delhi as per the Constitution;
- The Chief Justices of India in the past have “consistently opposed” the idea of an NCA or regional benches to the Supreme Court;
- The Attorney-General said an NCA would “completely change the constitution of the Supreme Court”.

SEPARATION OF POWER

GS-II POLITY

Context

- According to CJI, many people in this country believe that it is the courts which make the laws.

CJI Comment

- People need to know the scope and limitations of the roles ascribed to the different organs of the State.
- Courts intervenes not to usurp the role of the government, but to nudge it towards the right path.
- It said that judicial hierarchy needs to be restructured to include four National Courts of Appeals across the country.

Purpose of the Separation

- It is to **prevent abuse of power by a single person or a group of individuals. It will guard the society against the arbitrary, irrational and tyrannical powers of the state, safeguard freedom for all and allocate each function to the suitable organs of the state for effective discharge of their respective duties.**

Meaning Of Separation of Powers

- Separation of powers **divides the mechanism of governance into three branches i.e. Legislature, Executive and the Judiciary.** Although different authors give different definitions, in general, we can frame three features of this doctrine.
- Each organ **should have different persons in capacity**, i.e., a person with a function in one organ should not be a part of another organ.
- One organ should not interfere in the functioning of the other organs.
- One organ **should not exercise a function of another organ** (they should stick to their mandate only).

Significance

- Keeps away autocracy.
- Safeguards individual liberty.
- Helps create an efficient administration.
- Judiciary's independence is maintained.
- Prevents the legislature from enacting arbitrary or unconstitutional laws.

Constitutional Provision

- **Article 50:** This article requires the state to separate judiciary and executive branch. However, this is not enforceable as it falls under the guidelines of state policy.
- **Articles 53 and 154:** These stipulate that federal and state executive branches rest with the President and Governor and enjoy this exemption from civil and criminal liability.
- **Articles 121 and 211:** These provide that the legislature cannot discuss the actions of the Supreme Court or the judges of the Supreme Court. You can only do this in the case of impeachment
- **Article 123:** As a national executive branch, the President is empowered to exercise (issue ordinances) legislative power under certain conditions.
- **Article 361:** The President and Governor are exempt from judicial proceedings. You are not responsible to any court for exercising or exercising the powers and obligations of your office.

Related Cases

- **Kesavananda Bharati v Kerala State (1973):** In this case, the SC found that the right to amend the parliament depends on the main characteristics of the Constitution. Therefore, changes that violate the basic characteristics are declared unconstitutional.
- **RamJawaya Kapoor V. State of Punjab (1955):** In this case, it was proved that the Constitution of India **did not recognize the principle of absolute firmness of separation of powers, but the functioning of various parts or branches** of the government. It is well differentiated and, as a result, our Constitution does not prescribe the functions inherited by one organization or part of a nation that essentially belongs to another organization.
- **Indira Nehru Gandhi v. Raj Narain (1975):** When the dispute over the Prime Minister's election was pending in the Supreme Court, **the decision on a particular dispute was decided to be a judicial function that Congress could not function even under the power of constitutional amendment.** ... out.

MISCONDUCT IN PARLIAMENT**GS-II POLITY****Context**

- Twelve Opposition members of the Rajya Sabha were suspended for the entire winter session on Monday for “unprecedented acts of misconduct”, “unruly and violent behaviour” and “intentional attacks on security personnel”.

Reason behind Suspension

- According to rules 256 and 374, respectively, in the Rules of Procedure and Conduct of Business for Rajya Sabha and Lok Sabha, the presiding officer is permitted to, upon deeming it necessary, “name a member who disregards the authority of the Chair or abuses the rules... by persistently and wilfully obstructing the business thereof”.

Process of Suspension

- Filing of Motion:** The act of ‘naming’ of such a member paves the way for a motion to be moved in that House on the question that the member thus ‘named’ be “suspended from the service (of the House) for a period not exceeding the remainder of the session”.
- Passing of Motion:** This motion is generally subjected to a voice vote, as was the case with TMC MP Shantanu Sen in Rajya Sabha during the Monsoon session of 2021 after he had snatched from the hands of IT Minister Ashwini Vaishnaw and torn them. Once the motion is passed, the suspended MP is required to “forthwith quit the precincts” of the House.

Rules for Withdrawal

- For both Houses, the rules provide that such suspension can stand terminated if that House, passes a motion to that effect.

Power difference in Lok Sabha and Rajyasabha

- There is an additional provision in the Lok Sabha rules – which does not exist for Rajya Sabha – that allows the Speaker to suspend a member without the need for a motion in that regard being brought in the House. Rule 374A allow for suspension of member without the need for a motion.

Expected behavior

- “Behaviour of members should be such as to enhance the dignity of the House and its members”.
- It implies that “the conduct of members should not be contrary to the usage or derogatory to the dignity or prestige of the House or in any way inconsistent with the standards which the House is entitled to expect of its members”.
- However, as noted by the ‘Rules of Conduct and Parliamentary Etiquette’ of Rajya Sabha, “what precisely constitutes an unbecoming or unworthy conduct has not been exhaustively defined”.

Need of the Hour

- A balance has to be struck. There can be no question that the enforcement of the supreme authority of the Speaker is essential for smooth conduct of proceedings. However, it must be remembered that her job is to run the House, not to lord over it.
- The solution to unruly behaviour has to be long-term and consistent with democratic values.
- A step in that same direction could be to discontinue the practice of herding people out of the visitors’ gallery when the House witnesses chaos. It has been suggested that it may perhaps be a good idea to let them be – and to also reserve a few blocks in the gallery for schoolchildren, who could see for themselves the conduct of Members.

JUDICIAL INFRASTRUCTURE**GS-II POLITY****Context**

- The Supreme Court said courts cannot wait on the whims and fancies of the Government, but need a proper mechanism for funding the development of judicial infrastructure.

Court Interventions

- It mooted the idea of an “umbrella national organisation” that would take care of the need for judicial infrastructure. It asked to think of constituting a sort of council on judicial infrastructure.
- Court is not interested in retaining control of the council.
- The benefit of having a senior judge or Chief Justice on it would be that they are in the know of things.
- The composition can be of the Union Minister for Law and Justice, the Secretary, Finance, etc. The States can also be represented.

- Such a corporation would **bring the uniformity and standardisation** required to revolutionise judicial infrastructure.

Genesis and Need of Judicial Infrastructure

- The idea for such an agency was first proposed by CJI Ramana in March this year, even before he took office.
- Soon after he was sworn in, the CJI commenced work on the NJIC and a survey of 6,000 trial courts in various states was undertaken as part of this exercise.
- Budgetary allocation for state judiciary often lapses since there is no independent body to supervise and execute works related to improving court premises. NJIC is expected to fill this vacuum and overcome problems related to infrastructure.
- The basic idea behind NJIC is not to leave HC chief justices — who mostly undertake infrastructure-related projects in trial courts — at the mercy of state governments.
- The NJIC will be an “honest” agency that will monitor the execution of work for which the funds are earmarked.

Meaning of Judicial Infrastructure

- An efficient “judicial infrastructure” means providing equal and free access to justice.
- This could be realised through a “barrier-free and citizen-friendly environment

Status of Judicial Infrastructure in India

- **Only 27 per cent of courtrooms in the subordinate judiciary** have computers on judges’ dias.
- **There are still 10 per cent courts that do not have** access to proper internet facilities.
- **22 per cent trial court complexes do not have** any toilet facilities for women while 16 per cent don’t have such a facility for men either.
- There are **approximately 24,280 judicial officers in trial courts** but only 20,143 court halls.
- About **55 per cent of the trial courts surveyed** have a separate room for the staff attached to judges while 54 per cent are equipped with drinking water facilities.
- **Only 55 per cent courts have centralised filing centres and 31 per cent** have meditation halls.
- Most court complexes also do not have a waiting area for litigants with only 33 per cent buildings with this facility.

Reasons behind Infrastructure lag

- To **develop judicial infrastructure, funds are extended by the central government and states under the Centrally-Sponsored Scheme for Development of Judiciary Infrastructure**, which began in 1993 and was extended for another five years in July this year.
- States do **not come forward with their share of funds and consequently, money allocated under the scheme is often left unspent** with them and lapses.
- States **have also transferred part of the fund for non-judicial purposes**.
- Even in the **judiciary, particularly trial courts, nobody is willing to take responsibility to execute infrastructure projects**.
- Most district judges, who head trial courts, also do not vigorously pursue development projects due to short-term appointments and transferable jobs among others.

LIVE STREAMING OF COURT CASES

GS-II POLITY

Context

- Same Sex Couples are seeking proceeding’s live streaming To recognise marriage.

Need for the live streaming

- Space crunch in the courtroom made it difficult for the law students to attend the live session of court.
- Virtual hearing of the court has made it completely impossible for others to listen.
- In the earlier verdict in Swapnil Tripathi vs. Supreme Court of India, the court recommended that proceedings be broadcast live.
- The public has a right to know, about court proceedings in constitutional courts as well as trial and appellate courts.

Benefits of Live Streaming

- Live streaming proceedings are part of the right to access justice under Article 21 of the constitution.
- Publishing court proceedings is an aspect of Article 129, which state that the Supreme Court is a court of record.
- Journalists, young lawyers, civil society activists and academics would all benefit from live streaming.
- Open courts help foster public confidence in the judiciary.

International Experience

- Internationally, constitutional court proceedings are recorded in some form or the other.
- In Australia, proceedings are recorded and posted on the High Court's website.
- Proceedings of the supreme courts of Brazil, Canada, England and Germany are broadcast live.
- The Supreme Court of the US does not permit video recording, but oral arguments are recorded, transcribed, and available publicly.
- In china, court proceedings are live streamed from trial courts up to the supreme people's court of china.

Issues arising due to non-recording of court transaction process

- Court hearings can be turning points in the life of a nation: ADM Jabalpur comes readily to mind.
- The court craft of legal stalwarts like HM Seervai, Ram Jethmalani, or Ashok Desai is already lost to future generations for want of recording.
- Documentation is essential to preserve our history.

Supreme Court steps to make Hearing available

- The Court started providing vernacular translations of its judgments.
- Non-accredited journalists were permitted to live-tweet court proceedings.
- During the lockdown, journalists have been permitted to view virtual court proceedings in real time.

Government steps

- Government is developing the modalities and rules to make it accessible to all.
- Supreme Court has said that Chief Justice of India will decide the administrative side of live streaming of cases.
- Recently, High court of Calcutta has permitted live streaming of a case.

Conclusion

- Openness and transparency reinforce the public's faith in the judicial system. As Swapnil Tripathi noted, "sunlight is the best disinfectant" – even more important during a pandemic.



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IMPARTIALITY OF ELECTION COMMISSION

GS-II GOVERNANCE

Context

- The informal meeting between Chief Election Commissioner (CEC) and Election Commissioners with the Principal Secretary to the Prime Minister has raised questions of propriety.

Powers of election commission

- Determining the Electoral Constituencies' territorial areas throughout the country.
- Preparing and periodically revising electoral rolls and registering all eligible voters.
- Notifying the schedules and dates of elections and scrutinising nomination papers.
- Granting recognition to the various political parties and allocating them election symbols.
- The Commission also has advisory jurisdiction in the matter of post-election disqualification of sitting members of Parliament and State Legislatures.
- It issues the Model Code of Conduct in elections for political parties and candidates so that no one indulges in unfair practice or there is no arbitrary abuse of powers by those in power.

Challenges on the Functioning of Election Commission

- Decline of Trust:** As election commission is increasingly being seen as a body more closely to the government than working independently. Position parties have accused it of **going slow against certain political party**.
- Lack of Transparency in appointment:** there are **no safeguards in the procedure for its own appointments**. The government picks the commissioners with no consultation.
- Arbitrary standards:** Election commission has issued **gag against using army photographs in the political campaign**. But, **allowed certain leaders to use the army** in their campaign thus discriminating against political parties.
- Delay in cases:** Election commission is **taking time to clear the cases which** is leading to cause confusion and decline of trust.
- Failing to regulate income tax raids:** The commission **also failed to check the Department of Revenue, which conducted raids on members of Opposition parties**, without keeping it informed.

Way Forward

- 2nd ARC report recommended that collegium headed by the Prime Minister with the Speaker of the Lok Sabha, the Leader of Opposition in the Lok Sabha, the Law Minister and the Deputy Chairman of the Rajya Sabha as members** should make recommendations for the consideration of the President for appointment of the Chief Election Commissioner and the Election Commissioners
- Law Commission 255th Report on Electoral Reforms:** Strengthening the office of the Election Commission of India recommended Making the appointment process of the Election Commissioners and the CEC consultative
- Financial Independence:** Expenditure of the election commission must be charged on the consolidated fund of India.
- Enhancing Power:** Election commission must be **given more power to regulate the expenditure of political party**. Currently, **election commission can** regulate individual spending but not the spending by Political party.
- ECI must also **be given more power to deal with repeat offenders or leaders who use religion or caste in political rallies**. Currently, EC can only issue the notice to such leaders.

FISCAL FEDERALISM

GS-II GOVERNANCE

Context

- Prior to the pandemic, a series of steps by the Union government undermined the principles of federalism, especially fiscal federalism.

Steps by the Government

- Increasing monetary share of the States in Centrally Sponsored Schemes (CSS):** States are being provide more share in CSS.
- The terms of reference of the 15th Finance Commission:** 15th Commission reference made national security and defense requirement a separate head thus reduced the available budget.
- Imposition of demonetization without adequate consultation with the States:** States were not consulted but impacted heavily.
- Institutionalization of the Goods and Services Tax (GST):** It has led to erosion of autonomy of taxing.
- Retaining of GST Compensation Cess:** The Comptroller and Auditor General found that the Union government, in 2018-19, **wrongly retained ₹ 47,272 crore of GST compensation cess in the Consolidated Fund of India – money that was supposed to be transferred to the States.**

- **Reduction of States share in Union Tax:** The 2021-22 Budget Estimates indicate that the States' share of Union tax has reduced to 30% against the mandated 41% devolution prescribed by the 15th Finance Commission.
- **Guideline on Cooperatives:** The establishment of the Ministry of Cooperation, as well as the Reserve Bank of India's guidelines on cooperatives, are seen by the states as attempts to strangle a sector already reeling from the devastation of demonetisation.

Issues during the Pandemic

- The Union government repeatedly violated the compensation guarantees to the States under the GST regime.
- States were curtailed in aspects relating to COVID-19 management such as procurement of testing kits, vaccination.
- The GST compensation period expires in 2022 and the deadline has not been extended.
- Funding to the Chief Minister's Disaster Relief Funds is not considered as CSR expenditure, unlike the case with PM-CARES.
- Suspension and transfer of the Member of Parliament Local Area Development (MPLAD) funds to the Consolidated Fund of India.

Impact

- Enlarging the non-divisible pool of taxes in the form of cess in petrol tax and instituting the Agriculture Infrastructure and Development Cess have resulted in a situation where the Union continues to exclusively benefit from tax collection.
- The share of non-divisible pool cess and surcharge in total taxes collected by the Union government jumped from 12.67% in 2019-20 to 23.46% in 2020-21.
- It led to demands for increasing borrowing limits under the Fiscal Responsibility and Budget Management Act (FRBM), from 3% to 5%.

Way Forward

- **Formal Institutional Framework:** As recommended by the National Commission to Review the Working of the Constitution, there should be a formal institutional framework to mandate and facilitate consultation between the Union and the States in the areas of legislation under the Concurrent List.
- Deploy human resources to support states in preparing responses to the consultations initiated by the Union, especially with a focus on the federalism angle.
- Chief Ministers should try to create forums for regular engagement on federalism issue. It would be crucial in the advocacy of major demands like the extension of GST compensation to 2027 and inclusion of cess in the divisible pool of taxes.
- Central Government legislation relating to states should include additional provisions for cost-sharing to assist them in carrying out their responsibilities.
- In a cooperative federalist framework, it is critical to have provisions for further devolution to state governments in order to economically empower them to fulfil the aims of the New India-2022 national development programme.

About Fiscal Federalism

- Fiscal Federalism refers to the division of responsibilities with regards to public expenditure and taxation between the different levels of the government.
- Fiscal federalism is the economic counterpart to political federalism.
- It assigns functions to different levels of government and also offers appropriate fiscal instruments for carrying out these functions.

Need for better Fiscal

- **To Check Horizontal imbalances:** The horizontal imbalances arise because of differing levels of attainment by the states due to differential growth rates and their developmental status in terms of the state of social or infrastructure capital.
- **To Check Vertical imbalance:** Vertical imbalance arises due to the fiscal asymmetry in powers of taxation vested with the different levels of government in relation to their expenditure responsibilities prescribed by the constitution.
- There is huge economic and cultural diversity among the various States. It is a terrible mistake to presume that all of India can be governed from Delhi.
- Elected State governments and leaders cannot be made dummies without any fiscal powers for long. This fiscal federalism tension between the Centre and States can erupt into something more dangerous and spread wide.

ELECTION LAWS (AMENDMENT) BILL, 2021**GS-II GOVERNANCE****Context**

- The Election Laws (Amendment) Bill, 2021 that seeks to link electoral rolls to Aadhaar number has been listed for introduction in the Lok Sabha.

Details

- It allows electoral registration officers to ask for Aadhaar numbers of applicants wanting to register as voters to establish the identity of the applicant.
- It also seeks to allow the officers to ask for the number from
 - Persons already included in the electoral roll for the purposes of authentication of entries in electoral roll,
 - To identify registration of name of the same person in the electoral roll of more than one constituency or more than once in the same constituency.
- No application for inclusion of name in the electoral roll shall be denied and no entries in the electoral roll shall be deleted for inability of an individual to furnish Aadhaar number.
- People who cannot furnish their Aadhaar numbers will be allowed to present other documents to establish identity.

Issues with linking of Aadhar with voters id**Unknown methodology**

- The general public is unaware of the ECI process of using Aadhaar to find duplicate voters. Information is also not in the public domain.

Lack of privacy

- The State Resident Data Hub (SRDH) was built by UIDAI to provide the state with information about residents.
- SRDH contains state resident data provided by India's Unique Identification Authority (UIDAI) or further recorded by the state government. SRDH is currently operated by a private company.

Data ambiguity

- UIDAI was forced not to collect Aadhaar caste, religion, and other sensitive information, but advised the state to collect it as needed. This obscures the implementation. Incapacity:
- While the purpose and independence of ECI is controversial, the suspension of major electoral rolls by surveillance software undermines the principle of adult voting rights.

Lack of secret

- The use of smartphones in elections for facial recognition, voter identification, adhaar numbers, and phone number verification undermines "secret ballots."

Increased fraud

- In situations where money participation ridicules the democratic process, aadhaar links remain futile. Malware can also be used to manipulate election results through electronic voting. For election integrity:
- The bill does not deal with large-scale voting, but raises the issue of maintaining election integrity.

Illegal Benefits for Political Parties

- The link between Aadhaar and the voter ID also helps political parties create voter profiles and influence the election process.
- The potential for political parties to use data for elections is simplified by online trends on election days and targeted addressing of voters using the data.

Benefits for the ruling party

- The ruling coalition always has an advantage in the data it owns. As an example, the prime minister of a particular state is required to obtain data on the beneficiaries of social support systems.

Aadhaar problem

- The way Aadhaar spread nationwide was undemocratic and unconstitutional from the beginning.
- Aadhaar itself has some widely documented false duplicate names.

Need for link**Cleaning of electoral rolls**

- The government has said that the bill sought to address the Election Commission (EC)'s concern over identifying duplicate voters so **as to clean up the rolls, and that the linking** is designed to do exactly that.

Improved accessibility to voting

- With over **300 million migrant workers across the country, the Voter ID-Aadhaar linking will allow the EC to track them** and allow them to participate in elections in their home states.

Preventing voter fraud

- Since Aadhaar information is linked to biometrics, which cannot be replicated, the EC had contended that voter fraud on the basis of this information would be very difficult. Voter cards linked with biometrics would be difficult to falsify.

DIGITAL PUBLIC GOODS

GS-II GOVERNANCE

Context

- India is pioneering the concept of digital public goods that enhance the ease, transparency and speed with which individuals, markets and governments interact with each other.

Need to export the Digital Public Goods

- **Cheaper and Effective Usage:** The cost of setting up an open source-based high school online educational infrastructure, to supplement the physical infrastructure, for an entire country is less than laying two kilometres of high-quality road.
- **No aid Conditionality's:** The investments required for transporting digital public goods are minuscule in comparison and there is no chance of a debt trap. Also, the code(platform) is highly reusable.
- **Visible Impact and Benefits:** Unlike physical infrastructure such as ports and roads, digital public goods have short gestation periods and immediate, and visible impact and benefits.
- **Checks the Corruption:** It eliminates ghost beneficiaries of government services, removes touts collecting rent, creates an audit trail, makes the individual-government-market interface transparent and provides efficiencies that help recoup the investments quickly.
- **Responsive State:** Processes get streamlined and wait times for any service come down dramatically. Issuances of passports, PAN cards and driving licences are such examples.
- **Nature of Compounding:** the digital public goods infrastructure compounds while physical infrastructure depreciates.

Reasons for Compounding

- First reason is the growth of technology itself. Chips keep becoming faster, engines more powerful, and gene-editing technology keeps improving.
- The second reason is the network effect. As more and more people use the same technology, the number of "transactions" using that technology increase exponentially — be it Facebook posts or UPI transactions.
- And the third reason is the rapid creation of new layers of technology.
- **Development at Scale:** Digital public goods spread speed, transparency, ease and productivity across the individual-government-market ecosystem and enhance inclusivity, equity and development at scale.

Benefits of Digital Public Good Diplomacy

- **Boost India's Image as leading technology player:** It will take made-in-India digital public goods across the world and boost India's brand positioning as a leading technology player in the digital age.
- **Earn Goodwill:** It will enable quick, visible and compounding benefits for India's partner countries and earn India immense goodwill.
- **Counter Belt and Road Initiative:** it will create a strong foothold for India globally to counter the extravagantly expensive, brick-and-mortar led Belt and Road Initiative of China.

Challenges Associated with Digital Public Good Diplomacy

- **Digital Public Product Privacy Issues:** Potential privacy breaches and the possibility of using data weapons are key issues associated with such digital initiatives.
- **Increasing inequality:** Successful digital delivery of services depends on many fundamental factors, including digital literacy, education, and access to stable high-speed communications services. O Against this background, large-scale digitization of services without eliminating this digital divide can increase existing inequality.
- **Security issues:** Ensuring end-to-end protection of data throughout the ecosystem poses cybersecurity challenges.
 - The channels and databases used by the government for transmission and storage are usually secure, but other stakeholders in the ecosystem need the expertise or security needed to prevent and respond to breaches.
 - The alleged violation of the aadhar database is a good example.
- **No remote location:** Digital services are not evenly distributed, so remote communities often need onsite employees to deliver and complement digital tools.

Way Forward

- **Data Protection Bill:** India needs to provide the framework for the data protection through data protection bill.
- **Check on Sharing of data:** Key biometric data of the individual mustn't be shared and only the transactional data can be

shared.

- **Data localisation:** India needs to ensure that digital goods diplomacy doesn't become an exercise to gather the data and provisions must be made for data localisation.
- **Training of Individuals:** Individuals across the countries needs to be trained in cyber security for successful digital goods diplomacy. A lead can be taken up by CERT.
- **No Authoritative nature:** India needs to ensure that data with the state doesn't lead to authoritarianism in these countries. Decentralized and distributed storage using the Block chain technology can be used by India.

DAM SAFETY ACT

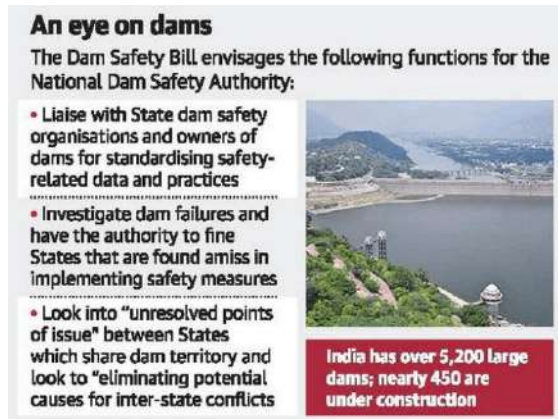
GS-II GOVERNANCE

Context

- The Dam Safety Bill, 2019, which provides for the surveillance, inspection, operation and maintenance of all specified dams across the country has been passed by the Parliament.

Need of the Act

- There is no specific Central law that governs the dam safety, given the situation that the ownership of dams and their maintenance predominantly falls in the purview of the States.
- 67 dams were built prior to the 20th century and 1,039 dams during the first 70 years of the 20th century. **Ageing of dams in the country has been a matter of concern.**
- In 2007, Andhra Pradesh and West Bengal Assemblies passed resolutions empowering Parliament to come up with a law on dam safety, under Article 252.



Provisions of the Act

- The bill provides for proper monitoring, inspection, operation and maintenance of all designated dams in the country to ensure that they function safely.

National Committee for Dam Safety

- The bill provides for the establishment of a National Dam Safety Commission to develop dam safety guidelines and recommend the necessary regulations for this purpose.
- Chaired by the Central Water Commission (CWC).
- Other members of the NCDS are nominated by the center and include up to 10 representatives from the center, 7 representatives from the state government, and 3 experts on dam safety.

National Dam Safety Authority

- The bill provides for the establishment of a national dam safety authority as a regulatory agency responsible for implementing national dam safety policies, guidelines and standards.
- NDSA also establishes rules for dam inspection and certifies various agencies working on dam construction and reconstruction.

State Commission for Dam Safety

- The bill provides for the establishment of a state committee for dam safety by the state government.
- SDSA's responsibility extends to all dams in that particular state.

Dam owner obligations

- The designated dam owner is obliged to provide dam protection to each dam. This unit inspects the dam before, during and after the monsoon season, and during and after all earthquakes, floods and other signs of disaster or distress.
- Dam owners should develop an emergency response plan and conduct risk assessment surveys for each dam at specified regular intervals.
- Dam owners should also regularly carry out a comprehensive safety assessment of each dam by a panel of experts.

Significance of the Act

- The bill helps ensure the safety of dams and the interests of people from such dams. This should also help protect lives, livestock and property.
- Covers all dam safety issues, including regular dam inspections, emergency response plans, comprehensive dam safety reviews, and appropriate dam safety repair and maintenance funding.
- Holds responsibility for the safety of the dam and provides criminal law provisions for certain acts.
- Dams play an important role in promoting the growth and development of India's rapid and sustainable agriculture, but a

unified legal and administrative structure to ensure the safety of dams is long needed. Has been said.

Challenges with the Act

- The main objection to the bill is that it is unconstitutional because water is one of the items on the state list.
 - **Example:** Tamil Nadu, which currently owns four dams in Kerala, violates the law as the four dams fall under NDSA.
- This removes Tamil Nadu's right to maintain the dam.
- The bill provides for NCDS to be headed by the Central Water Commission.
- However, the Supreme Court has ruled in the past that such a scenario is banned because the CWC has been involved as an advisor and serves as both a regulatory agency and the head of the NCDS.

CODE OF ETHICS ON SOCIAL MEDIA

GS-II GOVERNANCE

Context

- A Parliamentary panel asked the Government to ensure a code of ethics is followed in the digital media space while preserving the right to freedom of expression.

Necessity of Code of Ethics

- **Accountability:** India is the world's largest open internet company, with social media companies doing business, doing business and making a profit in India. However, you must be responsible for the Indian Constitution and the law.
- **Fake News:** The continued spread of fake news has forced many media platforms to introduce mechanisms to confirm the facts.
- **Challenge to female dignity:** The rampant abuse of social media to share modified images of females and content related to revenge porn often threatens female dignity.
- **Use of unethical means in Corporate:** The abuse of social media to resolve corporate competition in an apparently unethical way has become a major concern for businesses.
- **Violation of religious sentiment:** Increasingly abusive language, defamatory and obscene content, and overt disregard for religious sentiment on the platform.
- **Challenges for law enforcement agencies:** Over the years, the rise in social media abuse cases by criminals and anti-national factors has created new challenges for law enforcement agencies. These include incentives to recruit terrorists, the spread of obscene content, the spread of discord, financial fraud, incitement to violence, and public order and morals.

Development of Code of Ethics

- In Suomoto's application (Prajawala case), the Supreme Court said the Government of India could establish the guidelines necessary to eliminate child pornography, rape and gangbang images, videos, and websites in content hosting platforms and other applications.
- The Supreme Court has ordered the Ministry of Electronics and Information Technology to announce a schedule to complete the process of notifying new regulations.
- In a report dated March 2, 2020, Rajya Sabha's ad hoc committee investigated the alarming topics of pornography on social media and their impact on children and society as a whole, and found such content. It was recommended to identify the first author.

Providing a code of ethics

- **Content self-classification:** The OTT platform, called the publisher of online content curated by rules, classifies the content itself into five age-based categories U (universal), U / A 7+, U / A. ... 13 years or older, U / A 16 years or older and A (adult).
- **Regulation of Digital media:** Digital media news publishers have included the Press Council of India's Journalism Code of Conduct and Cable Television Network Regulation Act programming code to create a fair competition between offline (print, television) and digital.
- **Graded regulations:** Within the regulatory framework, there are three levels of grievance mechanisms with different levels of self-regulation.
 - Level Self-regulation by publishers.
 - Level II: Self-regulation by the publisher's self-regulatory body.
 - Level III: Monitoring mechanism.
- **Self-regulation by the Publisher:** Publisher shall appoint a Grievance Redressal Officer based in India who shall be responsible for the redressal of grievances received by it. The officer shall take decision on every grievance received by it within 15 days.
- **Self-regulatory Body:** There may be one or more self-regulatory bodies of publishers. Such a body shall be headed by a retired judge of the Supreme Court, a High Court or independent eminent person and have not more than six members.
- **Oversight Mechanism:** Ministry of Information and Broadcasting shall formulate an oversight mechanism. We publish a charter of self-regulatory bodies, including a code of conduct. Establish an interdepartmental committee to hear complaints.

RAISING THE AGE OF MARRIAGE**GS-II SOCIAL JUSTICE****Context**

- The Centre has decided to raise the legal age of marriage of women from 18 to 21 years.
- The proposed Bill may also contain amendments to various personal laws relating to marriage of various communities to ensure a uniform age of marriage.

Need for it

- Early marriage has **detrimental effect it has on the health and growth of the baby as well as the health of the mother.**
- Scientific studies have shown that children born to adolescent mothers (10-19 years) were more likely to be **stunted (shorter for their age)** than those born to young adults (20-24 years), and adult mothers.
- **Increasing age at first marriage, age at first birth, can be a promising approach to improve maternal and child nutrition.**
- **Will lead to gender empowerment** as more girls will opt into higher education
- **Democratisation of the family as an adult female member** would have greater say in working of the family
- Act as catalyst in population control as adult member won't go for higher no of children.

Counter arguments

- The National Coalition Advocating for Adolescent Concerns has asserted that increasing the legal age of marriage for girls will only expand the number of married persons deemed underage and criminalise them and may **render underage married girls without legal protection.**
- There are also arguments that the **Prohibition of Child Marriage Act, 2006 instead of curbing child marriages, has only played as a weapon in the hands of parents to punish their daughters for elopement** and is used in conjunction with other laws to punish boys in self-arranged marriages.
- The reasons for early marriage vary across the country. **The issue of poor nutritional status in teenage mothers is also due to poverty and lack of safety** driving early marriage in girls.
- Some have argued that **lack of proper education, poor economic status among teenage mothers also contribute to poor nutritional outcomes** for the mother and child and emphasize the need to act on these factors first before lowering the marriage age.
- The implementation of the child marriage law is very hard so there is no basis for increasing the age of marriage of women to 21.

Way forward**Focus on empowerment**

- **Work towards empowering the girls** by ensuring education, ensuring economic and social empowerment of women and girls.
- **Increase girls' access to education and health, create enabling opportunities for economic independence of the girls,** which will result in empowerment of the girls.

MOB LYNCHING**GS-II SOCIAL JUSTICE****Context**

- The Union Home Ministry informed that the National Crime Records Bureau (NCRB) collected data on mob lynching, hate crimes and cow vigilantism in 2017 but it was discontinued as the data were unreliable because these crimes are not defined.

Steps taken by Government to Check Mob Lynching

- The government through audiovisual media has also generated public awareness to curb the menace of mob lynching.
- The government has sensitised the service providers to take steps to check the propagation of false news and rumours having potential to incite mob violence and lynching.

Reasons for rising mob lynching

- **Inadequate enforcement of minority laws:** A lynching demonstrates a failure of the law to protect minorities and punish the perpetrators. State action is critical in enforcing the law and punishing those who break it.
- **No comprehensive law on mob lynching:** In India, there is no comprehensive law on mob lynching. This allows the criminal to go unpunished.
- **Absence of accountability and conviction:** There is no face to the mob. This impunity encourages the crowd to adopt drastic measures. As a result, the role of the community and the state in preventing such crimes grows.
- **Vote-bank politics:** Sometimes, political mobilisation that uses violence as a tool of politics, support such elements in society..

- **Police failure:** Indifferent attitude of Police leads people to take law in their own hands. Also police delays and inability to catch the criminals lead to more such incidents. State should be more proactive in police reforms.
- **Social media menace:** Rise in penetration of Social media and its usage to spread rumours and hatred has exaggerated such incidents.
- **High Unemployment rates:** High unemployment leave millions of youth unengaged. These young brains are often misguided and brainwashed through various ideologies and agendas.
- **Against social peace:** These crimes impact solidarity of society and idea of Unity in diversity. This create an atmosphere of majority v/s minority. It could aggravate caste, class and communal hatred. Thus community and state need to work together to stop such crimes.

SC guidelines

- There shall be a **"separate offence"** for **lynching and the trial courts** must ordinarily award maximum sentence upon conviction of the accused person to set a stern example in cases of mob violence.
- The state governments will have to designate a **senior police officer in each district** for taking measures to prevent incidents of mob violence and lynching.
- The state governments need to **identify districts, sub-divisions and villages where instances of lynching and mob violence have been reported in the recent past.**
- The **nodal officers** shall bring to the notice of the DGP about any inter-district co-ordination issues for devising a strategy to tackle lynching and mob violence related issues.
- **Every police officer shall ensure to disperse the mob** that has a tendency to cause violence in the disguise of vigilantism or otherwise.
- Central and the state governments shall **broadcast on radio, television and other media platforms** about the serious consequences of mob lynching and mob violence.
- Despite the measures taken by the State Police, if it comes to the notice of the local police that an incident of lynching or mob violence has taken place, the jurisdictional police station shall immediately **lodge an FIR.**
- The State Governments shall prepare a **lynching/mob violence victim compensation scheme** in the light of the provisions of Section 357A of CrPC within one month from the date of this judgment.
- If a police officer or an officer of the district administration fails to fulfill his duty, it will be considered **an act of deliberate negligence.**

'SET UP FAST-TRACK COURTS'	
<ul style="list-style-type: none"> ➤ SC orders states to designate officer of SP rank as nodal officer in each district to prevent mob violence ➤ Centre, states to broadcast radio, TV and online messages warning that lynching and mob violence shall invite serious consequences ➤ FIR must against persons spreading such fake/irresponsible messages, videos 	<ul style="list-style-type: none"> ➤ Police, district admin's failure to comply with SC's directions will be deemed deliberate negligence ➤ States to draw up compensation scheme for lynching with provision for interim relief to victim(s)/next of kin within 30 days ➤ Lynching cases to be tried by fast-track courts in each district and preferably concluded in 6 months

Sociology of lynching cases

- The victims are always those living on the margins of the society.
- The cow-vigilantes are motivated by an urge to **impose hegemony of values and cultural homogeneity**, by obfuscating diverse practices and beliefs.
- They dare to defy the process of law, as their acts are powered by majoritarian sentiments.
- This is not an issue within the narrow confines of law and order; it plays out on a broader canvass of **socio-cultural dynamics.**
- It is the tussle between rule of law and belief-systems.
- It is the friction between the privileges of the mainstream and the struggles of survival by the marginalized.

Legal Framework

- Rajasthan and Manipur has made a law to curtail these hate crimes.

Basic features of the law

- Definition: It covers any act of violence, whether spontaneous or planned, by a mob on the grounds of religion, race, caste, sex, place of birth, language, dietary practices, sexual orientation, political affiliation or ethnicity. And two persons are enough to constitute a 'mob'.
- **Provisions:**
 - Compensation worth Rs. 5 Lakh to the victim

- Punishable with life imprisonment

Such type of laws should be made at Pan India level curbing the mob violence in the nub.

FOREST RIGHTS ACT

GS-II SOCIAL JUSTICE

Context

- The Forest Rights Act completed 15 years. This has been marred by myriad implementational issues between the Forest Department and various Tribal Rights Groups.

Forest Rights act

- The act recognises mainly two types of forest dwellers:
 1. Forest Dwelling Scheduled Tribe
 2. Other traditional forest dwellers.
- It gives these communities the right to cultivate the land maximum upto 4 hectare.

Aims of act

- Grants legal recognition to the rights of traditional forest dwelling communities, partially correcting the injustice caused by the forest laws.
- Makes a beginning towards giving communities and the public a voice in forest and wildlife conservation.

Types of Rights granted

1. Land Rights

- Forest dwellers gets the right maximum upto 4 hectares.
- The land cannot be sold or transferred to anyone except by inheritance.
- Those who are cultivating land but don't have document can claim up to 4 hectares, as long as they are cultivating the land themselves for a livelihood.

2. Use Rights

- Minor forest produce things like tendupatta, herbs, medicinal plants etc "that has been traditionally collected (see section 3(1) (c)). This does not include timber.
- Grazing grounds and water bodies
- Traditional areas of use by nomadic or pastoralist communities i.e. communities that move with their herds, as opposed to practicing settled agriculture.

3. Right to Protect and Conserve

- For the first time, this law also gives the community the right to protect and manage the forest.
- Section 3(1) (i) provide a right and a power to conserve community forest resources.
- Section 5 gives the community a general power to protect wildlife, forests, etc.

Procedure of Rights

- **The gram sabha (full village assembly, NOT the gram panchayat) makes a recommendation** – i.e who has been cultivating land for how long, which minor forest produce is collected, etc.
- **The gram sabha's recommendation goes through two stages of screening** committees at the taluka and district levels.
- **The district level committee makes the final decision.**
- At both the taluka and the district levels, any person who believes a claim is false can appeal to the Committees.
- One can't appeal beyond the district level committee.

Importance of these Rights

Checking the Wrongs on Forest Dwelling communities:

- The acts **looks to right the wrongs of government policies in both colonial and independent India toward forest-dwelling communities**, whose claims over their resources were taken away during 1850s.
- The **alienation of tribes was one of the factors behind the Naxal movement**, which affects states like Chhattisgarh, Odisha and Jharkhand. The act through identifying IFR and CFR tries to provide inclusion to tribes.
- The act will **ensure that people get to manage their forest on their own which will** regulate exploitation of forest resources by officials, forest governance and management as well as tribal rights etc.

Sustainable forest protection

- The act **also has potential of sustainably protecting forest through** traditional ways along with providing tribes means of livelihood.

Expansion of fifth and 6th Schedule:

- It expands the **mandate of the Fifth and the Sixth Schedules of the Constitution** that protect the claims of indigenous communities over tracts of land or forests they inhabit.

Better Forest Governance:

- It has the **potential to democratise forest governance by recognising community forest resource rights over an estimated 85.6 million acres**, thereby empowering over 200 million forest dwellers in over 1,70,000 villages.

Challenges

- The debate on the **issue of the act leading to even more encroachment of already troubled forest lands** has started.
- Though the act **tries to focus on the needs of the forest dwellers, it defeats the purpose when the eviction rate of families from these lands increases** as their claims on these lands are not accepted by the government.
- The role of the sub-divisional level committee is always questioned as they have been given the **important right to make a decision on the needs and claims of the marginal communities on the piece of forest lands**.

Unwillingness of the Forest department

- **Issues have arisen from the part of forest departments who have been seen unwilling to give their forest lands.** Role of forest department to let the forest dwellers sow in the forest the reap the benefits is criticized as tribes like Baigas have blamed the department to not support their claim over the land.

Lack of Capability among tribes

- The **tribes and communities also lack the capability to prove their occupancy over the forest land** and the law turns out to be weak to strengthen their claim.

Commercial Plantations in Degraded lands

- Government's **role of allowing commercial plantations in degraded land is also debated** and questioned as the degraded land makes 40% of forests.

Lack of Verifiable Data

- The studies conducted in Chhattisgarh revealed that during various instances, the plots claimed and the awards given do not match.

Information Asymmetry

- The Tribals majorly received lesser rights than claimed due to the fact that they believed if they claimed their right, they may lose the smaller claim as well. This information asymmetry had led to the further alienation of the tribal persons from the mainstream.

Failure of Last Mile Connectivity of Schemes

- Various developmental schemes for rural development such as Deendayal Upadhyaya Gram Jyoti Yojana, Janani Shishu Suraksha Karyakram, etc. have not been able to empower the vulnerable sections and failed to allow for the assertion of political space.

Lack of Quality Land

- The land allotted to the Tribal persons is mostly small, of poor quality and not very fertile. The lack of irrigation facilities and labour-wage economy further destroy their productivity and profitability. The declining industry of local cigars in Chhattisgarh is a prime example of the same.

Supreme Court order on Forest rights implementation

- Court has ordered the eviction of lakhs belonging to the Scheduled Tribes (STs) and Other Traditional Forest Dwellers (OTFDs) categories across 16 States, whose claim as forest-dwellers has been rejected under the Forest Rights Act.
- It ordered the Forest Survey of India (FSI) to make a satellite survey and place on record the "encroachment positions."

Way Forward**Working with Communities**

- Awarding of the community rights must be increased to ensure well being of the forest.
- Forest department must work in collusion with the tribals in seeking the sustainable development than acting as bureaucratic department.

Innovative Techniques

- The techniques of horticulture must be provided to the tribals so that they may increase their productivity and afford a better quality of life.

Involvement of Civil Society

- Various organizations such as in Dang, Gujarat allowed for the hand-holding of the beneficiaries at every step.

Kerala Model

- The promotion of eco-tourism and medico-tourism to safeguard the interests of the tribals is another positive step. Also providing skill-based education with assured jobs on a large scale in proportion to the demand would do wonders in these

areas.

HEALTH INDEX

GS-II SOCIAL JUSTICE

Context

- The 'Annual Health Index' that the NITI Aayog released recently had an unsurprising headline: Kerala topped the charts.
- Uttar Pradesh had registered the highest incremental change relative to past performance, among 'larger states'.

About the Index

- The NITI Aayog calculated the health indices for the reference year 2019-2020 against the base year of 2018-2019.
- The index is a composite score for each state out of 100.

Parameters

- The Health Index score is prepared based on the States' performance across a large set of indicators that are divided into three broad domains – health outcomes, governance and information, and key inputs and processes.
- Health outcomes, for instance, include parameters such as neonatal mortality rate, under-5 mortality rate and sex ratio at birth.
- Governance includes institutional deliveries, average occupancy of senior officers in key posts earmarked for health.

Significance

Cooperative and Competitive Federalism

- Health Index has been developed as a tool to leverage co-operative and competitive federalism to accelerate the pace of achieving health outcomes.

Focus on Health outcomes

- It would also serve as an instrument for "nudging" States & Union Territories (UTs) and the Central Ministries to a much greater focus on output and outcome-based measurement of annual performance than is currently the practice.

Achieve the SDG

- With the annual publication of the Index and its availability on public domain on a dynamic basis, it is expected to keep every stakeholder alert to the achievement of Sustainable Development Goals (SDGs) Goal number 3.

Challenges

Issue with Grouping

- The problem is that the demographic and epidemiological realities of the 'larger' states are not uniform. For example, both states at the top and the bottom of the ranking – Kerala and Uttar Pradesh – are 'larger'.

Issue with Indicators

- Most indicators in the 'health outcomes' domain were concerned with states' performance on maternal and child health, and to some extent about tuberculosis and AIDS. But **the domain didn't capture states' performance against non-communicable diseases (NCDs)**.
- According to the **National Health Portal, 5.8 million people die of heart and lung diseases, stroke, cancer and diabetes – all NCDs – every year in India**. So this is a major oversight.

Incremental Development

- For a state like Kerala, which has already achieved a **lot in maternal and child health indicators, there is not as much scope to improve**.
- With Uttar Pradesh, the **baseline is low, hence, the scope of incremental change** is the highest.

Way Forward

- The exercise done by NITI Aayog is important and should be continued, But, it needs to be more [reflective] of the health realities.
- Re-categorise the states as per their common health needs, and don't be obsessed about giving overall scores, but rather have indicator-wise ranking.
- Relying on Health Management Information System data is lazy – do some state level studies to give the index some meaning.

SCORECARD			
Top 5			
Rank	2018-19*	2019-20*	
1	Kerala	Kerala	
2	Andhra Pradesh	Tamil Nadu	
3	Tamil Nadu	Telangana	
4	Himachal Pradesh	Andhra Pradesh	
5	Maharashtra	Maharashtra	
Bottom 4**			
Rank	2018-19*	2019-20*	
1	UP	UP	
2	Bihar	Bihar	
3	MP	MP	
4	Jharkhand	Rajasthan	
*According to Reference Year			
**In ascending order (Lowest first)			
Source: NITI Aayog Fourth Health Index			

INTER STATE WATER DISPUTE

GS-II SOCIAL JUSTICE

Context

- Telangana and Andhra Pradesh submitted in the Supreme Court that there is no information forthcoming from Karnataka for the past 14 years about how much Krishna river water it has diverted.

Argument by Telangana

- The state wants the central government to start again the tribunal proceeding afresh as it was not party to the earlier KWDT1 and KWDT2 adjudications.
- Karnataka and Maharashtra are opposing the tribunal proceeding afresh and state that the extension of the tribunal period is only for resolving the water disputes between Andhra Pradesh and Telangana states
- The extended KWDT2 decided to confine redistribution of water between Telangana and Andhra Pradesh states only.

Argument by Karnataka

- Lack of Publication:** Karnataka has argued that its dam and irrigation projects worth thousands of crores to provide water to its parched northern areas have been stalled for all these years because of the 2011 order of the Supreme Court to not publish the KWDT decisions in the Official Gazette under Section 6(1) of the Inter-State Water Disputes Act of 1956.
- the dispute raised by Andhra Pradesh and Telangana was between them and did not concern it.

Krishna Water Tribunal Award

- The KWDT II had allocated 166 TMC along with 7 TMC of minimum flow to Karnataka. Seven districts of the command area are severely drought prone. Four of the seven — Kalaburgi, Yadgir, Raichur and Koppal — are recognised as backward areas.
- The State said the decision of the KWDT was enforceable only till 2050, after which it has to reviewed or revised. Ten years have already lapsed in litigation since 2010.
- Karnataka required at least 10 years to complete several irrigation projects whose costs were pegged at ₹60,000 crore in 2014-15.
- The costs would escalate annually by 10% to 15%. Even if the irrigation projects are completed in 10 years, the Central Water Commission clearances would take time.

About Krishna Water Tribunal

- Government of India constituted a common tribunal on 10 April 1969 to adjudicate the river water utilization disputes among the river basin states of Krishna and Godavari rivers under the provisions of Interstate River Water Disputes Act – 1956.
- The KWDT in its award outlined the exact share of each state. The award contended based on 75% dependability that the total quantum of water available for distribution was 2060TMC. This was divided between the three states in the following manner.

Maharashtra	560 TMC
Karnataka	700 TMC
Telangana & Andhra Pradesh	800 TMC

- The KWDT-1 provided for a review of its award after 31 May 2000. However no such review was taken up for more than 3 years after that.
- In April 2004, the second KWDT, was constituted by the Government of India following requests by all three states.
- The second Krishna Water Dispute Tribunal gave its draft verdict on 31 December 2010.[10] The allocation of available water was done according to 65% dependability, considering the records of flow of water for past 47 years. According to KWDT II, Andhra Pradesh got 1001 TMC of water, Karnataka 911 TMC and Maharashtra 666 TMC. Next review of water allocations will be after the year 2050.

Constitutional Approach for Inter-state River water dispute

- Entry 17 of State List deals with water i.e. water supply, irrigation, canal, drainage, embankments, water storage and water power.
- Entry 56 of Union List empowers the Union Government for the regulation and development of inter-state rivers and river valleys to the extent declared by Parliament to be expedient in the public interest.

According to Article 262, in case of disputes relating to waters

- Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-State river or river valley.
- Parliament may, by law provide that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of any such dispute or complaint as mentioned above.

Parliament has enacted two laws according to Article 262

- River Board Act, 1956: The objective of Boards is to advise on the inter-state basin to prepare development scheme and to prevent the emergence of conflicts. Till date, no river board as per above Act has been created.
- Inter-State Water Dispute Act, 1956:
 - In case, if a particular state or states approach to Union Government for the constitution of the tribunal:
 - Central Government should try to resolve the matter by consultation among the aggrieved states.
 - In case, if it does not work, then it may constitute the tribunal.

LIST OF EXISTING WATER DISPUTE TRIBUNALS		
No	Name of Tribunal	States concerned
1.	Godavari Water Disputes Tribunal	Maharashtra, Andhra Pradesh, Karnataka, Madhya Pradesh & Odisha
2.	Krishna Water Disputes Tribunal -I	Maharashtra, Andhra Pradesh, Karnataka,
3.	Narmada Water Disputes Tribunal	Rajasthan, Madhya Pradesh, Gujarat and Maharashtra
4.	Ravi & Beas Water Tribunal	Punjab, Haryana and Rajasthan
5.	Cauvery Water Disputes Tribunal	Kerala, Karnataka, Tamil Nadu and Puducherry
6.	Krishna Water Disputes Tribunal -II	Karnataka, Telangana, Andhra Pradesh and Maharashtra
7.	Vansadhara Water Disputes Tribunal	Andhra Pradesh & Odisha
8.	Mahadayi Water Disputes Tribunal	Goa, Karnataka and Maharashtra

Need to amend 1956 Act

- There are dozens of tribunals for inter state water dispute resolution. It makes the process unwieldy and delayed.
- There are time delays from 6 years to 20 years in awarding the verdict.
- Low acceptance of the awards by the state: Only three out of eight awards have been accepted.
- There are tribunals for last 30 years like Cauvery tribunal, Ravi tribunal and hasn't given any verdict.
- There has been delay in constituting the tribunals. It took nine years to constitute the Narmada tribunal.
- The River Boards Act 1956, which is supposed to facilitate inter-state collaboration over water resource development, remained a 'dead letter' since its enactment.
- There was no clarity in the tenure of tribunal members.
- Generally tribunals members were not specialist in areas.
- Tribunals didn't go forward in water management and focus on developing a water database.
- Tribunals were created when State approached the center and centre approved creation of tribunals.

Provisions of the Inter-State River Dispute (Amendment) Act: 2019

- A dispute between two states will first go to a dispute resolution committee. In case of its failure, dispute will go to the permanent tribunal.
- A single Tribunal with different benches for all the river disputes.
- Maximum duration for a tribunal award is 6 years. 1.5 years are for dispute resolution committee and 4.5 years are for tribunals hearing and verdict.
- Tribunals member tenure will be of 5 years or 70 years of age.
- Tribunal will consist domain experts.
- Tribunal decisions are binding and have authority of Supreme court order.

EWS QUOTA

GS-II SOCIAL JUSTICE

Context

- The Ministry of Social Justice and Empowerment appointed a three-member committee to revisit the criteria for 10% reservation for economically weaker sections (EWS) in educational institutions and government jobs.




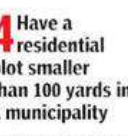

Need of the Committee

- The Supreme Court has observed that the the Centre cannot "pull out of thin air" the ₹8 lakh annual income limit to identify economically weaker section for providing 10% quota .
- It questioned if the attempt was to "make unequals as equals".
- The apex court is hearing petitions challenging the government notice issued in July which provides for 10% EWS quota in NEET admissions.

About EWS Quota

- The Constitution (103rd Amendment) Act provides for 10% reservation in government jobs and educational institutions for the economically weaker section in the unreserved category.
- The Act amends Article 15 and 16 to provide for reservation based on economic backwardness.

YOU ARE ELIGIBLE FOR THE 10% RESERVATION IF YOU:

 <p>1 Have household income of less than ₹8 lakh a year At least 95% (127 crore)</p>	 <p>2 Have agricultural land of less than 5 acres 86% land holdings in India fall under this category</p>	 <p>3 Have a house smaller than 1,000 square feet At least 80% of households in India have houses smaller than 1,000 sq. ft.</p>	 <p>4 Have a residential plot smaller than 100 yards in a municipality Data not available</p>	 <p>5 A residential plot of less than 200 yards in a non-notified municipality NA</p>
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More about EWS quota

- It is in addition to 50% reservation already provided to SC, ST and OBC communities.
- Declaration of EWS is based on fulfilling of following criteria:
 - Income should be less than 8 Lakh per annum.
 - One should not have more than 5 acre farm land.
 - Home size should be less than 1000 sq. feet.

Positives of EWS reservation


- It provides legitimacy to already existing reservation. Now, universities won't be segregated between merit candidates and reserved communities.
- It is secular in nature and includes all religions: Muslims, Christians
- Economic justice is the philosophy behind it. In an increasing economic society, class becomes a tool of oppression.
- It address contemporary reservation movements like Jats reservation, Patel reservation.

Concerns/drawbacks of EWS reservation

- It violates Indira Swahney judgment of Supreme court which applied 50% cap on the reservation.
- Social justice has been the philosophy behind reservation. Upper caste are at the top of caste pyramid and doesn't require any reservation.
- It is not based on any scientific data. A survey of 450 educational institutions had found 28% students belonging to EWS section.
- The reservation doesn't make any sense when jobs are on the rise in private sector. Public sector is already declining and not creating many jobs.
- This reservation move can be abused by changing the economic status by selling property or showing lower income.

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INDIA AND AFGHANISTAN

GS-II INTERNATIONAL RELATIONS

Context

- Several countries including the United Arab Emirates, Germany, Japan and the European Union begin to discuss the possibility of **re-staffing embassies in Kabul**.
- New Delhi is also considering its options on its presence in Afghanistan.

Does it mean recognizing the Taliban regime?

- Recognition for the Taliban is still “far away” and establishing a presence in Afghanistan has nothing to do with recognition.
- It means to have people on the ground for dealing with the new regime.

India and Afghanistan bilateral relations

Why relations with Afghanistan matters?

Geostrategic and geopolitical location

- Afghanistan has been a **key player in Asian geopolitics** owing to its geostrategic and geopolitical location.
- Being situated at the **crossroads of the Middle East, Central Asia and the Indian subcontinent**, it has been a transit and transport hub since the **ancient Silk route**.
- It has borders with six other nations including **Iran, Pakistan, China, Turkmenistan** have made it a **hot-bed for conflict and cooperation**.

Regional organisation

- It is also perhaps the **only SAARC nation whose people have much affection for India**.
- After a break between 1996 and 2001, when India joined the world in shunning the previous Taliban regime, one way New Delhi re-established ties with the country was to pour in development assistance.

Historical background

- India and Afghanistan have a strong relationship based on historical and cultural links.
- The relationship has its foundations in the historical contacts and exchanges between the people.
- In recent past, India-Afghanistan relations have been further strengthened by the **Strategic Partnership Agreement**, which was signed between the two countries in October 2011.

Strategic Partnership Agreement (SPA)

- The Strategic Partnership Agreement (SPA) between the two sides, provides for **assistance to help rebuild Afghanistan's infrastructure and institutions, education and technical assistance to re-build indigenous Afghan capacity** in different areas, encouraging investment in Afghanistan's natural resources, **providing duty free access to the Indian market for Afghanistan's exports** support for an Afghan-led, Afghan-owned, broad-based and inclusive process of peace and reconciliation, and advocating the need for a **sustained and long-term commitment to Afghanistan** by the international community.

Political relations

High Level Visits

- Prime Minister of India visited Herat in 2016 and inaugurated the **Afghan-India Friendship Dam**, earlier known as **Salma Dam**.
- Prime Minister along with a high level delegation inaugurated the newly built **Afghan Parliament** and gifted four **Mi-25 Attack helicopters** to the Afghan Air Force in 2016.
- President Ghani paid a working visit to India in 2018 and expressed satisfaction at the increase in **bilateral trade that had crossed the US \$ 1 billion mark**.
- India agreed to implement important new projects such as the
 - Shahtoot Dam and drinking water project for Kabul** that would also facilitate irrigation; **water supply for Charikar City**; **road connectivity to Band-e-Amir in Bamyan Province** that would promote tourism;
 - low cost housing for returning Afghan refugees in Nangarhar Province** to assist in their resettlement;
 - a gypsum board manufacturing plant in Kabul** to promote value added local industry development and **import substitution**;
 - a polyclinic in Mazar-e-Sharif** among others.
- In addition, India also committed to take up additional **116 High Impact Community Development Projects** in 34 provinces of Afghanistan.

Commercial Relations

- India has been a **natural trading partner for Afghanistan** and is the **largest market in South Asia** for its products.
- The total bilateral trade between India and Afghanistan for CY 2019-20 was at **US\$ 1.5 billion**.
- Difficulties in transit via Pakistan was a major hurdle in expanding the trade ties.
- In order to expand trade to India, the Afghan government in collaboration with Government of India launched a **dedicated Air Freight Corridor** on 19 June 2017.
- Operationalization of the Chabahar Port in December 2017, followed by commercial agreement to manage port operations in February 2018, clearly demonstrate the feasibility of Chabahar Port as a transit point for Afghanistan and eventually to Central Asia.

Afghanistan-India Culture Relations

- There have been several exchanges of artistes and music troupes over the past few years.
- In addition to the above people to people exchanges, the two Governments came together to establish an **India- Afghanistan Foundation (IAF)** in 2007.
- IAF is a trust fund, which finances projects aimed at fostering India-Afghanistan relations through enhancement of economic, scientific, educational, technical as well as cultural cooperation.

Sports Cooperation

- India and Afghanistan have robust relations in the field of sports.
- Since 2011, Afghanistan Under-14 & Under-17 Boys' and Under-17 Girls' **football** teams have been participating in the Subroto Cup International Tournament organised every year by the India Air Force.
- **Cricket** has been a major factor in promoting people-to-people ties between the two countries. Afghanistan Cricket Board (ACB) has been allotted three cricket home grounds in India (Noida, Dehradun and Lucknow).
- India is also involved in **construction cricket stadiums** and grounds in various provinces of Afghanistan.

High Impact Community Development Projects (HICDP)

- Since 2005, India and Afghanistan have partnered in the area of community development through the HICDP program.
- Under this scheme, US\$ 120 mn has been committed till date to various small to medium scale projects in areas such as education, health, water management, government buildings, sport facilities, agriculture and irrigation, etc.
- Around 433 High Impact Community Development Projects have been completed with Indian financial support in all 34 provinces of Afghanistan so far and around 110 projects are ongoing in various provinces of Afghanistan.
- During FY 2019-20, 37 projects were completed in various provinces of Afghanistan under the High Impact Community Development Project (HICDP) scheme of Government of India.

Human Resource Development and Capacity Building

- Human resource development and capacity building initiatives constitute an important segment of India's assistance in Afghanistan.
- On an average, more than **3,500 Afghan nationals undergo training/education in India every year**.
- More than 15,000 Afghan students pursue education in India on self-financing basis.
- India's assistance in human resource development has helped to create a large pool of trained manpower that has been an asset to both the public and private sectors in Afghanistan.

Humanitarian Assistance

- Major humanitarian assistance by India to Afghanistan in recent years include the following:
- To combat the global pandemic of COVID-19 and related issues of food security, India is committed to **deliver 75,000 MT of Wheat to Afghanistan** in 2020.
- In addition, India has also undertaken supply of **5 lakh tablets of Hydroxy-chloroquine**, 1 Lakh tablets of Paracetamol and 50,000 pairs of surgical gloves to Government of Afghanistan in 2020.
- To promote food security, particularly children during the times of drought, India has distributed 2000 tonnes of pulses to Afghanistan in 2018.
- A **Medical Diagnostic Centre** in Kabul was set up in 2015. The Centre provides latest diagnostic facilities to children of Afghanistan thereby generating goodwill for India.

Indian Diaspora in Afghanistan

- Presently, there are estimated to be about **1710 Indians in the country**.
- Most of the Indians in Afghanistan are engaged as professionals in Banks, IT firms, construction companies, hospitals, NGOs, telecom companies, security companies, universities, Govt. of India sponsored projects, Govt. of Afghanistan and UN


Missions.

India-Afghan Relations after Taliban Takeover

- India follows '**zero-tolerance policy**' towards terrorism.
- India propagate an **Afghan-led, Afghan-controlled and Afghan-owned Inclusive Peace Process**.
- India seeks a bigger role of United Nations in the Afghan peace process.
- India criticizes the role of Pakistan in promoting terror groups and for installing the Taliban regime in Afghanistan.

WHAT IS AT STAKE?

- The Zaranj-Delaram Highway project, estimated to cost US\$134 million, is possibly the most important for both India and Afghanistan
- Power transmission lines from the Uzbek border to Kabul over the Hindu Kush mountains. The lines are operated by the multi-country, multi-agency North East Power System (NEPS)



Salma Dam, now called the **Afghan-India Friendship Dam**, on the Hari Rud that produces 42 MW of power and irrigates 75,000 hectares of land

FOUR-PRONGED PLAN ON SRI LANKA CRISIS

GS-II INTERNATIONAL RELATIONS

Context

- India and Sri Lanka agreed to a four-pronged approach to **discuss initiatives on food and energy security to help mitigate Sri Lanka's economic crisis**.

Four-pillar initiative

- It comprising **lines of credit for food, medicines and fuel purchases granted by India**.
- A **currency swap agreement** to deal with Sri Lanka's **balance of payment issues**
- An "early" **modernisation project** of the Trinco oil farms that India has been pursuing for several years, and
- A Sri Lankan commitment to **facilitate Indian investments in various sectors**.

India-Sri Lanka bilateral relations

Background

- The relationship between India and Sri Lanka is **more than 2,500 years old**
- Both countries have a legacy of intellectual, ethnic, cultural, religious and linguistic interaction
- In recent years, bilateral relations and cooperation in the fields of development, trade, investment, education, culture and defence have grown.

Significance of Sri Lanka for India

- Sri Lanka is India's closest maritime neighbour and is strategically located in Indian Ocean and Bay of Bengal.
- As per its '**Neighbourhood-First Policy**' and the '**SAGAR (Security and Growth for All in the Region) Doctrine**', India attaches great importance to Sri Lanka "to keep the Indian Ocean region peaceful and secure".
- 70% of Indian cargo comes through the Colombo port, which is a largest trans-shipment port of South-Asia.

Bilateral Relations

Political Relations

- Historically, Sri Lanka was part of British India and since independence both countries had cordial relations.
- Unpleasantness in bilateral relations raised in 1983, when the Anti-Tamil violence in Sri Lanka dragged India into Tamil-Sinhalese Conflicts.
- With an objective of improving ties, **Indo-Sri Lanka Peace Accord or Rajiv Gandhi-Jayewardene Accord** was signed in 1987, which proposed a political solution to ongoing ethnic conflict by establishing a provincial council system and devolution of

power to the nine provinces in Sri Lanka. (Popularly known as **13th Amendment** to the Sri Lankan Constitution)

- India also deployed Indian Peace Keeping Force (IPKF) in Sri Lanka under Operation Pawan. After two year of military engagement IPKF was withdrawn as it failed to curb the Liberation Tigers of Tamil Eelam (LTTE) separatist movement.
- In May 1991, former Prime Minister Rajiv Gandhi was assassinated and it forced New Delhi to adopt a “**hands-off approach**” towards Colombo till the final phase of the civil war.
- Finally in May 2009, after 25 years of violence the Tamil militant separatism ended and India came forward to reconstruct the war-torn areas and to rehabilitate war-affected people.
- Although pro-LTTE government in Tamil Nadu posed obstruction in extending humanitarian assistance to Sri Lanka
- India-Sri Lanka relations hit a new rock bottom when in 2009, 2012 and 2013 India voted against Sri Lanka at UNHRC resolution to investigate human right violations and war crimes by state government against Tamil rebels.
- Since 2014, Political relations between the two countries have been marked by high-level exchanges of visits at regular intervals
- Prime Minister Ranil Wickremesinghe visited India in September 2015, his first overseas visit after being appointed as Prime Minister.
- In 2019, Prime Minister Narendra Modi made first foreign visit to Sri Lanka after his sweeping victory in the general election. He was also the first foreign leader to visit Colombo after the heinous Easter Sunday terror attacks.

Commercial Relations

- India is one of the largest investors in Sri Lanka with cumulative investments of around USD 1.2 billion.
- Sri Lanka is one of India's largest trading partners in SAARC. Trade between the two countries grew rapidly after **India-Sri Lanka Free Trade Agreement 2000**.
- Indian Chambers have signed MOU's with Sri Lankan Chambers to promote trade, economic relations and investments.

Development Cooperation

- Sri Lanka is a major recipient of development assistance from the Government of India. India's overall commitment stands close to US\$ 3 billion, out of which around US\$ 560 million are purely in grants.
- **Indian Housing Project**, commitment to build 50,000 houses for the war affected as well as the estate workers in the plantation areas. In 2017, PM signed an agreement to commence construction of 10,000 additional houses.
- The aid package includes funding for electricity power projects and north-south railway development.
- India continues to assist in a large number of **High Impact Community Development Projects** in areas of education, ambulance services all over the island, small and medium enterprise development and training
- An auditorium named after Rabindranath Tagore in Ruhuna University, Matara was constructed and handed over by India.
- India announced a new **US\$ 100 million Line of Credit** for undertaking solar projects in Sri Lanka during the Founding Conference of the International Solar Alliance.
- Indian government has agreed to cooperate with Sri Lanka in developing world-class road infrastructure in the Jaffna region of the island nation.
- India has been offered a lease on the Mattala Rajapaksa International Airport, 220 kilometres from Colombo.

Defence and security Cooperation

- To enhance regional security both countries cooperates in both traditional (Terrorism) and non-traditional security issues (human trafficking and drug smuggling).
- Capacity building and training of armed forces and police personnel of Sri Lanka has been the core area of cooperation between the two countries.
- Since 2012, India participates in **Indo-Sri Lankan Defence Dialogue**, this platform helps to review the security and defence cooperation issues between the two countries.
- To ensure maritime security
 - India-Sri Lanka conduct ‘**SLINEX**’ a joint naval exercise
 - India, Sri Lanka and Maldives conduct “**DOSTI**” a trilateral naval exercise
- India and Sri Lanka hold annual joint military drill ‘**Mitra Shakti**’ to boost counter-terror cooperation

Cultural relations

- **Cultural Cooperation Agreement** signed in 1977 forms the basis for periodic Cultural Exchange Programmes between the two countries.
- **Indian Cultural Centre in Colombo** actively promotes awareness of Indian culture by offering classes in Indian music, dance, Hindi. It also organises International yoga day event annually.
- India-Sri Lanka Foundation was set up to enhance scientific, technical, educational and cultural cooperation through civil society exchanges
- Both countries jointly commemorated 2600th year of the attainment of Lord Buddha Enlightenment, 150th anniversary of Anagarika, 150th Birth Anniversary Celebrations of Mahatma Gandhi and 550th Birth Anniversary of Sri Guru Nanak Dev Ji.

People to people contact

- To strengthen people-to-people ties, the first ever pilgrimage to Bodh Gaya for Sri Lankan Armed Forces personnel and their families was organised in 2018.
- Government of India formally launched the **e-Tourist Visa (eTV) scheme** for Sri Lankan tourists
- India is the top source for tourist influx into Sri Lanka with over 4 lakh Indian tourists travelled to Sri Lanka in 2018.

Human resource development

- Under the **Indian Technical and Economic Cooperation Scheme and the Colombo Plan**, India offers short and medium term training courses in technical and professional disciplines.
- From the academic session 2017-18, Sri Lankan students were allowed to appear for National Eligibility cum Entrance Test (NEET) and IIT JEE (Advanced) entrance examinations.

Indian Community

- The People of Indian Origin (PIOs) comprise Sindhis, Borahs, Gujaratis, Memons, Parsis, Malayalis, Telugu speaking person and Indian Origin Tamils (IOTs) form a significant portion of Sri Lanka population.

Issue of Convergence

- Both countries share a broad understanding on major global issues of international interest. This includes terrorism, climate change, human trafficking, arms smuggling, disaster management, biodiversity conservation, marine security etc.
- **Buddhism and democracy** is still the connecting link between India-Sri Lanka.
- India needs Sri Lanka support for getting **UNSC permanent member seat**.
- Indo-Lanka cooperation is must to revive the declining regional organisations like **SAARC, BIMSTEC, and Indian Ocean Rim Association (IORA)** etc.

Issue of Concern

- **Pro-China tilt**
 - Sri Lanka is a member of **China's Belt and Road Initiative (BRI)**
 - China is developing **Colombo Port City and the Hambantota port**, which are slated to play an important role in the BRI.
 - Hambantota port has been handed over to China on a 99-year lease in a controversial \$1.2 billion debt for equity swap.
 - According to the 2018 annual report of the Central Bank of Sri Lanka, imports from China accounted for 18.5%, just a little less than the 19% from India.
- **Fishermen issue**
 - In 1974, India ceded **Katchatheevu**, an uninhabited island to Sri Lanka and delimits the maritime boundary in the Palk Bay through "**Kachchateevu island pact**" but Tamil Nadu claimed that this island falls under Indian Territory and traditional fishermen have right to fish there.
 - In 1976, both the countries have mutually entered into agreement to decide the **International Maritime Boundary Line (IMBL)** and to delimit boundaries in Gulf of Mannar and Bay of Bengal in accordance with the international rules.
 - However, fishermen from both sides have difference on IMBL restriction and traditional fishing grounds.
 - Indian fishermen are accused of fishing deep into Lankan water and using big mechanised trawlers that is affecting both economy and ecology of Sri Lanka.
 - Incidents of fishermen facing arrest, boats and trawlers seizure and attack by respective state Navy are hurting the Indo-Lanka relations.
- **Delays in projects** proposed by India for e.g. not much is known about the status of a project to renovate Kankesanthurai harbour in Northern Province and little progress has been made in developing the Palaly airport.
- After civil war interventions, Sri Lanka governments **view "big brother" India** with suspicion. India's hand has been suspected in the political machinations that led to the exit of former pro-China President Mahindra Rajapaksa.
- India urges devolution of powers based on the 13th amendment while Sri Lankan government favours a homegrown solution.
- Indian insistence on going ahead with an **Economic and Technical Cooperation Agreement (ETCA)** by replacing the aborted Comprehensive Economic Partnership Agreement (CEPA) is also turned down by Sri Lanka.

Way Ahead

- Indian government should refrain from interfering even indirectly in Sri Lankan internal political affairs
- Indian government should urge Sri Lanka to focus on plight of war affected Tamils. As the Sri Lankan government is backtracking on its commitments to displaced Tamils using the recent terror attacks as an excuse
- India should invest more in generating livelihoods for war-affected areas where only agriculture and fisheries are key drivers.
- India must negotiate with Lankan leader to get approvals for all pending projects
- Ferry services between Talaimannar and Rameswaram should be resumed at the earliest. New ferry services can be set up for connecting Kankesanthurai port in Jaffna with Karaikal and Colombo with Tuticorin to increase trade, tourism and people-to-people connections.

INDIA AND AUSTRALIA FTA

GS-II INTERNATIONAL RELATIONS

Context

- India and Australia are expected to complete negotiations for an interim free trade agreement (FTA), which is officially dubbed as the **Comprehensive Economic Cooperation Agreement (CECA)** by the end of 2022.
- A similar agreement with the **UAE** is likely to be signed in **March 2022**.

About Comprehensive Economic Cooperation Agreement

- It is aimed at **boosting economic ties between the two countries**.
- The pact covers areas such as **goods, services, investment, rules of origin, customs facilitation, legal and institutional issues**.
- It is expected to increase bilateral trade in goods to \$100 billion within five years.

India-Australia relations

Historical background

- Before independence, Australia and India were **both part of the British Empire**.
- They also share political, economic, security, lingual and sporting ties.
- As a result of British colonisation, **cricket** has emerged as a strong cultural connection between the two nations, as well as the English language.
- Australia has traditionally **supported India's position on Arunachal Pradesh**, which is subject to diplomatic disputes between India and the People's Republic of China.
- Principle and pragmatism** have been the two pillars on which the two countries have built their partnership.



Areas of cooperation

- Besides both being members of the **Commonwealth of Nations**, both nations are founding members of the **United Nations**, and members of regional organisations including the **Indian Ocean Rim Association for Regional Cooperation** and **ASEAN Regional forum**.
- India and Australia have a lot in common, as both are **Westminster-style secular, multicultural democracies**.
- The Australian foreign policy blueprint sees healthy relations with India must for **stability and openness of the Indian Ocean**.
- Both the countries have common interests in upholding international law, especially in relation to freedom of navigation and maritime security.
- Australia's is part of **Quadrilateral Security Dialogue (Quad)** which is a outcome-oriented cooperation for building capacity and improving interoperability in the Indo-Pacific region.
- India's and Australis share the same vision "**free and open Indo-Pacific**" with a rules-based order and open market economies, along with the freedom of navigation in high seas and overflight.
- Both countries share the same concern about China's expansionist behavior, whether in the South China Sea or along China's land border, especially the ongoing India-China border standoff.

Security cooperation

- In June 2020, India and Australia had elevated their relationship to a '**Comprehensive Strategic Partnership**'.
- They hold the "**Two-Plus-Two**" **dialogue** meets to discuss vital security issues.
- India and Australia signed **Mutual Logistics Support Agreement** to allows each country to use the other's bases for the refuelling and maintenance of aircraft and naval vessels
- Military cooperation between Australia and India includes the regular joint exercise **AUSTRA HIND** (a Special Forces Army Exercise), **AUSINDEX** (a bilateral maritime exercise), **KAKADU** (a multilateral maritime exercise), and **Exercise Pitch Black** (a multilateral air exercise).
- Recently, Australia joined the **Malabar exercise**, which also include the United States and Japan.

Nuclear cooperation

- In 2012, Australian government decided to sell uranium to India despite India not being a signatory to the **nuclear Non Proliferation Treaty**.

- Canberra's overturning of a ban on uranium sales to India was seen as a removal of a diplomatic thorn between the two nations, potentially opening up a new and growing market for Australian suppliers.

The Treaty on the Non-Proliferation of Nuclear Weapons or Non-Proliferation Treaty

- It is an international treaty whose objective is **to prevent the spread of nuclear weapons and weapons technology**, to promote cooperation in the peaceful uses of nuclear energy, and to further the goal of achieving nuclear disarmament and general and complete disarmament.
- **India, Israel, Pakistan and South Sudan**, has not joined it.

People-to-people ties

- Growing people-to-people ties, including an increasing Indian diaspora in Australia as well as Indian students choosing Australia for higher education, tourism, sports etc,
- There are already more than 100,000 Indian students who are studying in Australia, more than two-thirds of whom are pursuing higher education.

Economic relations

- India was Australia's first major trading partner with imports through the East India Company, exports from Australia to India dates back to the late 18th century, when coal from Sydney and horses from New South Wales were exported to India.
- Trade is **highly skewed towards Australia**.
- India is Australia's **fifth largest trade partner**, with trade in goods and services worth A\$29 billion, representing 3.6 percent of the total Australian trade in 2017-18.
- Australia mainly exports Coal, services (mainly education), vegetables for consumer consumption, gold, copper ores and concentrates, while India's chief exports are refined petroleum, services (professional services such as outsourcing), medicaments, pearls, gems and jewelry.
- India and Australia have established a **\$100 million Strategic Research Fund**.

Way Forward

- Australia and India should negotiate to revive the **Comprehensive Economic Cooperation Agreement (CECA)** to improve trade and market access.
- There is need to address the gaps in the educational cooperation between India and Australia and associated issues of attack on Indian students.
- There is also a need to promote and popularize the New Colombo Plan of Australia, which encourages Australian undergraduate students to study in Indo-Pacific countries in general and India in particular.

INDIA-BHUTAN RELATIONS

GS-II INTERNATIONAL RELATIONS

Context

- Bhutan confers its highest civilian award on PM Narendra Modi.
- Bhutan highlighted the 'unconditional friendship' that India had extended over the years, particularly during the Covid-19 pandemic
- Bhutan was, the first country to receive Covid-19 vaccines, manufactured by the Serum Institute of India (SII) from India as a gift.

Overview of indo-Bhutan relations

- **Diplomatic relations** between India and Bhutan were established in 1968 with the establishment of a special office of India in Thimphu.
- **Buddhist links:** Common Buddhist links provide long term support to India-Bhutan diplomatic relation and for the regional order.
- The basic framework of India- Bhutan bilateral relations was laid in the **Treaty of Friendship and Cooperation signed in 1949** between the two countries, which was revised in February 2007.
- Government of India has consistently supported the socio-economic development of Bhutan. India has been extending economic assistance to Bhutan's socio-economic development since the early 1960s when Bhutan launched its Five Year Plans.
- India continues to be the principal development partner of Bhutan. For the 12th Five Year Plan, India's contribution of Rs. 4500 cr. will constitute 73% of Bhutan's total external grant component.

INDIA-BHUTAN DIPLOMATIC RELATIONS

- India opened an office of a Special Representative in Thimphu in 1968, Bhutan reciprocated in 1971.
- The two offices of special representatives were upgraded to full-fledged embassies in 1978.
- India and Bhutan are founding members of the South Asian Association for Regional Cooperation (SAARC) that deals with the economic, social, and cultural development of the South Asian Region.
- Both of them also share other multilateral forums such as BBIN (Bangladesh, Bhutan, India, and Nepal), BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation).

- **Areas of Assistance:** The key areas of focus of GOI's assistance include agriculture and irrigation development, ICT, health, industrial development, road transport, energy, civil aviation, urban development, human resource development, capacity building, scholarship, education and culture.
- **Hydropower diplomacy:** Hydro-power cooperation between the two countries is an example of win-win cooperation. For Bhutan, hydro-power development continues to be a vital catalyst for socio-economic development. The ongoing cooperation between India and Bhutan in the hydro-power sector is covered under the 2006 bilateral agreement for cooperation and its Protocol signed in 2009
- **Trade relations:** Major exports from India to Bhutan are mineral products, machinery and mechanical appliances, electrical equipments, base metals, vehicles, vegetable products, plastics and articles.
- India continues to be the largest trade and development partner of Bhutan and has extended its assistance to several developmental projects in the country – such as the 1020 MW Tala Hydroelectric Project, Paro Airport, and the Bhutan Broadcasting Station.
- **People-to-people ties:** India is the most popular educational destination for Bhutanese students – almost 4000 Bhutanese students are enrolled in Indian Universities at any time, many of whom are also provided scholarship by Govt. of India.
- **Cultural ties:** There are vibrant cultural exchanges between the two countries. A number of Bhutanese pilgrims travel to holy Buddhists sites in India. The two countries share an open border with regular exchange of travelers in both directions for work, tourism, shopping, medical care etc.

BHUTAN: NATION BETWEEN INDIA & CHINA

China's plans to widen its Chumbi valley with construction in Bhutan's Doklam plateau, extending to the tri-junction of Sikkim, Tibet and Bhutan, go back over a decade. Though India & China have no dispute along the Sikkim boundary, Beijing's bid to increase access to India's border via Bhutan has resulted in a diplomatic standoff. Here, a look at the Himalayan kingdom and the recent flashpoint

BHUTAN'S TIES WITH INDIA...

- In July 2014, Bhutan was PM Modi's first foreign stop. He met **Bhutan King Jigme Khesar Namgyel Wangchuck**
- About 75% of Bhutan's imports are from India. About 85% of its exports come to India: mostly hydropower, India the only importer
- The Indian Army trains Bhutan's army
- India had withdrawn subsidies in 2013 to warn Thimphu against normalising relations with Beijing

... AND ITS RELATIONS WITH CHINA

- Bhutan is China's only neighbour with whom it has no diplomatic ties. It maintains contact with China via the Delhi embassy
- The two sides have had several rounds of talks over border disputes. China has of late upped its 'soft diplomacy'
- Ever since entering Tibet in the 1950s, China has been eyeing Nepal, Sikkim & Bhutan
- Bhutan's pushed back on China's claims on its areas repeatedly
- But Thimphu has avoided offending Beijing. When China invaded Tibet, thousands of refugees fled to Bhutan but were eventually asked to take up citizenship. Many thereafter moved to India

THE BACKSTORY

- 1865** Friendship treaty between Bhutanese rulers and British India
- 1910** British India adds to the treaty recognising Bhutan's sovereignty but keeps control over its foreign relations
- 1949** Bhutan and independent India sign off on a treaty on the same lines as in 1910

- 1963** Bhutan's new constitution changes monarch's title from maharaja to druk gyalpo, emphasising Bhutan as an independent kingdom
- 1971** India backs Bhutan to become a UN member
- 2007** Treaty revised after some crises of trust including when large numbers of Nepalese fled from Bhutan to India citing discrimination. India was wary of taking in the refugees, but didn't wish to upset Bhutan either. Another time, Ulfar & other insurgent groups set up camps across the border in Bhutan, and were chased away in 2003. The new treaty included clauses like: "Neither govt will allow use of its territory for activities harmful to the ... other"

Source: TNM, yaleglobalonline

Why Bhutan matters to India?

- **Geostrategic location:** Bhutan acts as a **buffer between India and China**.
- **Economic significance:** Bhutan is important trade partner of India.
- **Regional security:** To facilitate coordination in border management.

Challenges involved

- **China's expansion:** China's claims to areas such as Chumbi valley and Doklam and its continuous efforts for establishing strong diplomatic and economic relations with Bhutan is a concern for India.
- **Security issue:** Establishment of militant camps in south-east Bhutan is a cause of concern for internal security both the nations.
- **Delay in project:** India's development plans and projects in Bhutan are suffering from delay.

Conclusion

- Bhutan is an important pillar of India's Neighborhood first policy". In recent times Bhutanese perception is changing under China influence.
- India should try to boost its relations with Bhutan, because it (Bhutan) does not have any diplomatic and economic ties with China.

IRAN-US DEADLOCK OVER NUCLEAR CAPABILITY**GS-II INTERNATIONAL RELATIONS****The story so far**

- **Iran, Russia, China and the European countries resumed negotiations in Vienna** to revive the 2015 nuclear agreement, known as the **Joint Comprehensive Plan of Action (JCPOA)**.
- Iran has refused to hold direct talks with the U.S.
- European officials are negotiating between the Iranian and American delegations, exchanging talking points and seeking common ground.

Issue in brief**The 2015 JCPOA agreement**

- It sought to **cut Iran off** a possible path to a **nuclear bomb** in return for **lifting of economic sanctions**.
- Iran agreed to **cut its stockpile of enriched uranium by 98% to 300 kg** and keep them at a low purity level of 3.67%. In return, the **Obama administration lifted sanctions**.
- **Restrictions were introduced on the number of centrifuges** it could keep and **Iran agreed to open all its facilities to the inspection of the International Atomic Energy Agency (IAEA)**.

What triggered the current crisis?

- In May 2018, U.S. President Donald Trump, **unilaterally pulled the U.S. out of the nuclear deal despite the UN certification that Iran was complying with all the terms of the agreement**.
- Critics of the deal argued that the **agreement was inadequate to address Iran's growing influence in the region**, would pose fresh challenges to America's allies in West Asia.
- The Trump administration also wanted to **negotiate Iran's ballistic missile programme as part of a new agreement**.
- After pulling out of the JCPOA, the **U.S. reimposed sanctions on Iran** and then invited Tehran for talks.
- Iran refused to talk with the Trump administration and **resumed its nuclear programme**.

Where do talks stand now?

- Joe Biden, had appointed a special envoy for Iran.
- Indirect talks with Iran through Europeans started immediately. But no agreement was reached after six rounds in Vienna.
- Iran has substantially stepped up its nuclear activities since 2019.
- It has installed more than 1,000 more advanced centrifuges at its plants, which can enrich uranium more quickly.
- Iran has also started enriching uranium to 20% purity or more, which is a technical step away from the weapons grade level.
- Iran is ready to return to the deal but it **wants the U.S. to remove all the sanctions first and give assurances to Tehran** that a future American leader would not renege on the promises as Mr. Trump did.

India-Iran

- **Trade with central Asia:** Iran-India relations are of vital importance for India because of **Iran's Chabahar port**, which plays a fundamental role in **India's trade connectivity with Afghanistan, Central Asia, Eurasia and Europe**.
- **Energy security:** India being the **second largest importer of crude oil from Iran** has begun to effectuate a plan to ensure that there is no shortage in supply by increasing imports from other countries.
- **Sanction impact:** The immediate impact of the sanctions on India was that it can no longer use US dollars for transactions with Iran.
- **Investment by Indian companies** in Iran's oil and gas development projects and pipeline projects, not permitted to open new US bank accounts and facing restrictions on loans, licences and Ex-Im credit.
- In December 2018, India and Iran agreed to revive its **2012 rupee-rial payment mechanism** to receive payments in Indian rupee, where half of the payments would be used to import products from India.

Impacts of Iran's sanctions on India

- **Energy security:** Cutting down crude imports from Iran will **impair India's energy-security needs** affecting inflation and **slow down economic growth**.
- **China's growing presence:** In the absence of Indian infrastructural development projects in Iran, the **vacuum created** is likely to be **filled by China** amid fast-changing geopolitics.
- **Lack of clear policy:** India's policy towards Iran and developments in the Middle East has been largely reactive.
- **Create a balance between U.S. and Iran:** In the backdrop of tensions between US and Iran, India has had to re-adjust its own relations with Iran while maintaining strategic ties with US and Israel.

INDIA-MYANMAR'S RELATIONS

GS-II INTERNATIONAL RELATIONS

Context

- India gave 1 million doses of COVID-19 vaccines to Myanmar.
- Myanmar was part of the first few countries alongside Bangladesh, Bhutan and Nepal that received Covishield vaccine of the Serum Institute of India (SII) in January as part of the Vaccine Maitri initiative.

India-Myanmar's Relations

"Myanmar is India's gateway to Southeast Asia, India is Myanmar's gateway to South Asia."

Why Myanmar Should Matter to India

- Myanmar is **only country** that sits at the intersection of India's "Neighborhood First" policy and "Act East" policy.
- Myanmar is an **essential element** in India's practice of regional diplomacy in the **Indo-Pacific**, and serves as a **land bridge** to connect South Asia and Southeast Asia.
- Myanmar is an important member of the **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)**, a multilateral subregional organization that is committed to fostering bilateral or regional cooperation among Bay of Bengal countries.
- To elevate its "**Made in India**" **arms industry**, India has identified Myanmar as key to increasing its military exports.
- Myanmar is **geopolitically significant** to India as it stands at the center of the India-Southeast Asia geography.
- Myanmar is the only Southeast Asian country that shares a **land border** with northeastern India, stretching some 1,624 kilometers. The neighbors also share a 725-km **maritime boundary** in the Bay of Bengal.



Measures taken to improve ties

- It was one of only two Southeast Asian countries invited to attend the swearing-in of Indian Prime Minister Narendra Modi after he won re-election in May 2019.
- Facilitating connectivity** is central to improving India-Myanmar economic relations. India regards Myanmar as a gateway to link up to the rest of Southeast Asia, and invested in **ASEAN-wide infrastructural projects** that are able to boost trade in the ASEAN-India Free Trade Area.
- Infrastructure projects:**
- The India-Myanmar-Thailand Trilateral Highway and Kaladan Multi-Modal Transit Transport (KMMTT), to connect the eastern Indian seaport of Kolkata with the Sittwe deep-water port in Myanmar's Rakhine state by sea.
- Sittwe port:**
 - As part of its policy for the **Indian Ocean called Security and Growth for All in the Region (SAGAR)**, central to which is "**port-led development**," India developed the **Sittwe port** in Myanmar's Rakhine state.
 - This port, which sits on the Bay of Bengal, serves as a critical node of the KMMTT initiative to connect **southwestern Myanmar to northeastern India by creating a multi-modal trinary of sea, river and road transport corridor** to boost **interconnectivity**.
 - India's long-term strategic goal is to create a **Special Economic Zone surrounding the Sittwe port**.
 - The Sittwe port is meant to be **India's answer to the Chinese-fronted Kyaukpyu port**, which is intended to cement China's geostrategic footprint in Rakhine.
- India has been **providing humanitarian relief** even while deporting Rohingya refugees from India for security reasons, provoking the UN's ire.



Challenges in India-Myanmar relations

- **China Factor:** Beijing's bidding into Myanmar regional affairs. Myanmar is inevitably a "kingmaker" in Sino-Indian relations.
- **Trade deficit:** With a total bilateral trade of \$2 billion, India's economic engagement with Myanmar lags behind China. Myanmar is vital to fulfilling India's ambition to become a \$5 trillion economy by 2024. India's **withdrawal from Regional Comprehensive Economic Partnership** can further increase this trade gap.

Strengths of India-Myanmar relations

- It is the **only Southeast Asian country** that has a **separate bureaucratic division** (shared with Bangladesh) in India's External Affairs Ministry, testifying to the continued importance of Myanmar to India's current foreign policy.
- **Operation Sunshine 1 and 2:** The Indian and Myanmar armies have carried out two joint military operations, Operation Sunshine 1 and 2, to fight militants along the borders of Myanmar's Rakhine state, which borders the northeastern Indian states of Arunachal Pradesh, Nagaland, Manipur, and Mizoram.
- **IMBAX-2017 and IMBEX 2018-19:** Seeing that Myanmar is critical to its national security interests, India provides military training and conducts joint military exercises with the Myanmar Army like the India-Myanmar Bilateral Military Exercise (IMBAX-2017 and IMBEX 2018-19), by which India had trained the Myanmar Army to be able to participate in UN Peacekeeping Operations.
- **Defense Cooperation Agreement:** To deepen their defense relations, India and Myanmar signed a landmark defense cooperation agreement in July 2019.
- **IMNEX-18:** Realizing the growing importance of the Bay of Bengal, the navies of both India and Myanmar conducted a historic bilateral naval exercise, IMNEX-18, in 2018. India also invited the Myanmar Army to participate in the India-led multilateral **Milan naval exercise** that occurs biennially in the Andaman and Nicobar Islands.
- **Military purchases:** Myanmar bought India's first locally-produced anti-submarine torpedo, called TAL Shyena, a diesel-electric Kilo-class submarine, INS Sindhuvir.
- **Cultural diplomacy: "Buddhist Circuit" initiative**, which seeks to double foreign tourist arrivals and revenue by connecting ancient Buddhist heritage sites across different states in India, should resonate with Buddhist-majority Myanmar.

Way forward

- **Security Cooperation:** For **economic relations to improve**, India and Myanmar must boost their security cooperation at the border. The more secure the border is, the greater the economic activity will be.
 - **For example:** Part of the reason why the KMMTT has faced delays is that the route of the project traverses a warzone in Rakhine state, where a battle rages on between the Myanmar Army and the Arakan Army rebels on the one hand, and on the other, the Arakan Rohingya Salvation Army. Insurgents from India's Nagaland have also disrupted the completion of the KMMTT project.
- **Handling Rohingya issue with care:** Myanmar's geostrategic importance to India has meant that Delhi did not take a hardline approach on Naypyidaw vis-à-vis the Rohingya issue, even keeping its distance when Myanmar was hauled into the International Court of Justice over accusations of Rohingya genocide. India, which has a Hindu majority, will need **to perform a balancing act between Muslim-majority Bangladesh and Buddhist-majority Myanmar as far as the Rohingya issue is concerned**. The quicker the Rohingya issue is resolved, the easier it will be for India to manage its relations with Myanmar and Bangladesh, focusing instead more on bilateral and subregional economic cooperation.
- **India's Buddhist diplomacy** would bolster its tourist industry and could build up India's diplomatic reservoir of goodwill and trust with Buddhist-majority countries such as Myanmar.

INDIA OUT CAMPAIGN

GS-II INTERNATIONAL RELATIONS

Context

- The recent '**India Out**' campaign in the **Maldives** is against the opposition to the Uthuru Thila Falhu (UTF) harbour development deal with India in February 2021, which is being seen as a **way of allowing Indian military presence on native soil**.

More about news

- The 'India Out' campaign, is widely spreading across social media platforms.
- Reports are being published in Maldives media alleging that the present incumbent government is **allowing India to establish a military base in the island by signing secret agreements, in exchange for financial assistance or other material benefits**.
- This allegation is made against the government because the leader of the current ruling party Mohamed Nasheed urged India to intervene militarily to restore peace and democracy in 2018.
- Progressive Party of Maldives (PPM) of former President Abdulla Yameen and its coalition partner People's National

Congress (PNC) are trying to mobilise people against the current government by spreading misleading propaganda against India.

- Indiaout campaign was launched by the opposition coalition PPM and PNC both on the street as well as on social media demanding the expulsion of Indian military personnel present in the country.

How India has become a victim of the internal political situation in the Maldives

- Former President Abdullah Yameen is perceived as a **friend of China**. During Yameen's term as President from 2013 to 2018, **New Delhi-Male relations deteriorated drastically**.
- On the other hand, the present Solih administration opt for an **'India first' foreign policy**.
- The Solih government has rejected the 'India Out' campaign and has expressed concern at attempts to spread **"misguided and unsubstantiated information to propagate hatred towards India"**.

Why this campaign is gaining ground again?

- Although campaign gained popularity in the past year or so, its root cause can be traced back to 2013 when Abdulla Yameen Abdul Gayoom of the Progressive Party (PPM) became the president.
- The **next presidential election is scheduled in 2023**, and Mr. Yameen is trying to make a political comeback, tapping on both the anti-incumbency, and the anti-India sentiments among sections loyal to him.

India's reaction

- India's requested to take action against local media and have repeatedly urged people to not spread hate against India.
- Foreign ministry's urged the media not to affect bilateral relations and, as per **article 29 of the Vienna Convention on Diplomatic Relations**, it is the responsibility of the Maldives to treat the diplomats with due respect, and take all appropriate steps to prevent any attack on freedom, and dignity of foreign diplomats.

India-Maldives bilateral Relations:

- India and Maldives are neighbors as they share a maritime border. Relations have been friendly and close in strategic, economic and military cooperation. India continues to contribute to maintaining security on the island nation.



10 REASONS WHY MALDIVES IS IMPORTANT FOR INDIA

- 1** Strategically located in the Indian Ocean, Maldives archipelago comprising 1,200 coral islands lies next to key shipping lanes which ensure uninterrupted energy supplies to countries like China, Japan and India
- 2** Since China started to send naval ships to Indian Ocean roughly 10 years ago —and right up to Gulf of Aden in the name of anti-piracy operations — Maldives' significance has steadily grown and now it's at the heart of international geopolitics
- 3** As the pre-eminent South Asian power and a 'net security provider' in the Indian Ocean region, India needs to cooperate with Maldives in security and defence sectors
- 4** China's massive economic presence in Maldives is a major concern for India. With the country now said to owe 70% of its external aid to China, many believe that Yameen has done to Maldives what Rajapaksa did to Sri Lanka. India had to push back at some stage and the current political crisis might just have offered India the right opportunity
- 5** A large section of population which supports the opposition parties like Nasheed's MDP wants India to act against Yameen
- 6** Maldives is also a member of Saarc. It is important for India to have Maldives on board to maintain its leadership in the region. Maldives was the only Saarc country which seemed reluctant to follow India's call for boycott of Saarc summit in Pakistan after the Uri attack
- 7** Under Yameen, radicalisation grew rapidly and it was often said that archipelago accounted for one of the highest numbers of foreign fighters in Syria in terms of per capita. India can ill-afford a neighbour which fails to check Islamic radicalisation
- 8** India and Maldives share ethnic, linguistic, cultural, religious and commercial links. India was among the first to recognise Maldives after its independence in 1965 and later established its mission at Malé in 1972
- 9** There are 25,000 Indian nationals living in Maldives (second largest expatriate community). Indian tourists also account for close to 6% of tourists Maldives receives every year
- 10** India is also a preferred destination for Maldivians for education, medical treatment, recreation and business. According to MEA, more and more Maldivians are seeking long term visa for pursuing higher studies/ medical treatment in India

Historical relations

- Both nations' were Britain colonies.
- India was among the **first to recognise Maldives after its independence in 1965** and to establish diplomatic relations with the country. India established its mission at Malé in 1972.
- India and Maldives share ethnic, linguistic, cultural, religious and commercial links steeped in antiquity and enjoy cordial and multi-dimensional relations.

Political relations

- India and Maldives have consistently supported each other in multilateral fora such as the UN, the Commonwealth, the NAM and the SAARC.
- High connectivity:** High People-to-People contacts, as Air India operates daily flights to Malé from Thiruvananthapuram, Bangalore and Chennai.
- Tourism:** The proximity of location and improvements in air connectivity in recent years has led to a very substantial increase in the number of Indians visiting Maldives for **tourism** (around 33,000) and business.
- Soft diplomacy:** India is a preferred destination for Maldivian for **education, medical treatment, recreation and business.**
- Diaspora:** Indians are the **second largest expatriate community in the Maldives.**



Why Maldives matters to India?

Strategic location

- Maldives holds strategic importance for India under the Modi government's '**Neighborhood First**' policy due to its location in the Indian Ocean.
- The **Eight Degree Channel** is one of the major maritime lanes of the world.
- Stability, maturity and democratic systems** in the Maldives can ensure peace and security in the Indian Ocean.

Major challenges

Chinese influence:

- India has been quite apprehensive of the growing Chinese influence in Maldives even as it continues to give utmost priority to the island nation.
- There have been growing concerns regarding China's role in the Maldivian economy through so-called "**debt-trap diplomacy.**"
- Maldives incurred a debt of about **\$1.4 billion owing** to loans from China to finance several of its infrastructure projects.
- Maldives and China had also entered into a **free trade agreement.**

India's position in Male crisis:

- During the pro-Beijing regime of their former President Abdulla Yameen, ties between the nations got strained. In fact, there came a point in 2018 when **India even contemplated a military intervention.**

Dhruv controversy:

- India gave **two Dhruv Advanced Light Helicopters (ALF) to the Maldives in 2010 and 2015** both of which were to be used for ocean search-and-rescue operations, maritime weather surveillance and for airlifting patients between islands.
- However, some people in the PPM stirred up a controversy by saying that the **helicopters marked the start of military presence in the country.**
- The Maldives government requested India to take back the helicopters in 2016, but **India refused to do so.**

Lack of transparency

- Another issue is the lack of transparency when it comes to the **signing of agreements between India and the Solih government.**
- The Maldives government has refused to share details of agreements signed with India citing **security reasons**

The Naval Base controversy

- The **Uthuru Thilafalhu** is a **strategically located atoll** near the capital Malé and was called the **UTF Harbour project.**
- Also, in 2016, an action plan was signed by both the governments for defence cooperation to enhance "shared strategic and security interests of the two countries in the Indian Ocean region".
- However, after the Solih government took over, there was speculation that the UTF project would be turned into an Indian naval base.

Measures taken so far

- After coming to power for the second time in May last year, Prime Minister Modi's first international destination was Maldives. He was also the **only head of state to attend Maldives President Ibrahim Mohamed Solih's swearing-in ceremony**

in November 2018, when he came to power ousting Yameen.

- India has also **offered a \$1.4-billion development assistance package to Maldives**, which is being utilised in several projects.
- 30 years ago, in 1988, an intervention by the Indian armed forces - codenamed '**Operation Cactus**' - trounced an attempted coup on the island nation. On November 3, 1988, when mercenaries attacked the Maldives, India was the first to respond.
- In 2004, when the tsunami hit Maldives, Indian naval ships were dispatched to assist rescue operation.
- During the **Male water crisis**. Within four hours Indian Navy and Air Force vessels delivered water.

Way forward

- **Past learning's:** Despite repeated calls for intervention, India firmly avoided military action against the Yameen regime. New Delhi thoughtfully coordinated its diplomatic response with other stakeholders, and put enormous pressure on Yameen to hold the presidential elections in a fair and transparent manner. This patience seems to have yielded a positive outcome as India finds itself in an advantageous situation now.
- **Cautious approach:** India needs to remain careful if it wants to avoid a Nepal-like situation, where New Delhi's perceived interference in Nepal's internal affairs had turned the Nepali people against India. Having a lighter diplomatic footprint is the only way forward in the Maldives.'



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ASSISTED REPRODUCTIVE TECHNOLOGY (REGULATION) BILL, 2020

GS-II HEALTH

Context

- The Lok Sabha passed the the Assisted Reproductive Technology (Regulation) Bill, 2020, that proposes the establishment of a national registry and registration authority for all clinics and medical professionals serving in the field.

About

- The ART bill seeks to set minimum standards and codes of conduct for fertility clinics and egg/sperm banks.
- The bill provides for the “safe and ethical practice of assisted reproductive technology services”, including egg or sperm donation, in-vitro fertilisation (IVF), intrauterine insemination (IUI), and gestational surrogacy.

Aim

- The bill aims to introduce protections for egg donors, gestational surrogates, and children conceived through ART services.

Provisions

- Offences under the bill include clinics offering sex selection, abandoning or exploiting children born through ART, the selling, buying, or importing of human embryos, and exploiting the couple or donors concerned in any form.
- Proposed jail terms for violations range from five to 12 years, and fines from Rs 5 lakh to Rs 25 lakh.

Need for the bill

- India has one of the highest growths in the number ART centres and ART cycles performed every year.
- India has become one of the major centres of this global fertility industry, with reproductive medical tourism becoming a significant activity.
- This has also introduced a plethora of legal, ethical and social issues.
- There is no standardisation of protocols and reporting is still very inadequate.

Regulating ART




Illustration of in vitro fertilisation

- **The Bill establishes the National Board, the State Boards, and the National Registry to**

regulate and supervise Assisted Reproductive Technology (ART) clinics. It establishes ART banks to promote ethical practices

- **It proposes stringent punishment for those who attempt to control the offspring's sex, sell embryos or gametes**
- **As of Feb. 20, there are 517 ART clinics under the National Registry of ART clinics and banks in India, according to the ICMR**

BAN ON CIGARETTES

GS-II HEALTH

Context

- New Zealand said it will ban young people from buying cigarettes for life, one of the toughest approaches in the world to curbing smoking deaths as part of a wider plan that focuses on the disproportionate impact on its indigenous Maori population.

Details

- New Zealand is already one of 17 countries where plain cigarette packaging is compulsory.
- New Zealand plans to make it illegal to sell cigarettes to anyone aged 14 and under from 2027.
- The ban will remain in place for the rest of the person's life. That means a person aged 60 in 2073 will be banned from buying cigarettes, while a person aged 61 would be allowed to do so.
- It also bans sales to anyone under 18, but it says those measures are not enough to reach its goal of a national adult smoking rate of less than 5% by 2025.

Trivia

- Bhutan banned cigarette sales outright in 2010 (although it lifted the ban temporarily in 2020 to stop black market imports from India during a COVID-19 border closure.).

Tobacco in India

- Nearly 267 million adults (15 years and above) in India (29% of all adults) are users of tobacco, according to the Global Adult Tobacco Survey India, 2016-17.
- The most prevalent form of tobacco use in India is smokeless tobacco and commonly used products are khaini, gutkha, betel

quid with tobacco and zarda. Smoking forms of tobacco used are bidi, cigarette and hookah.

Impact of smoking

- Smoking and exposure to secondhand smoke kill about 1.2 million Indians each year.
- India accounts for 70% of the global burden of smokeless tobacco.
- Tobacco leads not only to loss of lives but also has heavy social and economic costs.
- For example: The total economic costs attributed to tobacco use from all diseases in India in the year 2017-18 for persons aged 35 years and above amounted to INR 177 341 crore (USD 27.5 billion).

Government and Judicial Interventions

- Supreme Court (Justices M B Shah and R P Sethi bench) advocated for banning smoking in public places.
- It recognised that lighting of cigarettes in public places invariably infringed non-smokers' right to life, guaranteed as a fundamental right under Article 21 of the Constitution.
- From 1975, inscribing of statutory warning - 'cigarette smoking is injurious to health' - was made mandatory on each packet.
- Prevention and Control of Pollution Act of 1981: Recognized smoking as an air pollutant.
- In 2003, India passed the Cigarettes and Other Tobacco Products Act (COTPA), which prohibits tobacco advertisements through most forms of mass media.
- International Convention: India ratified the WHO Framework Convention on Tobacco Control (WHO FCTC) in 2004.
- Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2020: These provide for new sets of specified health warnings with enhanced pictorial images to be printed on all tobacco products



Why not a blanket ban on cigarettes in India?

- The tobacco economics appears to be the prime reason dissuading governments from signing the death warrant for cigarettes.
- The Rs 35,000 crore tobacco industry employs a whopping 36 lakh people and contributes 10% of India's total excise revenue, of which nearly 90% is contributed by cigarettes.

Are such bans effective?

- While on one hand making tobacco products dearer may lead to an overall decrease in consumption of tobacco globally, on the other hand, it can lead to an increase in the sale of loose cigarettes.
- A study found that 57 per cent of cigarette smokers (3.46 million approximately) in India (based on data from the Global Adult Tobacco Survey, India 2009-2010) bought loose cigarettes.
- According to a 2017 study published in the Journal of the Scientific Society, raising tax on tobacco products is one of the key ways of controlling tobacco consumption.

Way ahead

- A comprehensive tobacco control policy is the need of the hour.
- Steps like a complete ban on tobacco marketing, support for smokers who want to quit, prevention of tobacco industry interference need to be undertaken.

MISSION INDRADHANUSH

GS-II HEALTH

Context

- Mission Indradhanush which was launched on 25th December 2014 as a special drive to expand full immunization coverage in India has completed seven years.

About

- Mission Indradhanush (MI) was launched by the Ministry of Health and Family Welfare (MOHFW) in 2014 with the aim of expanding immunization coverage to all children across India.
- Children across socio-economic, cultural and geographical spectrums in India, are being immunized under this program.

Immunization Programme in India: Background

- Immunization Programme in India was introduced in 1978 as 'Expanded Programme of Immunization' (EPI) by the

Ministry of Health and Family Welfare.

- In 1985, the programme was **modified as 'Universal Immunization Programme' (UIP).**
- India's Universal Immunisation Programme (UIP) provide free vaccines against 12 life threatening diseases, to 26 million children annually.
- UIP provides life-saving vaccines to all children across the country free of cost to protect them against **Tuberculosis, Diphtheria, Pertussis, Tetanus, Polio, Hepatitis B, Pneumonia and Meningitis due to Haemophilus Influenzae type b (Hib), Measles, Rubella, Japanese Encephalitis (JE) and Rotavirus diarrhoea. (Rubella, JE and Rotavirus vaccine in select states and districts).**
- To strengthen and re-energize the programme and achieve full immunization coverage for all children and pregnant women at a rapid pace, the Government of India launched "Mission Indradhanush" in December 2014.

GHS INDEX 2021

GS-II HEALTH

Context

- Recently, the **Global Health Security (GHS) Index 2021 has been recently released.**

About the Index

- The Global Health Security Index is an assessment of global health security capabilities in 195 countries prepared **by the Johns Hopkins Center for Health Security, the Nuclear Threat Initiative (NTI) and the Economist Intelligence Unit (EIU).**
- The index was first published in 2019.

Method

- The report is based on six categories, 37 indicators and 171 questions, using instantly available information. The six categories are:
 1. **Prevention:** Prevention of the emergence or release of pathogens
 2. **Detection and Reporting:** Early detection and reporting for epidemics of potential international concern
 3. **Rapid Response:** Rapid response to and mitigation of the spread of an epidemic
 4. **Health System:** Sufficient and robust health system to treat the sick and protect health workers
 5. **Compliance with International Norms:** Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms
 6. **Risk Environment:** Overall risk environment and country vulnerability to biological threats
- The index measures countries' capabilities from 0-100, with 100 representing the highest level of preparedness. The GHS Index scoring system includes three tiers.
 1. **Low Scores:** Countries that score between 0 and 33.3 are in the bottom tier.
 2. **Moderate Scores:** Countries that score between 33.4 and 66.6 are in the middle tier and
 3. **High Scores:** Countries that score between 66.7 and 100 are in the upper or "top" tier.

Findings

World

- The world's overall performance on the GHS Index score **slipped to 38.9 (out of 100) in 2021**, from a score of 40.2 in the GHS Index, 2019.
- In 2021, no country scored in the top tier of rankings and **no country scored above 75.9.**

India

- India, with a score of 42.8 (out of 100) has slipped by 0.8 points since 2019.
- But three neighbouring countries — **Bangladesh, Sri Lanka and Maldives** — have improved their score by 1-1.2 points.

GENERAL STUDIES - III

CHIP HUB

GS-III ECONOMY

Context

- India is aiming to manufacture silicon semiconductor chips.
- India is in talks with Taiwan to set up an indigenous semiconductor assembly plant worth \$7.5 billion.
- It has intensified efforts to set up a semiconductor fabrication plant with the help of Taiwan.

Developments Undertaken

- The Tata Group is in talks with three States — Tamil Nadu, Telangana and Karnataka — to invest over **\$300 million to set up** a semiconductor manufacturing facility.
- Several techies **working in silicon fab and chip-making companies** across the globe, who want to revive the five-year old initiative of bringing the industry to A.P.

Fact

- Around **40 percent of India's demand is met through** imports from China, despite the frequent geopolitical impasse that the two nations find themselves in.

India's Failed bids

- The government had previously **floated an offer to foreign companies in 2017** to set up their facilities in India by waiving customs duty for the import of the relevant machinery and equipment. The sop evoked zero response.
- In **2020, the central government floated another expression of interest (EoI)**, inviting companies that were interested in setting up semiconductor fabrication units. The EoI's deadline was April 30, 2021 and had no apparent takers.
- An earlier **failed attempt to woo semiconductor giant Intel to India -- which** chose Vietnam instead -- also stands as a stark reminder of India's lack of real progress on the front.

Global Giants

- **Taiwan holds a virtual monopoly** in the global chip manufacturing industry.
- The company is **responsible for over half of all semiconductor** chips that are manufactured in the world, and the country as a whole is responsible for over 60 percent of global production.
- Other major centres **include South Korea and the US.**

Basic Requirements for Chip Facility

- A clean environment, ie, low air particulate matter,
- abundant supply of clean, fresh water,
- uninterrupted and stable power supply,
- quick access to an international airport or seaport,
- first-world levels of road infrastructure from the said port to the fab
- close proximity to well-trained technical talent

Challenges in Manufacturing

- It is difficult to **compete with neighbouring countries like China and Vietnam** which have been favourite destinations for global chip manufacturers due to better cost-efficiency.
- **massive investment:** In addition to the huge cost, **running in billions of dollars, manufacturing even a single chip requires hundreds of gallons of pure water**, which may also be hard to find in India in the required quantities.
- An **uninterrupted power supply is another major hurdle**. The heart of the issue is that India is still **not unto the par in terms of the basic infrastructure** needed to pursue endeavours in the chip manufacturing space.
- There is also **constant price pressure from other global players**, particularly China which is also building a homegrown chip program for the adoption of local semiconductors in 70% of its products by 2025.

Way Forward

- **Land Acquisition by the government:** acquire the land and develop a special economic zone (SEZ) which would encompass a complete semiconductor manufacturing ecosystem.
- **Cover all ancillaries:** The monetary benefits being extended for setting up a fab should also be made available for all the ancillary units manufacturing specialty chemicals to cleanroom apparel.

- **Focus on simple technology:** The requirements are less stringent and the fabs less expensive. These companies typically operate at much lower gross margins as opposed to the large fabs and OEMs.

POWER DISCOMS

GS-III ECONOMY

Context

- Recently, government told the parliament that **Discoms have not been able to pay the generation companies for the power procured, and the outstanding payments to generation companies are estimated to be in excess of ₹1,56,000 crore.**

Issues with Discoms

Cross Subsidisation

- In India, **electricity price for certain segments such as agriculture and the domestic category** (what we use in our homes) is cross-subsidised by the industries (factories) and the commercial sector (shops, malls).
- This affects the competitiveness of industry. While the government has started a process through which the **extent of cross-subsidisation is gradually being reduced**, this is easier said than done as states do not like to increase tariffs for politically sensitive constituents, such as farmers.

Aggregate Technical and Commercial (AT&C) Losses

- The discoms suffer Aggregate Technical and Commercial (AT&C) Losses.
 - **Technical Loss:** It is due to the flow of power in transmission and distribution system. Almost 25% of the power is lost, and never gets billed.
 - **Commercial Loss:** It is due to the theft of electricity, deficiencies in metering, etc.

Gap Between Revenue realization and cost of supply:

- The gap between the average per-unit cost of supply (ACS) and average revenue realised (ARR).
 - The **remaining 75% is sold at prices that are much lower than the discoms' procurement costs.**
 - In almost every state, the increase in tariff rates is avoided because of the associated political costs.
 - Therefore, political unwillingness is at the heart of commercial losses.

Government Steps to improve the functioning of Discoms

- To tide over the liquidity problems of increasing DISCOM payables to Gencos arising out of the outbreak of COVID-19 lockdowns, the Government of India has launched a Liquidity Infusion scheme under which DISCOMs are already availing benefits under the scheme tied to reforms.
- The Government has also **incentivised the DISCOMs to transform, reform and perform by linking 0.5% of the Additional borrowings linked to power sector reforms from FY 2022 to FY 2024.**
- Apart from the above, the **Government of India has also launched the Revamped Reforms-Based Results-Linked Scheme, which allows the States to create infrastructure** tied to initiation of Reforms and achievement of Results for improving their financial sustainability and operational efficiencies.
- This scheme **would be in operation till FY 2025-26, and includes a major component of prepaid Smart metering.**

About Reforms Based Results Linked Scheme

Targets

- Reduction of AT&C (aggregate technical & commercial) losses to **pan-India levels of 12-15%** by 2024-25.
- **Reduction of ACS-ARR gap (i.e. between the total cost of electricity and revenues generated from supplying power) to zero** by 2024-25.
- **Developing institutional capabilities** for modern discoms.
- **Improvement in the quality, reliability, and affordability of power supply** to consumers through a financially sustainable and operationally efficient Distribution Sector.
- **Implementation of the Scheme would be based on the action plan worked out for each state rather than a "one-size-fits-all" approach.**

Key Objectives

- The Scheme provides for **annual appraisal of the DISCOM performance** against predefined and agreed upon performance trajectories.
- **The Scheme has a major focus on improving electricity supply for the farmers and for providing daytime electricity to them through solarization of agricultural feeders.**
- A key feature of the Scheme is to **enable consumer empowerment by way of prepaid Smart metering to be implemented in Public-Private-Partnership (PPP) mode.**
- it is also proposed to take up **System metering at Feeder and Distribution Transformer (DT) level with communicating feature simultaneously in PPP mode.**

OALP BID

GS-III ECONOMY

Context

- The central government has launched the Open Acreage Licensing Programme (OALP) Bid Round-VII for International Competitive Bidding.

About Hydrocarbon Production Licensing Policy (HELP)

Freedom in Pricing

- The new policy also gives the investors the **much needed freedom in pricing and marketing** for crude oil and natural gas.
- The contractor will have **freedom for pricing and marketing of gas produced** in the domestic market on arms length basis.

Uniform Licensing

- There will be a uniform licensing system which will cover all hydrocarbons, under a single license and policy framework.

Open Acreage licensing

- An 'Open Acreage Licensing Policy' will be implemented whereby a bidder may apply to the Government seeking exploration of any block not already covered by exploration. This will enable a faster coverage of the available geographical area.

Revenue Sharing

- Contracts will be based on 'biddable revenue sharing'. Bidders will be required to quote revenue share in their bids and this will be a key parameter for selecting the winning bid.
- A concessional royalty regime will be implemented for deep water (5%) and ultra-deep water (2%) areas. In shallow water areas, the royalty rates shall be reduced from 10% to 7.5%.

Protection of Government Interest

- To safeguard the Government revenue, the Government's share of profit will be calculated based on the higher of prevailing international crude price or actual price.

Extraction of all resources

- The uniform licence will enable the contractor to explore conventional as well as unconventional oil and gas resources including CBM, shale gas/oil, tight gas and gas hydrates under a single license.

Increased Production

- It will enhance domestic oil & gas production, bring substantial investment in the sector and generate sizable employment.

About Open Acreage Licensing Policy-OALP

- A critical part of the Hydrocarbon Exploration and Licensing Policy.
- Provides uniform licences for exploration and production of all forms of hydrocarbons, enabling contractors to explore conventional as well as unconventional oil and gas resources.
- Fields are offered under a revenue-sharing model and throw up marketing and pricing freedom for crude oil and natural gas produced.
- Under OALP, companies are allowed to carve out areas they want to explore oil and gas in. Once an explorer selects areas after evaluating the National Data Repository (NDR) and submits the expression of Interest, it is put up for competitive bidding.

About National Data Repository

- NDR is a government-sponsored E&P data bank with state-of-the-art facilities and infrastructure for preservation, upkeep and dissemination of data to enable its systematic use for future exploration and development.

START UPS

GS-III ECONOMY

Context

- India has added 33 'unicorns' in a single year as per the Hurun Report.
- This has helped India displace the United Kingdom (U.K.) to be third in the list of countries hosting unicorn companies.

About Unicorns

- Unicorns are enterprises valued at more than \$1 billion.



Figure 1: No Copyright Infringement Intended

Reasons for Growth of Startups

Indian Market Size

- With a GDP growth of 7.0 percent in 2018, India is one of **the fastest-growing large economies in the world**.
- In a country with a population of nearly 1.3 billion people, even niche products can have significant market potential.

Rising Consumption

- Rising consumption is driven by **the growth of upper-middle income and high-income segments of the population, which will grow from being one in four households today, to one in two households by 2030.**

Demographic Dividend

- Half of the country's population are **below the age of 25 years** and the youth is aspirational.
- The nearly 700 million people born through the late 1980s to the 2000s carry material ambitions and have the ability to spend and make those goals a reality.

Role of Diversity

- If Startups solutions are successful in addressing the **needs of diverse customers pan-India, they can likely find market uptake in other geographies** such as Africa and Latin America, and even the developed world.

Export Potential

- Indian startups often do pilots and serve customers in the United States, where the user base has a much higher ability to pay.

Increased Technology Penetration

- Over the last few decades, **technological change has reduced the cost of building digital products** and has provided access to consumer markets.
- As India improved its digital connectivity, **market access barriers have been brought down.**
- The **broadband penetration is increasing fast** and the number of wireline subscribers in 2018 is expected to increase by 44 percent over the next four years.
- The **Aadhaar biometric ID system, introduced in 2009 and assigning Indian residents a unique identity number**, has made it easier for companies to validate information about their customers.

Increased Political Will

- The federal as well as **some state governments increasingly recognise startups** as important engines for economic growth.
- Government has **launched Startup India to build a strong ecosystem that is conducive for the growth of startup businesses**, to drive sustainable economic growth and generate large scale employment opportunities.

Changing Perceptions towards Entrepreneurship

- Most startup founders in India **have strong intrinsic motivations and report being** driven by their passion, curiosity, satisfaction that comes from problem solving, and desire to make a difference in society.
- Some founders **have become India's "startup heroes", contributing to a current image of entrepreneurship as "cool" and "glamorous".**

Challenges

Diversity and the Digital Divide

- In general, an **information gap exists between those who provide solutions** and those who are supposed to use them.
- Most startup founders are well-educated and come from well-off backgrounds in urban metro cities. However, as nearly 70 percent of the Indian population live in rural areas leading to disconnect.

Taking Products to Market and Low Willingness to Pay

- startups are at a **disadvantage compared to large companies**. On the one hand, this is due to the fact that big market players are more capable of dealing with bureaucratic regulations.
- **public procurement is seen as weak and government prefers** to sign contracts with established companies.
- communication **with and retention of customers takes time and effort**. Convincing Indian customers is difficult, especially if the startup develops innovative products and caters to new market segments.

Hiring Qualified Employees

- the majority prefer to **work for large corporations, which promise more stable jobs**.
- In addition, **startups can rarely compete with the reputation and compensation structures** which large companies can offer.
- many job applicants are **not sufficiently skilled**. Startups see a **gap between the knowledge taught to students in colleges and the knowledge needed for the jobs**, especially in sectors in which technologies change at a fast pace.
- Significant number of **highly qualified specialists move abroad for jobs**. At the same time, and in contrast to many other startup hubs globally, Indian startups are yet to attract international talent.

Complex Regulatory Environment

- Startups in India **often feel encumbered by bureaucratic processes**, which appear to lack underlying standards.
- They have **insufficient possibilities to find information**, and there is little planning security about how long processes can take.
- Despite government's declared intention to hasten the setting up of a business, the process is **generally described as lengthy**

and costly. It requires many approvals, constituting a high entry barrier.

- Some startups fail, but **closing down a business was described as even** more difficult than setting it up.

Way Forward

Changes in Culture

- changes in the **broader cultural milieu would be helpful to encourage** people taking risks and possibly developing impactful solutions.

Economic Reforms

- Policy reforms **improving general economic conditions as well as investments** in digital and physical infrastructure (for instance, internet connectivity, roads and public transportation, power and electricity), are expected to also benefit startups.

Integration with College Curriculum

- There is a **need for integration of entrepreneurship courses in college curricula**, which would better prepare students for careers in startups.

NUCLEAR POWER

GS-III ECONOMY

Context

- There is some progress in the Jaitapur nuclear power project in Maharashtra with the French company EDF and Nuclear Power Corporation of India Limited (NPCIL).

About the project

- Jaitapur would be the world's most powerful nuclear power plant.**
- There would be **six state-of-the-art EPR reactors with an installed capacity of 9.6 GWe** that will produce low carbon electricity.
- It would provide electricity to seven crore households.

India's Nuclear Share

- The share of nuclear power in the **total electricity generation in the country is about 1 per cent** in 2020-21 – Ministry of Science and Technology.

Nuclear Power in India

- Genesis: India's nuclear programme can trace its **origins to 1944 and its efforts in 3 stage technology were established by HomiJehangirBhabha** when he founded the nuclear research centre, the Tata Institute of Fundamental Research.
- Today, **India has 23 nuclear reactors in operation in 7 nuclear power plants**, with a total installed capacity of 7,480 MW.
- Nuclear power produced a total of 43 TWh in 2020-21, contributing 3.11% of total power generation in India (1,382 TWh).**
- Kudankulam Nuclear Power Plant is the largest nuclear power station in India**, situated in Tamil Nadu.

Coal: 994,197 GWh (71.9%)
Large Hydro: 155,769 GWh (11.3%)
Small Hydro: 9,366 GWh (0.7%)
Wind Power: 64,639 GWh (4.7%)
Solar Power: 50,103 GWh (3.6%)
Biomass & other RE: 14,209 GWh (1.0%)
Nuclear: 46,472 GWh (3.4%)
Gas: 48,443 GWh (3.5%)
Diesel: 199 GWh (0.0%)

Benefits of Nuclear Energy

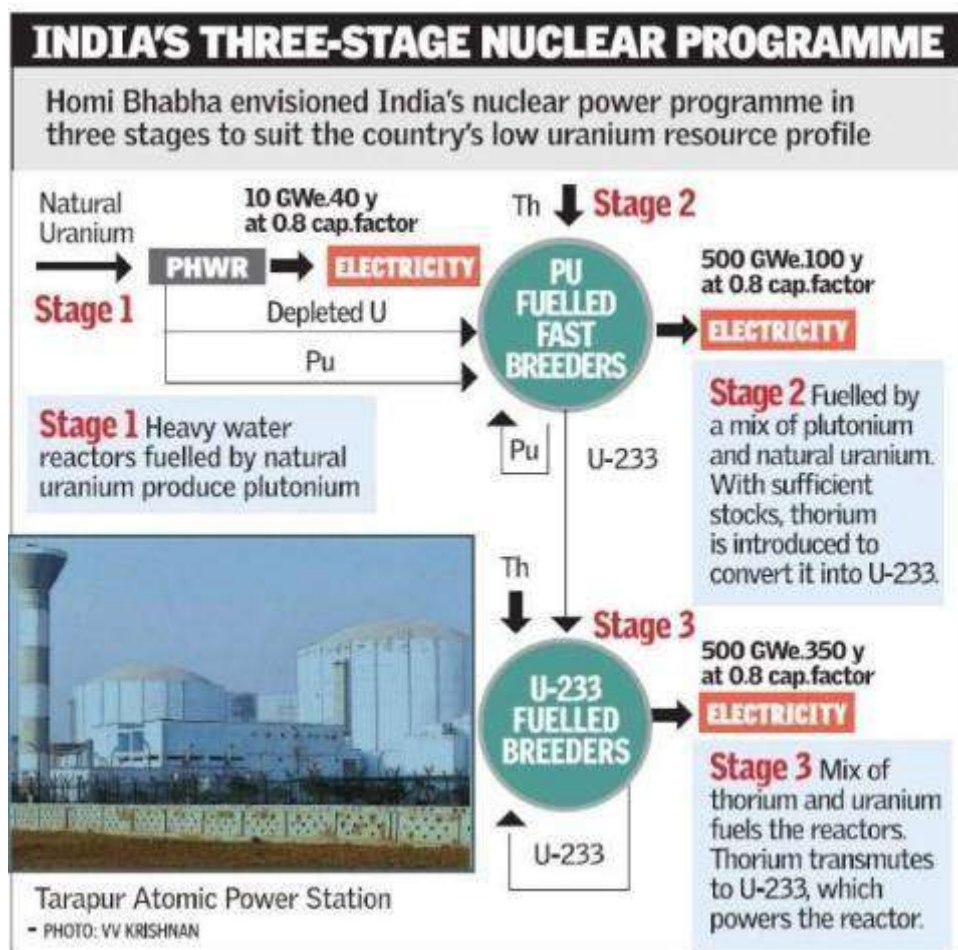
- Thorium and uranium reserves:** India has huge thorium reserves that can fuel India's nuclear energy with the right technology. **India's thorium deposits are estimated at 360,000 tonnes and natural uranium deposits are estimated at 70,000 tonnes.** National thorium reserves account for 25% of the world's reserves.
- Energy poverty:** India is the third largest producer of electricity, but today about 20% of the country's population does not have **access to electricity**. At about **1,181kWh per year, per capita electricity consumption is very low, about half of the world average**, far below that of developed countries. There is a bottleneck in energy and peak power in the 1015% range.
- Energy Demand:** Nuclear power is an **important factor for India's future energy security**. India's annual energy demand is expected to increase to 800 GW by 2032, so it is very important to consider each energy source in the optimal energy mix.
- Energy efficiency:** The amount of **nuclear fuel required is significantly lower than in thermal power plants**. For example, **producing 10,000 MW of coal requires 3,035 million tonnes of coal, but only 300,350 tonnes of nuclear fuel.**
- Economic Growth:** Over the next few decades, we need about 8-10% sustainable economic growth. Since electricity is an important driving force for economic growth, it is necessary to significantly expand the power capacity other than transmission and distribution systems.
- Decreased energy supply:** Energy supply has been adversely affected by changing weather conditions. Decreased rainfall and increased evaporation reduce water supply, which can reduce the ability to generate electricity from hydropower and other

water-intensive power generation technologies.

- **Climate change:** Due to its zero-emission nature, nuclear power can contribute to global efforts under the Paris Agreement.

Challenges

- **Public Awareness:** Commercial nuclear power is sometimes viewed by the general public as a dangerous or unstable process. This perception is often based on three global nuclear accidents, its false association with nuclear weapons,
- **Used Fuel Transportation, Storage and Disposal:** Many people view used fuel as a growing problem and are apprehensive about its transportation, storage, and disposal.
- **Constructing New Power Plants:** Building a nuclear power plant can be discouraging for stakeholders. Conventional reactor designs are considered multi-billion dollar infrastructure projects. High capital costs, licensing and regulation approvals, coupled with long lead times and construction delays, have also deterred public interest.
- **High Operating Costs:** Challenging market conditions have left the nuclear industry struggling to compete. Strict regulations on maintenance, staffing levels, operator training, and plant inspections have become a financial burden for the industry.



Worldwide Nuclear Production

- Approximately 10% of the world's electricity is produced using nuclear energy.
- Worldwide, nuclear power plants are operational in around 30 countries.
- In France, approximately 75% of the electricity is produced by Nuclear energy.
- A total of around 450 nuclear reactors are operating worldwide for generating electricity.

Safety Provisions at Nuclear Plant

- Nuclear Power Plants in India are required to obtain clearances from Atomic Energy Regulatory Board (AERB).
- Nuclear safety and security aspects are reviewed by AERB before giving clearance for various stages of the projects from sitting onwards.
- AERB has specified safety and security requirements in its Codes & Guides which are in line with international standards.
- AERB has rigorous process for reviewing Nuclear Safety and Nuclear Security aspects of nuclear power projects through multi-tier reviews, apart from periodic regulatory inspections, to ensure adherence to the requirements.
- Various electronic surveillance and security measures have been taken at all nuclear power plant sites of NPCIL.
- Nuclear power plants are designed adopting safety principles of redundancy, diversity and provide fail-safe design features following a defence-in-depth approach.
- This ensures that there are multiple barriers between the source of radioactivity and the environment.
- The operations are performed adopting well laid out procedures by highly qualified, trained and licensed personnel.
- Appropriate Personal Protection Equipment and monitoring aids are provided to all the personnel working in the nuclear power plants.

Government Plans for Nuclear Plants

- There are presently 22 reactors with a total capacity of 6780 MW in operation and one reactor, KAPP-3 (700 MW) has been connected to the grid on January 10, 2021.

- In addition, **there are 10 reactors (including 500 MW PFBR being implemented by BHAVINI) totaling to 8000 MW** under construction at various stages.
- The Government has accorded **administrative approval and financial sanction for construction of 10 indigenous 700 MW Pressurized Heavy Water Reactors (PHWRs)** to be set up in fleet mode.
- On progressive completion of the projects under construction and accorded sanction, the nuclear capacity is expected to reach 22480 MW by 2031.

GIG ECONOMY

GS-III ECONOMY

Context

- The surge in **demand for gig workers, particularly in the shared services and logistics segments**, in the aftermath of the Covid-19 pandemic led to mushrooming of job discovery platforms.

About Gig Economy

- A gig economy is a work **environment (borderless and technology enabled) where organizations/businesses hire temporary workers or freelancers** instead of full-time long-term employees.
- **Fragmented Work** where someone is given a work for certain amount of time
- People **provide a service nearly always through a digital platform**
- Companies **provide temporary positions to workers and the latter reaches independent**, short-term contracts with them.
- So, instead of a regular wage, workers get paid for “gigs”.

Drivers of the Gig Economy

Emergence of the digital age

- Here, **workforce is highly mobile and work can be done from anywhere**, anytime. This means that you need not **reach at the location of the organization** to do the job.

Firms

- In the era of disruption **will be safe as it avoids long term obligations like pension and other emoluments, when they provide short term contract.**
- **The worker can be relieved at any time without any friction.**

Others

- The **short-term engagements better fit for the workers** to search for the best.
- **Software and technological changes taking away human efforts** also contributed to the gig economy.
- **Temporary nature of projects and greater specializations etc.**, added to this trend.
- Uncertain **business climate and declining profits in the context of disruptive innovations** also tempted companies to go for short-term labors.
- In the US, **colleges and universities recruit teachers and professors on contract basis.**

Size of Gig Economy

- An **estimated 56% of new employment in India is being generated by the gig economy** companies across both the blue-collar and white-collar workforce.
- Global Gig Economy Index report **has ranked India among the top 10 countries.** India constitutes about 40% of freelance jobs offered globally.

Advantage of Gig Economy

- **Responding to urgent needs:** The gig economy can benefit workers, businesses, and consumers by better adapting to their current needs and demands for a flexible lifestyle.
- **Cheaper and more efficient:** Most employers can't afford to hire full-time employees. In the gig economy, many people work part-time or in temporary positions.
- The result is cheaper and more efficient services for those who want to use them, like Uber and Airbnb.
- **Expanded options for employers:** **Technology and connectivity over the Internet eliminates the need for freelancers to work in the office.** Therefore, employers have more choices for applicants because they don't have to hire someone to stay nearby.
- **Provide specific know-how:** Professional service companies hire gig staff to provide a wide range of expertise to their client impact teams. Most professional service contacts have extensive domain-specific knowledge, such as consultants.
- **Greater choice for employees:** People often need to move or occupy multiple positions in order to be **able to provide the desired lifestyle.** Today, people also tend to change jobs many times in their lives. The gig economy reflects this upward trend.

- **Economic productivity of young people:** India has a high proportion of young people who are expected to grow. According to IMF economists, India's youth inactivity is the highest in developing countries at 30%.

Associated Challenges

- There is **no certainty, stability or employment** security in the gig economy.
- **Workers do not receive pensions**, benefits, etc. available to full-time employees.
- If stable income is **not guaranteed**, there is **no basis for banks or other financial** service providers to grant credit lines.
- Social goals can be ignored **if the business and profitable freelance path is at the forefront**.
- **Internet connectivity and electricity are still inaccessible to many rural people who are distant dreams**. This denies them this opportunity, which leads to another inequality controversy.
- Confidentiality of documents at work is not guaranteed here. When there are situations in which a gig worker may work for others, including competitors, the employer suspects that they are sharing with the gig worker and is always suspicious.
- For some work **projects where teamwork is essential**, the **gig economy will not work in such scenarios**.

Way Forward

- **Enforcement of Social Security Law:** Platform workers and gig workers will be recognized as the first new expert group in the 2020 Social Insurance Bill.
- This means that Platform **employees are entitled to benefits such as life and disability insurance, old age protection, maternity allowances, pension funds and** occupational accident benefits. The dignity of the gig worker.
- **Take an example from global best practices:** Labor law changes in Ontario and California have shown that platform workers are granted minimum wage and benefits guaranteed worker status.
- This is the **view expressed by EU international organizations, including European trade unions**.
- Therefore, the Government of India **should also consider granting gig workers the status of an aggregator employee**. This **automatically provides all work services such as PF and ESI**.
- **Providing Gig Workers with the Opportunity to Become a Self-employed Entrepreneur:** Governments should consider offering platform workers a loan program to end their reliance on platform aggregator companies.

DIRECT TAX COLLECTION

GS-III ECONOMY

Context

- The net direct tax collection grew almost 68% during the April 1-November 23 period to more than Rs. 6.92 lakh crore.

Statistic/Fact

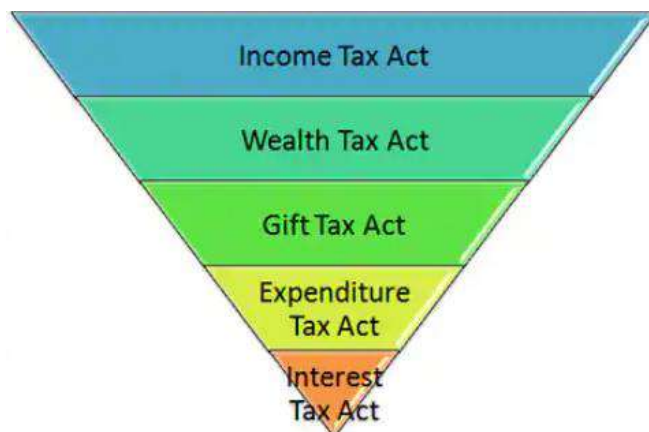
- The net collection **between April 1 - November 23 in 2020-21 and 2019-20 fiscals was more than Rs. 4.12 lakh crore and over Rs. 5.44 lakh crore**.
- The gross direct tax collection (before adjusting refunds) as of November 23 stood at more than ₹8.15 lakh crore, a 48.11% growth over collections a year earlier.

Comparison of Direct and Indirect Taxes

- There are different implications of direct and indirect taxes on the country. However, both types of taxes are important for the government as taxes include the major part of revenue for the government.

Direct Taxes	Indirect Taxes
It is levied on income and activities conducted. The burden of tax cannot be shifted in case of direct tax. It is paid directly by person concerned.	It is levied on product or services. The burden of tax shifted for indirect taxes. It is paid by one person but he recovers the same from another person i.e. person who actually bear the tax ultimate consumer.
It is paid after the income reaches in the hands of the taxpayer Tax collection is difficult.	It is paid before goods/service reaches the taxpayer. Tax collection is relatively easier.
Example Income tax, wealth tax etc.	Example GST, excise duty custom duty sale tax service tax

Type of Direct Taxes



Direct tax issue

- **Gross tax-to-GDP** which was 11% in FY19, fell to 9.9% in FY20 and marginally improved to 10.2% in FY21 (partly due to decline in GDP) and is envisaged to be 10.8% in FY22.
- India's **tax-to-GDP ratio**, the universal measure for a state's revenue-raising ability, for centre and states combined was 17.1% in 2018-19, lower than the average of its emerging market peers (20.9%).
- Crucially, **India is more reliant on indirect taxes** (taxes on spending) instead of direct taxes (taxes on income) compared to its peers.
- Since **direct taxes are taxed on income**, they are more progressive and hurt the poor less. But the direct tax share in India's tax collections has shrunk as overall tax revenues have fallen.

Reasons for Low tax to GDP ratio

- **Tax exemption** raj that benefited the richer private sector.
- India has **relatively large informal/unorganised sector**, and tax evasion is more rampant in informal sector compare to organised sector.
- **Low per capita income**, high poverty, keeps tax collections low.
- Out of 25 crore households in India, **15 crore belong to agricultural sector** which are exempted from taxes.
- A **parallel economy of unaccounted incomes** and expenditures exists which goes untaxed.
- India has **one of the highest numbers of disputes between tax administration and taxpayers**, with lowest proportion of recovery of tax arrears.
- India's **direct to indirect tax ratio is roughly 35:65**. This is in contrast to most OECD economies where the ratio is the exact opposite, 67:33 in favour of direct taxes.

Government Initiatives to Improve Direct Taxes

- **Personal Income Tax** - In order to reform Personal Income Tax, the Finance Act, 2020 has provided an **option to individuals and co-operatives for paying income-tax at concessional rates if they do not avail** specified exemption and incentive.
- **Abolition of Dividend Distribution Tax (DDT)** - the Finance Act, 2020 removed the Dividend Distribution Tax under which the companies are not required to pay DDT with effect from 01.04.2020. The dividend income shall be taxed only in the hands of the recipients at their applicable rate.
- **Vivad se Vishwas** - Direct Tax Vivad se Vishwas Act, 2020 was enacted on 17th March, 2020 under which the declarations for settling disputes are currently being filed.
- **Faceless E-assessment Scheme** - This is for implementing assessments by eliminating the interface **between assessors and assessors, optimizing resource usage through functional specialization, and implementing team-based assessments**.
- **Document Identification Number (DIN)** - In order to make the work of the Income Tax Department efficient and transparent, we will receive all communications from the Tax Department, including assessments, appeals, investigations, penalties and corrections after October 1, 2019 through a unique computer-generated Document Identification Number (DIN).
- **Encouraging digital transactions** - In order to facilitate the digitalisation of the economy and reduce unaccounted transactions, various measures have been taken which include reduction in rate of presumptive profit on digital turnover, removal of MDR charges on prescribed modes of transactions, reducing the threshold for cash transactions, prohibition of certain cash transactions, etc.

BAD BANK

GS-III ECONOMY

Context

- Leading banks have made a pitch for setting up an Asset Reconstruction Company specifically to deal with collections and recovery of farm loans.

Need of the Asset Reconstruction Company

- At present, there is **not a unified mechanism to tackle Non-Performing Assets (NPAs)** in the farm sector
- There is **not a single law that deals with** enforcement of mortgages created on agricultural land.
- Agriculture being a state subject**, the recovery laws – wherever agricultural land is offered as collateral – varies from state to state.
- Agriculture market is scattered in India**, different banks have to make efforts to capture and connect to these markets.
- Enforcement of provisions on mortgaged farm land is generally done through the Revenue Recovery Act of states**, Recovery of Debt and Bankruptcy Act, 1993, among other state-specific regulations. These are often time consuming and in some states revenue recovery laws covering bank loans have not been enacted.

Agricultural Debt

- As per data from the 'Situation Assessment of Agricultural Households and Land Holdings of Households in Rural India, 2019, even as the **percentage of agricultural households indebted has come down from 52% in 2013 to 50.2% in 2019**, the average debt has jumped by more than 57% from Rs 47,000 in 2013 Rs 74,121 in 2019.
- The survey data **shows that 69.6 % of the outstanding loans by agricultural households were taken** from institutional sources such as banks, cooperative societies, and other government agencies.
- The **survey is conducted by the National Statistical Office's (NSO)**.

About Bad Bank

- It's an entity where all the **bad loans from all the banks can be parked** – thus, **relieving the commercial banks of their "stressed assets"** and allowing them to focus on resuming normal banking operations, especially lending.
- While commercial banks **resume lending**, the so-called **bad bank**, or a bank of bad loans, would try to sell these "assets" in the market.
- The bad bank structure will assist in consolidation of debt, currently fragmented across various lenders, thus leading to faster, single-point decision making, including through Insolvency and Bankruptcy Code (IBC) processes.

Positives

- A bank will **get rid of all its toxic assets, which were eating up** its profits, in one quick move.
- When the **recovery money is paid back**, it will further improve the bank's position. Meanwhile, it can start lending again.
- the decision is in keeping with the government's commitment to reduce non-performing assets (NPAs) **of public sector banks (PSBs) through the four "R" strategy -- Recognition, Resolution, Recapitalisation and Reform**.
- Since the **guarantee is in a form of contingent liability**, it will not lead to immediate cash outflow and therefore is unlikely to impact the fiscal position in near future. **It will boost the economic growth**.
- It will **incentivise quicker action on resolving stressed assets**, thereby helping in better value realization.
- The five-year **limit will encourage banks to not drag the process**, adding NARCL has already been incorporated as a company.

Challenges

- The plan of **bailing out commercial banks will collapse if** the bad bank is unable to sell such impaired assets in the market.
- Taxpayer Money to improve Banking**: whether it is **recapitalising PSBs laden with bad loans or giving guarantees for security receipts**, the money is coming from the taxpayers' pocket. While recapitalisation and such guarantees are often designated as "reforms", they are band aids at best.

Way Forward

- A **farm focused ARC on the lines of recently set up National Asset Reconstruction Company Ltd** to deal with industry NPA should be set up.
- Banks have **their hands tied when it comes to recovery of loans in the agriculture sector**. There is also a problem of anticipated farm loans waivers, which makes recovery difficult.
- The ARC has a **very vital role to play in the current scenario and it should be strengthened to solve the massive NPA problem** prevailing in the Indian banking industry.

- However, **ARC cannot be the sole response**. The most efficient approach would be to design solutions tailor-made for different parts of India's bad loan problem and use ARC only as a last resort once all other methods fail.

ELECTRIC VEHICLES

GS-III ECONOMY

Context

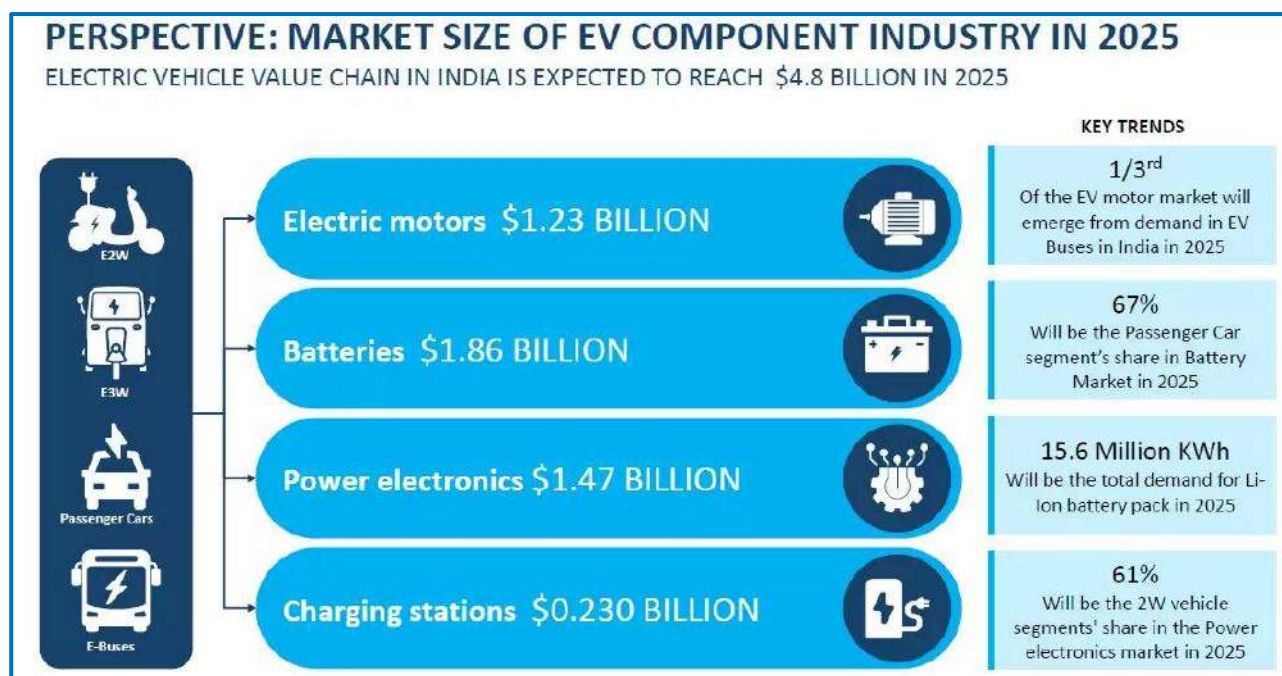
- India is the fifth largest car market in the world and has the potential to become one of the top three in the near future — with about 40 crore customers in need of mobility solutions by the year 2030.

Data on Electric Vehicle

- It is estimated that **two in every hundred cars sold today** are powered by electricity.
- This phenomenon is **today defined by the rapid growth in EV uptake, with EV sales for the year 2020, reaching 2.1 million**.
- The global EV fleet totalled 8.0 million in 2020 with EVs accounting for 1 per cent of the global vehicle stock and 2.6 per cent of global car sales.
- Falling battery costs and rising performance efficiencies are fueling the demand for EVs globally.

Benefits of EV

- **Reduced greenhouse gases emission** - petrol and diesel are important sources of carbon dioxide emission. CO₂ is a leading source of global warming. EVs can help in reducing the GHG emissions.
- **Reduced air pollution** - Petroleum fuels are also a source of NO_x, SO₂ and particulate matter along with photochemical smog. With EV this pollution can be addressed.
- **Reduced noise pollution** - EV vehicles produce less noise as compared to petrol or diesel vehicles. This will be really helpful to transport in urban areas, forested areas etc.
- **Use of renewable energy** - with EV there will be a rise in electricity demand. This will give scope for more renewable energy like solar and wind.
- **Easier to maintenance** -An internal combustion engine usually contains more than 2,000 moving parts. An electric motor onboard an EV on the other hand contain around 20 moving parts.
- **Low cost of ownership** -It is a proven fact by many researches that EVs offer way lower cost of ownership in their lifecycle compared to fossil fuel powered vehicles.



Challenges

- **High price** -There is no price parity between electric vehicles and ICE vehicles in India. Electric vehicles are way more expensive than their conventional fuel-powered counterparts. For example, the Tata Nexon price starts from ₹7.19 lakh, while the Tata Nexon EV price starts from ₹13.99 lakh. Weak charging infrastructure beyond major urban areas.
- **Range anxiety** -Range anxiety is one of the crucial challenges ahead of the growth path for electric vehicles in India. The EV customers are often worried about the vehicles capability to reach point B from point A before the battery runs out.
- **Consumer perception** -The consumer perception about electric vehicles in India is still weak compared to ICE vehicles. The

range anxiety, lack of charging infrastructure, a wide gap between EV and ICE vehicle prices, lack of assurance about satisfactory resale value play key roles in that.

- **Scarce battery technology** -The lithium-ion battery is the most popular and widely used energy source for EVs. India doesn't produce lithium. The country doesn't produce li-ion batteries either.
- **Majority of EVs are not covered under FAME scheme** -The Indian government took an attempt to promote electric mobility in the country via incentivizing and discounts for EVs. The terms and conditions of the FAME scheme doesn't support a majority of the electric vehicles.
- **Lack of products** -Only a few options are there and majority among them are not from established trustworthy brands.

Government steps

- **FAME (faster adoption of electric and hybrid vehicles)** scheme in its phase 2 has been going on.
- **EV policy** - individual states are coming with EV policies. Eg. Recently the Maharashtra government came up with its policy till 2025.
- **Green colored number plates** - the government has decided to use green colored number plates for EVs.
- The Ministry of Power has **issued a policy on charging infrastructure and has issued a notification clarifying that charging electric vehicles** will be a service, not a sale of electricity.
- Decision to **promote aluminum batteries as an alternative** to lithium batteries.
- electricity **regulatory commissions have also brought out special tariffs for EV charging**, and ARAI has introduced standards for AC & DC charging.
- MoHUA has **amended Building Bye-laws and Urban and Regional Development Plans Formulation and Implementation Guidelines** to make charging infrastructure development as an integral part of urban planning, development and construction.

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AMENDED GUIDELINES FOR COARSE GRAINS

GS-III AGRICULTURE

Context

- The Government of India has amended the guidelines for procurement, allocation, distribution and disposal of coarse grains dated March 21, 2014.

Prior Provisions

- The procurement of coarse grains was regulated by the 2014 guidelines, under which states were allowed to procure coarse grains from farmers at MSP under the central pool.
- This was subject to the prior approval of the Government of India on the detailed procurement plan prepared by states in consultation with the Food Corporation of India.
- As per the 2014 guidelines, the whole quantity was to be distributed within 3 months from the end of the procurement period.

Issue

- Several difficulties were being faced by some State Governments with respect to distribution period of coarse grain which was 3 months each for procurement and distribution activity, irrespective of the shelf life of the commodity.

The recent amendment

- Distribution period of Jowar and Ragi has been increased to 6 and 7 months, respectively, from the earlier period of 3 months.

Significance

Increased procurement and consumption

- This would increase procurement and consumption of coarse grains as the state would have more time to distribute these commodities in Target Public Distribution System (TPDS)/other welfare schemes.

Sustainable agriculture

- As these crops are normally grown on marginal and un-irrigated land, therefore, enhanced cropping of these would encourage sustainable agriculture and crop diversification.

Benefit to farmers

- With the increased procurement, the number of farmers benefitting from the procurement of these crops would also increase.

Foster immunity and health

- Coarse grains are highly nutritive, non-acid-forming, gluten-free and have dietary properties.
- Besides, to strengthen our fight against malnutrition in children and adolescents, the consumption of coarse grains would help to foster immunity and health.

IMPACT OF NATURAL DISASTERS ON AGRICULTURE

GS-III AGRICULTURE

Context

- Agriculture crops cultivated in about 50.40 lakh hectare of area have been affected across the country due to heavy rains, floods and landslides so far this year, with maximum damage reported in Karnataka, Parliament was informed on Tuesday.

Some Statistics: FAO findings

- Nearly a quarter of damages caused by natural disasters in the developing world are borne by the agriculture sector, according to Food and Agricultural Organization (FAO).
- During drought period, agriculture absorbs up to 84 percent of all economic impacts.
- Within the agricultural sector, 42 per cent of assessed losses were to crops (\$13 billion) - with floods being the main culprit, responsible for 60 per cent of crop damages, followed by storms (23 per cent of crop damages).

Climate-resilient agriculture

- Climate-resilient agriculture (CRA) is an approach that includes sustainably using existing natural resources through crop and livestock production systems.

The need

- This is to achieve long-term higher productivity and farm incomes under climate variabilities.
- This practice reduces hunger and poverty in the face of climate change for forthcoming generations.
- CRA practices can alter the current situation and sustain agricultural production from the local to the global level.

- Improved access and utilisation of technology, transparent trade regimes, increased use of resources conservation technologies, an increased adaptation of crops and livestock to climatic stress are the outcomes from climate-resilient practices.
- Most countries have been facing crises due to disasters and conflicts. Food security, however, is adversely affected by inadequate food stocks, basic food price fluctuations, high demand for agro-fuels, and abrupt weather changes.

Strategies and technologies for climate change adaptation

Tolerant crops

- Patterns of drought may need various sets of adaptive forms.
- Example: To reach deficient downpour conditions, early maturing and drought-tolerant cultivars of green gram (BM 2002-1), chickpea and pigeon pea (BDN-708) were brought on selected farmer's fields in Aurangabad district of Maharashtra (rainfall of 645 millimetres).
- This provided 20-25 per cent higher yield than the indigenous cultivars.

Water management

- Water-smart technologies like a furrow-irrigated raised bed, micro-irrigation, rainwater harvesting structure, cover-crop method, greenhouse, laser land levelling, reuse wastewater, deficit irrigation and drainage management can support farmers to decrease the effect of variations of climate.
- Various technologies based on a precision estimation of crop water needs; groundwater recharge techniques; adoption of scientific water conservation methods; altering the fertilizer and irrigation schedules; cultivating less water requiring varieties; adjusting the planting dates; irrigation scheduling; and adopting zero-tillage will help farmers to reach satisfactory crop yields, even in deficit rainfall and warmer years.

Agro-advisory

- Response farming is an integrative approach; it could be called farming with advisories taken from the technocrats depending on local weather information.
- The success of response farming, viz., decreased danger and enhanced productivity has already been taken in Tamil Nadu and many other states.
- Response farming can be a viable choice for climate change adoption strategies, for the variations of climate is not a sudden one.

Soil organic carbon

- Conservation agriculture technologies (reduced tillage, crop rotations, and cover crops), soil conservation practices (contour farming) and nutrient recharge strategies can refill soil organic matter by giving a protective soil cover.
- Integrated nutrient management deals with the application of organic and inorganic fertilizers, in addition to farmyard manure, vermicompost, legumes in rotation, and crop residue for sustaining soil health for the long term.
- Feeding the soil instead of adding fertilizers to the crop without organic inputs is the key point for the long-term sustainability of Indian agriculture.

National Programmes for climate change adaptation

- The National Mission of Sustainable Agriculture was implemented in 2010 under the National Action Plan on Climate Change (NAPCC) to promote the judicious management of available resources and this was one of the eight missions under NAPCC.
- The Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) was launched in 2015 to address the issues of water resources and provide a permanent solution that envisages Per Drop More Crop, by promoting micro / drip irrigation for the conservation of maximum water.
- The Paramparagat Krishi Vikas Yojana mission was executed to extensively leverage adaptation of climate-smart practices and technologies in conjunction with the Indian Council of Agricultural Research and state governments of India.
- To mitigate climate extreme actions, Green India Mission was launched by the GOI in 2014 under the umbrella of NAPCC with the primary objective of protecting, restoring and enhancing India's diminishing forest covers, thereby reducing the deleterious effects of climate change.
- To protect the soil health, GOI has launched the Soil Health Card scheme with the main objective of analysing cluster soil samples and advocating farmers regarding their land fertility status.
- Neem-Coated Urea was also introduced to minimise the excess addition of urea fertilizers, thereby protecting soil health and supplying plant nitrogen.
- To encourage farmers with more income benefit and ecosystem protection, programmes such as the National Project on Organic Farming and National Agroforestry Policy was introduced in 2004 and 2014 respectively.

Role Models

- Andhra Pradesh, Himachal Pradesh, Sikkim, etc, have already initiated several programmes to adopt and promote organic farming practices on a wider scale. Sikkim is an organic state.

- The ICAR, is implementing agriculture contingency plans in about 650 districts of India towards climate change preparedness for the last seven years.
- ICAR has established climate-resilient villages across India in 151 districts, which are replicated by the state governments towards the overall objective of building carbon positive villages.

Way ahead

- In a nutshell, following steps are crucial to build climate resilient agriculture systems and achieve sustainable development goals (SDG) in India:
 - Adaptation of appropriate mitigation technologies such as the cultivation of tolerant breeds to overcome the climate stress.
 - Water and nutrient management for efficient productivity and resource utilization.
 - Agro-advisories for timely crop monitoring.
 - Conservation agricultural practices to build soil organic carbon and to build congenial environment for plant growth, manure management.
 - Reduction of greenhouse gas emissions from all agriculture and non-agricultural sources has to be prioritised. The introduction of neem-coated urea is one such policy intervention.
 - Structured training is essential to build confidence in stakeholders and sensitise them to understand the climate change events.
 - Implementing CRA across the country is the need of the hour.
 - Flagship farmer-oriented programmes are needed to improvise skills in agriculture and allied sectors
 - Collaboration between farmers, research institutions, funding agencies, governments, and non-government organisations and private sectors combine strengths to promote CRA

WORLD SOIL DAY

GS-III AGRICULTURE

Context

- Recently, ICAR (Indian Council of Agricultural Research) – Central Coastal Agricultural Research Institute (CCARI) celebrated 'World Soil Day' (WSD) on 5th December 2021.

This year's theme

- World Soil Day - 2021 Theme - "Halt Soil Salinization, Boost Soil Productivity".

About

- The World Soil Day is observed on 5th December every year across the globe.
- To apprise the farmers and citizens about the soil's importance in maintaining the healthy ecosystems and human well-being by addressing the growing challenges in soil management, fighting soil biodiversity, etc.

Soil Health in India

Causes of poor condition

- Imbalance in the use of fertilizers in soil results in a loss of fertility.
- Fertilizers and sundry agricultural chemicals seep easily into the ground, toxifying the soil and groundwater.
- Urea is used more than other fertilizers. While the recommended ratio of use of the NPK fertilizers is 4:2:1, this ratio in India is currently at 6.7:2.4:1.6
- An imbalanced use of urea leads to a loss of fertility in the soil over a period of time, affecting productivity.
- A 2019 report by the Centre for Science and Environment on the fertiliser industry in India – the world's largest producer and consumer of fertilizers after China – warns that nitrogen pollution in surface and groundwater has reached "alarming levels".

Initiatives to Improve Soil Health in India:

- Zero Budget Natural Farming, a more sustainable form of agriculture using traditional and organic farming methods such as intercropping and zero chemicals.
- Soil Health Card Scheme
- Organic Farming
- Paramparagat Krishi Vikas Yojana
- Fertilizer Self-Sufficiency
- Digital Agriculture
- Carbon Farming

- The Nutrient Based Subsidy (NBS) Scheme

Read: <https://www.iasgyan.in/blogs/properties-of-soils-in-india>

FOOD SUMMIT AND ZBNF

GS-III AGRICULTURE

Context

- Prime Minister Narendra Modi will address the farmers during the valedictory session of the National Summit on Agro and Food Processing on 16th December 2021 at Anand, Gujarat.

About


- The Government of Gujarat is organizing the National Summit on Agro and Food Processing, with focus on Natural Farming. The Summit brings in focus on natural farming.


About Natural Farming/ZBNF

THE METHOD AND ITS ROOTS

CONCEPT OF ZERO-BUDGET NATURAL FARMING
The concept of zero-budget natural farming is self-explanatory. If the term is broken into two halves, "zero budget" means without using any credit and without spending any money on purchased inputs, while "natural farming" means farming with nature and without chemicals.

THE DIFFERENCE
In zero-budget natural farming, all goods used for growing the crop are made on the farm, with the help of cow urine and dung. Ghee and natural ingredients are also used in this. On the other hand, in organic farming, the fertilizer and insecticides, though organic, are procured from outside.

FOUNDER
 The concept of zero-budget natural farming was founded by Maharashtra-based Subhash Palekar. It is also an off-shoot of the Japanese idea of natural farming. He founded the concept in the 1990s.




Why is ZBNF necessary?

- From the (NSSO) National Sample Survey Office data, 70% plus of farmers spend more they earn, and most farmers have debt.
- The indebtedness level is around 90% in states like Andhra Pradesh and Telangana, where each household has an average debt of Rs 1 lakh.
- To achieve the promise of the central government to double the income of farmers by 2022, one factor being considered is natural farming methods zero budget natural farming.

Why is ZBNF important in a nutshell

- The economic survey has highlighted the ecological benefits.
- Cost of farming inputs is rapidly increasing.
- The number of farmer's suicide cases is growing continuously.
- The demand for safe food increased among customers.
- Unstable market price.

Advantages of Zero Budget Natural Farming

- Zero budget natural farming reduces the initial cost of farmers.
- Farmer's income automatically increases.
- Cow dung adds soil value. It is full of nutrients value and available locally.
- Bacteria of cow dung decompose the organic matter in soil and make soil for the plants.
- It requires less electricity and water.
- It decreases the disease attack risk on the crop.

Disadvantages of Zero Budget Natural Farming

- This farming method used in some parts of India.

- The type of farming being debated, and there is not much scientific research under evaluation.
- This farming technique used in negligible areas.

Zero Budget Natural Farming V/S Organic Farming

S/N	Zero Budget Natural Farming(ZBNF)	Organic Farming
1.	No external fertilizers are used in ZBNF.	Organic fertilizers such as compost, cow dung, and vermicompost are used in organic farming.
2.	There is no tilling and no mixing. It requires natural ecosystems.	It requires basic agro methods like tilling, plowing, mixing, etc.
3.	It is low-cost farming due to the local biodiversity.	It is expensive due to the need for bulk manures.

WTO PANEL'S SUGAR REPORT AGAINST INDIA

GS-III AGRICULTURE

Context

- A panel set up by the Dispute Settlement Body (DSB) of the World Trade Organization (WTO) has ruled against India's sugar subsidies.

Details

- It has asked it to **withdraw its prohibited subsidies under the Production Assistance, the Buffer Stock, and the Marketing and Transportation Schemes within 120 days from the adoption of the report.**
- The panel circulated its report, '**India – Measures Concerning Sugar and Sugarcane**'.
- The report is yet to be adopted (or rejected) by the WTO's full membership.

Background

- The World Trade Organization (WTO) uses some "boxes" for classifying trade subsidies (Domestic Trade Support) to traffic lights. This is to prevent Trade Distortion.
- WTO basically aims to remove trade barriers and to promote transparent market access and integration of global markets.

Trade Distortion

- Trade distortion is commonly viewed as **any interference that significantly affects prices or market behavior.**
- A tax or action that changes the normal characteristics of trade.
- For example, many governments subsidize the agricultural sector, which sometimes makes farming economically feasible, at least for certain products.
- The subsidies can mean farmers gain artificially high prices for their products.
- Some experts believe that trade-distorting agricultural subsidies are partly responsible for increases in global food prices.

WTO's conditions

Domestic Support

- It calls for reduction in domestic subsidies that distorts free trade and fair price.
- Under this provision, the **Aggregate Measurement of Support (AMS) is to be reduced by 20% over a period of 6 years by developed countries and 13% over a period of 10 years by developing countries.**

GREEN BOX	BLUE BOX	AMBER BOX
<ul style="list-style-type: none"> • Subsidies that do not distort trade or cause only minimal distortion. • Usually, these subsidies are not for specific products. • Green Box subsidies are allowed without any limit. • They can include direct income support for farmers that are decoupled from current production levels and/or prices. • Examples: Research funding, conservation and environmental programs, domestic food aid including food stamps, inspection programs, and disaster relief. 	<ul style="list-style-type: none"> • Amber box subsidies that tend to limit production are classified under the Blue Box. • Its opponents argue that these payments are only partly decoupled from production. • Countries in favour say that these subsidies are needed for agricultural reforms. • Examples: Subsidies linked with the capping of acreage or number of animals. • Only a few nations use subsidies in this box, namely, Norway, Slovenia, Iceland, etc. • There is no cap on these subsidies. 	<ul style="list-style-type: none"> • Includes subsidies that distort international trade by making the products of the country cheaper as compared to similar products from other countries in the global market. • They are said to distort trade since they encourage excessive production. • Examples: Input subsidies such as subsidy for fertilisers, seeds, electricity, irrigation, etc. Minimum Support Price (MSP) also included under this box. • It is capped at 5% of the total agricultural production for developed countries and at 10% for developing countries.

Market Access

- Tariffs fixed by individual countries need to be cut progressively to allow free trade.
- It also required countries to remove non-tariff barriers and convert them to Tariff duties.

Export Subsidies

- There should be limited subsidies as they lead to dumping of highly subsidized (and cheap) products in other countries and damage the domestic agriculture sector of other countries.

Peace Clause (Interim measure at the Bali ministerial meeting)

- High subsidies are seen to be distorting global trade. The peace clause protects a developing country's food procurement programmes against action from WTO members in case subsidy ceilings are breached.
- This is in case the subsidy ceilings **10% of value of food production in the case of India and other developing countries- are breached.**
- Under the Peace Clause, WTO members agreed to refrain from challenging any breach in the prescribed ceiling by a developing nation at the dispute settlement forum of the WTO.
- This **clause will be there till a permanent solution is found to the food stockpiling issue.**
- India was the first country to invoke the peace clause. India had invoked the clause in 2018-19 (13 per cent) and 2019-20 (11 per cent) as it breached the subsidy cap for rice.

About WTO:

- Intergovernmental organisation which regulates the international trade.
- Officially commenced **in 1995 under the Marrakesh Agreement.**
- Signed by 123 nations in 1994.
- WTO had **replaced GATT (General agreement on tariffs and trade).**
- It deals with agriculture, textiles and clothing, banking, telecommunications, government purchases, industrial standards and product safety, food sanitation regulations, intellectual property and much more.

FUNCTIONS OF WTO

- Administering WTO trade agreements
- Forum for trade negotiations
- Handling trade disputes
- Monitoring national trade policies Technical assistance and training for developing countries
- Cooperation with other international organizations

PRINCIPLES OF WTO

- Administering WTO trade agreements
- The basic principles of the WTO (According to the WTO):

Trade Without Discrimination:

- Most Favoured Nation (MFN): treating other people equally
- National treatment: Treating foreigners and locals equally
- Freer trade: gradually, through negotiation
- Predictability: through binding and transparency
- Promoting fair competition
- Encouraging development and economic reform.

Mechanisms of WTO

- Trade Related Aspects of Intellectual Property Rights (TRIPS)
- Trade Facilitation Agreement
- General Agreement on Trade in Services (GATS)
- Trade Policy Review Mechanism

The recent complaint against India

- Three countries, Australia, Brazil and Guatemala, had complained about "support allegedly provided by India in favour of producers of sugarcane and sugar. Both domestic support measures, as well as all export subsidies.
- India's domestic support and export subsidy measures appeared to be inconsistent with various articles of the WTO's Agreement on Agriculture and the Agreement on Subsidies and Countervailing Measures (SCM), and Article XVI (which concerns subsidies) of the General Agreement on Trade and Tariffs (GATT).
- They raised the issue of India's alleged export subsidies, subsidies under the production assistance and buffer stock schemes, and the marketing and transportation scheme.
- India provides domestic support to sugarcane producers that exceed the **de minimis level of 10% of the total value of sugarcane production, which they said was inconsistent with the Agreement on Agriculture.**

Note: The Agreement on Subsidies and Countervailing Measures ("SCM Agreement") addresses two separate but closely related topics: multilateral disciplines regulating the provision of subsidies, and the use of countervailing measures to offset injury caused by subsidized imports.

India's counter arguments

- India has maintained its stand that the country's sugar exports comply with WTO rules.
- India does not extend a subsidy to its farmers for exports, but **instead gives a production subsidy.**

- India said that the “complainants have failed to show that India’s market price support for sugarcane, and its various schemes violate the Agreement on Agriculture.
- It argued that “the requirements of Article 3 of the SCM Agreement are not yet applicable to India and that India has a phase-out period of 8 years to eliminate export subsidies, pursuant to Article 27 of the SCM Agreement.
- On the issue of MSP being violative of WTO norms, India has dismissed these allegations and has demanded that MSP should be calculated by using the recent reference period instead of 1986/88 prices, which was factored in at the time of the creation of the WTO.
- The price support is to ensure stability in food grain prices and their equitable distribution at affordable prices to the marginalized and vulnerable sections of society throughout the year.
- India has underlined that special and differential treatment (S&DT) is a treaty embedded right at the WTO and it cannot be taken away based on certain arbitrary assumptions.
- The basis of S&DT is to give members time and flexibility to integrate into the rules-based system and members with huge differences in economic and social development cannot be put in the same category.

Challenges faced by WTO

- WTO has been less effective in addressing trade protectionism. This raised questions over WTO’s credibility.
- New emerging issues: electronic commerce, investment facilitation, domestic regulation in services.
- Side stepping WTO: countries have turned to free trade agreements to explore new trade-related issues that are currently not addressed within the WTO.
- Administrative issues: Some members of WTO established Multi-party Interim Appeal Arbitration Arrangement as contingency appeal arrangement for trade disputes as WTO’s dispute settlement body has become dysfunctional.
- Lack of Transparency: no agreed definition of what constitutes a developed or developing country, members can currently self-designate as developing countries to receive ‘special and differential treatment’

Reforming WTO: The Way ahead

- A **reaffirmed commitment to the rules-based liberal market order with a development dimension** must be the foundational starting point.
- A reformed WTO will have to be constructed on the **foundation of liberal multilateralism, resting on open, non-discriminatory plurilateral pillars, an improved Appellate Body, explicit accommodation of regional trade agreements, and appropriate safety valves for rules-based sovereign action**.
- Development of a **new set of rules to keep pace with changes in the market and technology**.
- Rules and disciplines on topics ranging from trade-distorting industrial subsidies to digital trade require updates and for dealing with digital trade and e-commerce, aligning trade and environmental sustainability
- A **credible trading system requires a dispute settlement system** that is accepted by all.
- WTO should **work on a Covid-19 vaccine Intellectual Property Rights waiver and the use of flexibilities of the TRIPS agreement and the Doha Declaration on TRIPS Agreement and Public Health**.
- India, along with the G-33 (group of nations), has been engaging in finding a permanent solution to the public stockholding issue.
- WTO’s approach is “completely imbalanced” and tilted towards the developed countries.
- Finding a permanent solution to the public food stockpile issue is linked to the survival of 800 million hungry people across the globe.

DIVERSIFICATION OF FOOD BASKET IN PROGRAMMES

GS-III AGRICULTURE

Context

- NITI Aayog has entered into an agreement with United Nations World Food Program (WFP) to address issues related to inclusion of millets in government programmes.

The agreement

- A **more diversified food basket** under its free food distribution programme with focus on coarse grains and millets.
- The focus will be on mainstreaming millets and strengthening of climate resilient agriculture for enhanced food and nutrition security in India.
- The partnership focuses on mainstreaming millets and supporting India in taking the lead globally in knowledge exchange.
- Further, the partnership will aim at building resilient livelihoods for small-holder farmers and adaptation capacities to climate change and transforming food systems.

Millets

About

- Millets are cereal crops with high nutritive value and categorized as small-seeded grasses.
- The key varieties of millets include Sorghum, Pearl Millet, Ragi, Small Millet, Foxtail Millet, Barnyard Millet, Kodo Millet and others.

Major Producers

- Major producers include Rajasthan, Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Maharashtra, Gujarat and Haryana.

Nutritious values

- High in dietary fibre, nutri-cereals are a powerhouse of nutrients including iron, folate, calcium, zinc, magnesium, phosphorous, copper, vitamins and antioxidants.

Need of the hour

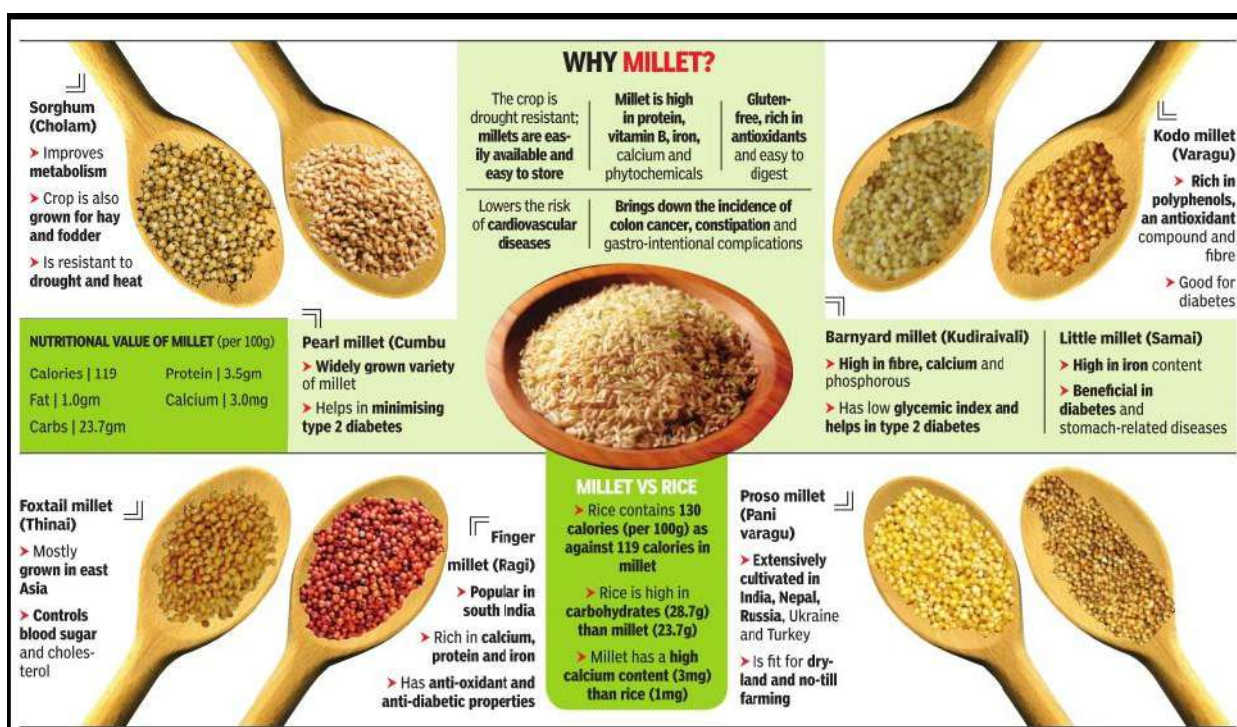
- There is need to focus on the production of millets, also now known as “nutri-cereals” examples of nutri-cereals like jowar, bajra and ragi.

Government effort

- Government is incentivising the production of nutri-cereals to increase the intake of diverse and nutritious diets, improve their availability in markets and bring benefits to small and medium farmers, who are the main cultivators of coarse grains.

International effort

- United Nations has declared the year 2023 as the International Year of Millets and preparations are being made to celebrate the International Year of Millets at the global level.



Efforts made: A multi-pronged strategy of the Government

Rebranding

- First strategy from a consumption and trade point of view was to re-brand coarse cereals/millets as nutri-cereals. Till 2018-19, millet production was extended to over 14 states.

Recognition

- The government had observed 2018 as a year of millets to encourage and promote millet production in India and declared 2023 as the International Year of Millets, in line with the United Nations General Assembly resolution.

Hiked MSP

- Second, the government hiked the MSP of nutri-cereals, which came as a big price incentive for farmers.
- As we compare the data on MSPs for food crops from 2014-15 against 2020, we see that the MSP for ragi has jumped a whopping 113 per cent, followed by bajra and jowar at 72 per cent and 71 per cent respectively.
- MSPs have been calculated so that the farmer is ensured at least a 50 per cent return on their cost of production.

Inclusion in PDS

- Next to provide a steady market for the produce, the government included millets in the public distribution system.

Increased area

- The Ministry of Agriculture & Farmers' Welfare is running a Rs 600-crore scheme to increase the area, production and yield of nutri-cereals.

Realigning of cropping pattern

- With a goal to match the cultivation of nutri-cereals with local topography and natural resources, the government is encouraging farmers to align their local cropping patterns to India's diverse 127 agro-climatic zones.

Support

- Provision of seed kits and inputs to farmers, building value chains through Farmer Producer Organisations and supporting the marketability of nutri-cereals are some of the key interventions that have been put in place.

Research and campaigns

- And finally, the Ministry of Women and Child Development has been working at the intersection of agriculture and nutrition by setting up nutri-gardens, promoting research on the inter-linkages between crop diversity and dietary diversity and running a behaviour change campaign to generate consumer demand for nutri-cereals.

Way Ahead

Food Diversification

- Under the distribution system, it is time that we shift the focus of food distribution programmes from 'calories fundamentalism' to providing a more diversified food basket, including coarse grains and millets to improve the nutritional status of pre-school children and women of reproductive age.

Millet mainstreaming

- In the next phase, it's important to scale-up of millet mainstreaming through knowledge sharing and intense engagement with select states.
- This will leverage India's expertise to support developing countries for millet mainstreaming and work on building capacities for climate resilient and adaptive livelihood practices.

Capacity Building

- India is rightly focusing on capacity building in research, teaching, policy-making, trade and farming of nutritious cereals, which will benefit the farmers while conserving the amazing diversity available in this group of crops.

Promotion

- As the government sets to achieve its agenda of a malnutrition-free India and doubling of farmers' incomes, the promotion of the production and consumption of nutri-cereals is a policy shift in the right direction.

PROHIBITION OF STREPTOMYCIN + TETRACYCLINE IN AGRICULTURE

GS-III AGRICULTURE

Context

- The Union Ministry of Agriculture and Farmers Welfare recently notified the draft order on 'Prohibition of Streptomycin + Tetracycline in agriculture', which prohibits import, manufacture or formulation of Streptomycin and Tetracycline for use in agriculture from February 1, 2022.

What is AMR?

- Antimicrobial resistance (AMR) is the ability of microorganisms to persist or grow in the presence of drugs designed to inhibit or kill them.
- These drugs, called antimicrobials, are used to treat infectious diseases caused by microorganisms such as bacteria, fungi, viruses and protozoan parasites.
- When microorganisms become resistant to antimicrobials, standard treatments are often ineffective, and in some cases, no drugs provide effective therapy. Consequently, treatments fail.
- This increases illness and mortality in humans, animals and plants.

Impact of AMR on agriculture

Emergence and transmission of resistant genes

- The use of antimicrobials, leads to the emergence of resistance and the transmission of resistant genes and resistant bacteria between plant species.

Food Security

- For agriculture, AMR causes production losses, damages livelihoods and jeopardizes food security.

Food Chain contamination

- Moreover, AMR can spread among different hosts and the environment, and antimicrobial resistant microorganisms can contaminate the food chain.

Livelihood and Economies

- AMR in food and agriculture poses risks to food systems, livelihoods and economies.
- The use of antimicrobials in agriculture contributes to the spread of AMR and undermines the effectiveness of veterinary medicines.

In a nutshell,

- The consequences of antimicrobial resistance include reduced food production, reduced food security, greater food safety concerns, higher economic losses to farm households, and contamination of the environment.

The recent draft

Concerns over AMR

- The draft order comes over growing concerns over antimicrobial resistance observed in various crops, particularly to streptomycin, which is used in the treatment of tuberculosis (TB).

The antibiotics

- Tetracycline antibiotics find application in the treatment of bacterial infections.
- Streptomycin is a critically important antimicrobial while tetracycline belongs to the class of highly important antimicrobials, according to the World Health Organization.

Provisions of the Draft

- The order ensures a complete ban on the use of the two antibiotics in agriculture January 1, 2024, onwards.
- It directed every state government to take all such steps necessary for executing the order in their state.
- The draft order is the result of the deliberations within the Central Insecticides Board and Registration Committee (CIBRC), where the registration committee (RC) had approved the recommendation for phasing out the use of streptomycin and tetracycline amid growing concerns over antimicrobial resistance (AMR).
- The phase-out was considered "according to the availability of alternatives".

HONEY FARMER PRODUCER ORGANIZATIONS

GS-III AGRICULTURE

Context

- Recently, the Ministry of Tribal Affairs launched 14 Honey Farmer Producer Organizations (FPOs) of TRIFED (Tribal Cooperative Marketing Development Federation of India) along with various other initiatives such as The TRIFED Van Dhan Chronicle, The MIS Portal for Minimum Support Price for Minor Forest Produces etc.

TRIFED Van Dhan Chronicle

- The chronicle gives an in-depth illustration of the activities undertaken by TRIFED under the Van Dhan Vikas Yojana which has impacted the life of almost 16 lakh tribals.
- This includes the introduction of Minimum Support Price (MSP) for select forest produces, the training imparted, value addition that began in VDVKCs, new product lines developed, new ideas for packaging and marketing implemented, achievements so far and future plans and can also serve as an instruction and information manual for officers working for the programs in future.

MIS Portal on Minimum Support Price for Minor Forest Produces (MFPs)

- The MIS Portal for Minimum Support Price for Minor Forest Produces, is a ready dashboard for the authorised users of The Ministry of Tribal Affairs and TRIFED.
- In this dashboard, data is available on a real-time basis, pertaining to the list of procurement centres and their locations (including display pins on maps), and the procurement of MFPs being done across the country.
- **Significance:** This portal is being launched to ensure ready and online availability of procurement related data for analysis and fast and effective decision making and will go a long way to ensure transparency in the procurement activities and give a reflection on the performance and efficiency of the different states and districts.

About Honey FPO Programme

- The Honey FPO Programme has been launched under the Central Sector Scheme for Formation & Promotion of new 10,000 FPOs.
- The task of creating these FPOs has been given to NABARD, Small Farmers' Agribusiness Consortium, National Cooperative Development Corporation and NAFED.
- Through these Honey FPOs, NAFED will also work for promotion of beekeeping as an occupation for unemployed women and tribal populations and uplift their livelihood.

Other Honey Initiatives

Honey Mission Programme

- The Honey Mission Programme was launched by Khadi & Village Industries Commission (KVIC), under the Ministry of MSME, during 2017-18.
- It is being implemented to promote Bee Keeping activities and provide self-sustaining employment opportunities among farmers, Adivasies and unemployed youth in rural India, especially in economically backward and remote areas.
- Under the programme, beneficiaries are provided with Bee Boxes, live bee colonies, tool kits and training.

National Beekeeping & Honey Mission (NBHM)

- Under National Beekeeping & Honey Mission (NBHM) scheme under Ministry of Agriculture, scientific beekeeping is promoted for holistic growth of the sector, leading to income and employment generation, livelihood support to farm and non-farm households.

Scheme of Fund for Regeneration of Traditional Industries' (SFURTI)

- Besides, under 'A Scheme of Fund for Regeneration of Traditional Industries' (SFURTI) implemented by the Ministry of MSME, traditional beekeepers are provided with sustainable employment by organizing them into clusters, and supporting them with new machineries and training.

Significance

Sweet revolution

- Sweet Revolution is a strategic step to emphasize the increase in honey production in the state, which can be a major contributor to doubling the income of the farmers.
- With the increase in income, the production of crops will also increase by 15%.

Purpose

1. Providing employment by connecting the farmers of the state with bee keeping.
2. To increase agriculture and horticulture yield and income of farmers.
3. To make the state the leading state in the field of honey production.
4. Children free from malnutrition.
5. Production of quality honey.

About Van Dhan Vikas Yojana

- It is an initiative of the Ministry of Tribal Affairs and TRIFED.
- It was launched in 2018 and seeks to improve tribal incomes through value addition of tribal products.
- The scheme is implemented through Ministry of Tribal Affairs as Nodal Department at the Central Level and TRIFED as Nodal Agency at the National Level.
- At State level, the State Nodal Agency for Minor Forest Produce (MFPs) and the District collectors are envisaged to play a pivot role in scheme implementation at grassroot level.

Mandate

- Under Van Dhan, 10 Self Help Groups of 30 Tribal gatherers is constituted.
- The establishment of "Van Dhan Vikas Kendra" is to provide skill upgradation and capacity building training and setting up of primary processing and value addition facility.
- They are then trained and provided with working capital to add value to the products, which they collect from the jungle.
- Working under the leadership of Collector these groups can then market their products not only within the States but also outside the States.

About TRIFED

- Tribal Co-operative Marketing Development Federation of India (TRIFED) is a **national level cooperative body** under the administrative control of Ministry of Tribal Affairs.

Establishment

- It was established under the **Multi-state Co-operative Societies act 1984** under the former Ministry of Welfare. Later it came under the control of **Ministry of Tribal affairs**.
- In order to empower the downtrodden tribal community it started the procurement of tribal art and craft items firstly in 1999 through its **retail outlet called TRIBES INDIA**.

Mandate

- In case of fluctuations in the price of these MFPs, the mandate of TRIFED is to **provide adequate compensation to the tribals** through Ministry of Agriculture & Farmers' Welfare.
- In order to support tribal art and craft it organises the tribal art and craft exhibition called "**Aadi Mahotsav**"; where tribal craft products from all over the country are exhibited and bought by the art lovers.

SOIL REPORT 2021: FPOS

GS-III AGRICULTURE

Context

- Just 1-5 per cent of FPOs have received funding under central government schemes introduced to promote them in the last seven years, The State of India's Livelihood (SOIL) Report 2021 stated.

About the SOIL Report

- Access Development Services, a national livelihoods support organization has prepared the report.
- It has only analyzed farmer producer companies (FCP – FPOs registered under The Companies Act, 2013) since they make up a large majority of the organisations started in recent years.

What is a Producer Organisation (PO)

- A Producer Organisation (PO) is a legal entity formed by primary producers, viz. farmers, milk producers, fishermen, weavers, rural artisans, craftsmen.
- A PO can be a producer company, a cooperative society or any other legal form which provides for sharing of profits/benefits among the members.

What is a "Farmers Producer Organisation" (FPO)

- It is one type of PO where the members are farmers. Small Farmers' Agribusiness Consortium (SFAC) is providing support for promotion of FPOs.

About FPOs

- In the last decade, the Centre has encouraged **farmer producer organisations (FPOs) to help farmers**.
- Since 2011, it has intensively promoted FPOs under the **Small Farmers' Agri-Business Consortium (SFAC), NABARD, state governments and NGOs**.
- The membership of an FPO ranges from **100 to over 1,000 farmers**. Most of these farmers have small holdings.
- The ongoing support for FPOs is mainly in the form of, one, a **grant of matching equity** (cash infusion of up to Rs 10 lakh) to registered FPOs, and two, a **credit guarantee cover to lending institutions** (maximum guarantee cover 85 percent of loans not exceeding Rs 100 lakh).
- The budget for 2018-19 announced supporting measures for FPOs including a **five-year tax exemption** while the budget for 2019-20 talked of setting up **10,000 more FPOs in the next five years**.

Financial Support and other support to FPOs

- Equity Grant Scheme:** Under the Equity Grant Scheme, Small Farmers' Agri-business Consortium (SFAC), promoted by the Ministry of Agriculture and Farmers Welfare, has been offering equity grants up to a maximum of Rs 15 lakh in two tranches within a period of three years since 2014.
- Credit Guarantee Scheme:** It provides risk cover to banks that advance collateral-free loans to FPCs up to Rs 1 crore.

Organizations

- Various organizations viz. **SFAC, NABARD & DAY-NRLM** have been promoting FPOs.
- Government of India through **Small Farmers' Agribusiness Consortium (SFAC)**, a registered society under Department of Agriculture, Cooperation & Farmers Welfare, had been promoting Farmer Producer Organizations (FPOs) by mobilizing the farmers, helping them in registering as companies and giving them training for improvement of their income and sustainability.
- Under **Deendayal Antyodaya Yojana- National Rural Livelihood Mission (DAY-NRLM)**, Ministry of Rural Development, had been promoting FPOs by mobilizing farmers, building market linkages through a value chain development approach for farm based livelihood is an important strategy under this mission.

Performance of FPOs

- Experience shows a **mixed performance** of FPOs in the last decade.
- Some estimates show that **30 percent of these are operating viably** while **20 per cent are struggling to survive**.
- The remaining **50 per cent are still in the initial phase of mobilization** and business planning.
- FPOs in **Gujarat, Maharashtra and Madhya Pradesh, Rajasthan** and some other states have shown encouraging results and have been able to realise higher returns for their produce.
- For example, tribal women in the Pali district of Rajasthan formed a producer company and they are getting higher prices for custard apples.
- NABARD** has undertaken a field study on the benefits of FPOs in Punjab and Madhya Pradesh. The study shows that in

nascent FPOs, the proportion of farmer members contributing to FPOs activities is **20-30 per cent** while for the **emerging and mature FPOs it is higher at about 40-50 percent**.

- In Maharashtra, some of the FPOs have organically evolved (OFPOs) when farmers have taken the lead to **adopt market-oriented practices, develop cost-effective solutions in production and marketing**.

Challenges

- Studies of NABARD show that there are some important challenges for building sustainable FPOs.
- Some of these are:
 - Lack of technical skills,
 - Inadequate professional management,
 - Weak financials,
 - Inadequate access to credit,
 - Lack of risk mitigation mechanism
 - Inadequate access to market and infrastructure.
 - Lack of Business Skills
 - Missing Supply Chain
 - Lack of Transparency

Way Ahead

Capacity Building

- FPOs need to secure funding, identify and establish relations with customers, establish internal governance processes.
- For this, they need capacity building to be able to move from start-up phase to growth and eventually to maturity. This is a gap that has not been addressed yet.

Availing Schemes

- There is a need to make it easier for FPOs to avail government programmes and schemes for providing equity grants and loans. This can be achieved either by reducing the threshold for eligibility or by supporting FPOs to reach the eligibility criteria, or both.

Addressing structural issues

- Issues such as working capital, marketing, infrastructure have to be addressed while scaling up FPOs.

Finances and Competency

- Getting credit is the biggest problem. Banks must have structured products for lending to FPOs. These organisations lack professional management and, therefore, need capacity building.
- They have to be linked with input companies, technical service providers, marketing/processing companies, retailers.
- They need a lot of data on markets and prices and other information and competency in information technology.

Land Consolidation to benefit small and marginal farmers

- FPOs can be used to augment the size of the land by focusing on grouping contiguous tracts of land as far as possible – they should not be a mere grouping of individuals.
- Women farmers also can be encouraged to group cultivate for getting better returns. FPOs can also encourage consolidation of holdings.
- The FPOs have to be encouraged by policy makers and other stakeholders apart from scaling up throughout the country to benefit particularly the small land holders.
- FPOs negotiate as a group to help small farmers in both input and output markets.
- While small farmers gain greater bargaining power through FPOs in relation to the purchase of inputs, obtaining credit and selling the produce, the fundamental problem of the small size of land holdings that gives only a limited income is not resolved.
- While incomes will rise because of the benefits flowing from FPOs, they may not still be adequate to give a reasonable income to small and marginal farmers. That issue has to be handled separately.

'INNOVATIONS FOR YOU'; 'THE INGENIOUS TINKERERS'

GS-III SCIENCE & TECHNOLOGY

Context

- Atal Innovation Mission (AIM) NITI Aayog released the **second edition of 'Innovations for You'** and another compendium titled **'The Ingenious Tinkerers'**.

About

- The second edition of 'Innovations for You' is a **compendium of innovations focused on agriculture featuring 70 start-ups supported by Atal incubation Centers (AICs) of AIM.**
- 'The Ingenious Tinkerers'** is a compendium on the innovations on technology featuring 41 innovations from Atal Tinkering Lab (ATL) of India.
- 'The Ingenious Tinkerers' is a compilation of the top innovations created by young student innovators who participated in the ATL Marathon - which invites school students to address a problem that they see or face on a day-to-day basis.

Atal Innovation Mission

- The Atal Innovation Mission (AIM) is a flagship initiative set up by the NITI Aayog to promote innovation and entrepreneurship across the length and breadth of the country.
- AIM's objectives are to create and promote an ecosystem of innovation and entrepreneurship across the country at school, university, research institutions, MSME and industry levels.

Functions of Atal Innovation Mission

- The Atal Innovation Mission shall have two core functions
 - Entrepreneurship promotion through Self-Employment and Talent Utilization, wherein innovators would be supported and mentored to become successful entrepreneurs.
 - Innovation promotion: to provide a platform where innovative ideas are generated.

Atal Innovation Mission: Initiatives

- Atal Tinkering Labs-** As mentioned, these are to create a problem-solving mindset across schools in India.
- Atal Incubation Centers-** These would help in fostering world-class startups and would also add some dimension to the incubator model.
- Atal New India Challenges-** These are charged to foster product innovations and align them as per the requirements of various sectors/ ministries.
- Mentor India Campaign-** It would create a national mentor network in public sectors, corporates and institutions in order to support the initiatives of Atal Innovation Mission.
- Atal Community Innovation Center-** This would create a community-centric innovation module and provide with ideas in the unserved /underserved regions of India.
- ARISE-** This would bring about an innovation and research in MSME industry.

SPACE TOURISM

GS-III SCIENCE & TECHNOLOGY

Context

- Billionaire Japanese entrepreneur Yusaku Maezawa reached **the International Space Station (ISS)** for a 12-day trip, during which time he will complete 100 tasks in space, including playing a game of badminton.

Space Tourism

- Space tourism is another niche segment of the aviation industry that seeks to give tourists the ability to become astronauts and experience space travel for recreational, leisure, or business purposes.
- Companies including Virgin Atlantic, SpaceX, XCOR Aerospace, Jeff Bezos's Blue Origin and Armadillo Aerospace are working on providing space tourism services to people.

The Pros and Cons of Space Tourism

Cons

- Exposure to Sun's Radiation:** Space travel technology at the nascent stage can make entering space a dangerous venture. Space travelers are **likely to get exposed to harmful radiations from the sun.**
- Health:** Spending long hours in zero gravity condition can be dangerous for the person's cardiovascular and musculoskeletal system. If people accidentally get exposed to high-energy ionizing cosmic rays, it may lead to cancer.

- **Exposure to harmful organisms:** We may unwittingly introduce some harmful microorganism from space into the atmosphere of Earth.
- **Poor Regulation:** Lack of proper regulation and inadequate safety protocols can make space travel extremely dangerous.
- **Commercialization:** Companies engaged in this form of travel may fail to stick to safety measures in a spree to gather more customers.
- **Waste of Resources:** Experimentation and unsuccessful ventures may cause an unnecessary waste of resources.
- Developing space programs and spacecrafts need a lot of money. That money can be utilized for alleviation of poverty.
- **Inequity:** Space tourism is meant for the super rich only. For example, a single 2 ½ hour flight ticket in Virgin Galactic's upcoming space ship costs \$ 250,000.
- **Not environment friendly:** Several natural resources are wasted in flying the fuel guzzling rockets. It pollutes the atmosphere as well. Thus, space program is bad for our environment.
- **Not a panacea:** It is great to imagine people walking on the surface of Mars. It would not be wise to consider the escape to space will help in escaping the problems of earth. There is nowhere in the solar system where we can find the environment as congenial as that available on earth.

Pros

- **Boost to economy:** Space tourism will increase the commercial activity in the time of poor state of world economy.
- **Generate Employment:** Space tourism will give employment to thousands of people. Manufacturing of new and better spacecraft will give employment to many skilled people.
- **Draw Investors:** It will renew interest in space exploration. This will draw more investors for more financial backing to support more innovations in the industry.
- **Pave ways to protect Earth:** It would also help in identifying potential hazards dangerous for our planet.
- **Technological advancement:** Opens avenues for advanced technology which can be applied to other domains apart from space missions.
- **New resources:** Help to find new minerals and other precious materials in space and other planets. This will be of great help to the people of Earth where natural resources are depleting fast.
- **Adventure Tourism:** Open a new avenue for adventure tourists.

International Space Station Programme

- Launched in 1998 and involving **Russia, the United States, Canada, Japan, and the European Space Agency**.
- **China and India are not members** of ISSP.
- The ownership and use of the space station is established by intergovernmental treaties and agreements.
- The station serves as a microgravity and space environment research laboratory in which scientific research is conducted in astrophysics, astronomy, meteorology, physics, and other fields

PARKER SOLAR PROBE

GS-III SCIENCE & TECHNOLOGY

Context

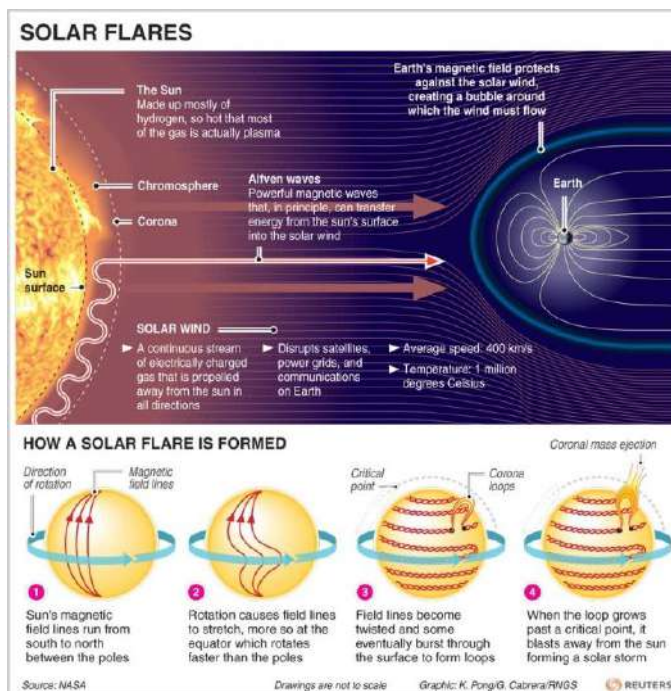
- In an astronomical milestone for NASA, their Parker Solar Probe flew into the Sun's corona (where the temperature is roughly two million degrees Fahrenheit) becoming the first spacecraft ever to do so.

About

- The Parker Solar Probe is a NASA space probe launched in 2018 with the mission of making observations of the outer corona of the Sun.
- It will approach to within 9.86 solar radii from the center of the Sun, and by 2025 will travel, at closest approach, as fast as 690,000 km/h, or 0.064% the speed of light.
- The Parker Solar Probe mission design uses repeated gravity assists at Venus to incrementally decrease its orbital perihelion to achieve a final altitude (above the surface) of approximately 8.5 solar radii.

Science Goals

- The goals of the mission are:
 - Trace the flow of energy that heats the corona and



accelerates the solar wind.

- Determine the structure and dynamics of the magnetic fields at the sources of solar wind.
- Determine what mechanisms accelerate and transport energetic particles.

EXPERIMENTAL ADVANCED SUPERCONDUCTING TOKAMAK (EAST)

GS-III SCIENCE & TECHNOLOGY

Context

- Top scientists from China have claimed to have successfully created a 'fake Sun'.
- The artificial Sun created by China is about ten times hotter than the real Sun, around which our planet revolves.

What is China's 'artificial sun' EAST?

- The Experimental Advanced Superconducting Tokamak (EAST) reactor is an advanced nuclear fusion experimental research device.
- The **purpose of the artificial sun is to replicate the process of nuclear fusion**, which is the same reaction that powers the sun.

Apart from the EAST, China is currently operating the HL-2A reactor as well as J-TEXT. In December 2020, HL-2M Tokamak, China's largest and most advanced nuclear fusion experimental research device, was successfully powered up for the first time.

- EAST first became operational in 2006. The EAST project is **part of the International Thermonuclear Experimental Reactor (ITER) facility**, which will become the world's largest nuclear fusion reactor when it becomes operational in 2035.
- ITER project includes the contributions of several countries, **including India**, South Korea, Japan, Russia and the United States.

How does the 'artificial sun' EAST work?

- The EAST Tokamak device is designed to replicate the nuclear fusion process carried out by the sun and stars.
- Nuclear fusion is a process through which high levels of energy are produced without generating large quantities of waste.
- Previously, energy was produced through nuclear fission – a process in which the nucleus of a heavy atom was split into two or more nuclei of lighter atoms.
- Unlike fission, fusion also does not emit greenhouse gases.
- For nuclear fusion to occur, tremendous heat and pressure are applied on hydrogen atoms so that they fuse together.
- The nuclei of deuterium and tritium – both found in hydrogen – are made to fuse together to create a helium nucleus, a neutron along with a whole lot of energy.
- Fuel is heated to temperatures of over 150 million degrees C so that it forms a hot plasma "soup" of subatomic particles.
- With the help of a strong magnetic field, the plasma is kept away from the walls of the reactor to ensure it does not cool down and lose its potential to generate large amounts of energy.
- The plasma is confined for long durations for fusion to take place.

Nuclear Fission	Nuclear Fusion
<ul style="list-style-type: none"> ▪ A heavy nucleus breaks up to form two lighter ones. ▪ It involves a chain reaction, which can lead to dangerous meltdowns. ▪ The heavy nucleus is bombarded with neutrons. ▪ There is established, decades-old technology to control fission. ▪ Nuclear waste, a byproduct of fission, is <u>an environmental challenge</u>. ▪ Raw material like plutonium or uranium is scarce and costly. 	<ul style="list-style-type: none"> ▪ Two nuclei combine to form a heavier nucleus. ▪ There is no chain reaction involved. ▪ Light nuclei have to be heated to extremely high temperature. ▪ Scientists are still working on a controlled fusion reactor that offers more energy than it consumes. ▪ There is no nuclear waste. ▪ Raw materials are very easily sourced. ▪ Fusion reactions have energy densities many times greater than nuclear fission.

Significance

- The sun's core only reaches about 15 million degrees Celsius, which means the reactor was able to touch temperatures that are 10 times hotter than that.
- Once mastered, nuclear fusion could potentially provide unlimited clean energy and very low costs.

Note: In 2020, South Korea's KSTAR reactor set a new record by maintaining a plasma temperature of over 100 million degrees Celsius for 20 seconds.

AFSPA**GS-III SECURITY & DEFENSE****Context**

- The Nagaland govt has called for repeal of AFSPA in the wake of public outrage against the killings in Mon.

What is AFSPA?

- The Act in its original form was **promulgated by the British in response to the Quit India movement in 1942**.
- After Independence, Prime Minister Jawaharlal Nehru **decided to retain the Act, which was first brought in as ordinance and then notified as an Act in 1958**.
- AFSPA has been **imposed on the Northeast states, Jammu & Kashmir, and Punjab during the militancy years**.
- **Punjab was the first state from where it was repealed**, followed by Tripura and Meghalaya.
- It remains **in force in Mizoram, Nagaland, Manipur, Assam, J&K, and parts of Arunachal Pradesh**.
- AFSPA provides for **special powers for the armed forces that can be imposed by the Centre or the Governor of a state, on the state or parts of it, after it is declared "disturbed" under Section 3**.
- The Act defines these as areas that are **"disturbed or dangerous condition that the use of armed forces in aid of the civil power is necessary"**.
- AFSPA has been used in areas where militancy has been prevalent.

Why it is called draconian?

- The Act **gives sweeping powers to the armed forces**.
- It allows them to **open fire, even causing death, against any person in contravention to the law or carrying arms and ammunition**.
- It gives them **powers to arrest individuals without warrants, on the basis of "reasonable suspicion", and also search premises without warrants**.
- It provides **blanket impunity to security personnel involved in such operations: There can be no prosecution or legal proceedings against them without the prior approval of the Centre**.

Are there safety nets?

- While the Act gives **powers to security forces to open fire, this cannot be done without prior warning given to the suspect**.
- The Act further says that **after any suspects apprehended by security forces should be handed over to the local police station within 24 hours**.
- It says armed forces **must act in cooperation with the district administration and not as an independent body**.

What attempts have been made to repeal AFSPA in the past?

- In 2000, Manipur activist **Irom Sharmila** began a hunger-strike, which would continue for 16 years, against AFSPA.
- In 2004, the UPA government set up a **five-member committee** under a former Supreme Court Judge.
- The **Justice Jeevan Reddy Commission** submitted its report in 2005, saying **AFSPA had become a symbol of oppression and recommending its repeal**.
- The **Second Administrative Reforms Commission**, headed by **Veerappa Moily**, endorsed these recommendations.

How often have state governments opposed it?

- It empowers the **Centre to unilaterally take a decision to impose AFSPA**, this is usually **done informally in consonance with the state government**.
- The Centre had also imposed AFSPA in Tripura in 1972 despite opposition from the then state government.

What has been the social fallout?

- **Nagaland and Mizoram** faced the brunt of AFSPA in the 1950s, including **air raids and bombings** by the Indian military.
- Allegations have been made against **security forces of mass killings and rape**.
- The **Malom massacre in 2000**, and the killing and alleged rape of Thangjam Manorama led to the subsequent repeal of AFSPA from the Imphal municipal area.
- Human rights activists have said the Act has often been **used to settle private scores, such as property disputes, with false tip-offs provided by local informants to security forces**.

Have these excesses been probed?

- In 2012, the **Extrajudicial Execution Victim Families Association of Manipur** filed a case in the Supreme Court alleging **1,528 fake encounters between 1979 and 2012**.

- The Supreme Court set up a **three-member committee under former judge Santosh Hegde** and including former Chief Election Commissioner J M Lyngdoh and former Karnataka DGP Ajay Kumar Singh.
- **AFSPA creates an atmosphere of impunity among even state agencies** such as the Manipur Police and their Manipur Commandos, believed to be responsible for most encounters in the state, some of them jointly with Assam Rifles.

The constitutionality of AFSPA was challenged in the Supreme Court in 1997. What did the court say in its ruling?

- Decades before the Nagaland Cabinet called for repeal of the Armed Forces Special Powers Act, 1958, the constitutionality of AFSPA had been challenged in the Supreme Court (**Naga People's Movement of Human Rights v Union of India, 1997**).

SC ruling

- A five-judge Constitution Bench unanimously **upheld the law**.
- Although the court agreed that the Constitution did provide for deployment of armed forces in aid of civil power, it held that such deployment can be permitted for a "temporary period" and "until a situation of normalcy was restored".
- While declaring a region as "disturbed area", the opinion of the state government must be taken and there must be a periodic review of the situation.
- The court also cautioned that the **officer in the armed forces shall use minimal force required for effective action against the person/persons acting in contravention of the prohibitory order**.
- A complaint containing an allegation about misuse or abuse of the powers conferred under the Central Act shall be thoroughly inquired into and, if on enquiry it is found that the allegations are correct, the **victim should be suitably compensated and the necessary sanction for institution of prosecution and/or a suit or other proceeding should be granted under Section 6 of the Central Act**.
- The law is very clear that if an offence is committed even by Army personnel, **there is no concept of absolute immunity from trial by the criminal court constituted under the Criminal Procedure Code**".
- The verdict also called for a probe into alleged 1,528 cases extra-judicial killings by security forces in Manipur during 2000-12.



ASSAM RIFLES

GS-III SECURITY & DEFENSE

Context

- Killing of over a dozen civilians in Mon district of Nagaland saw angry crowds vandalise camps of Assam Rifles in the district.
- While the botched operation was launched by the Indian Army, **Assam Rifles, which has the responsibility of the area**, issued a statement expressing regret.

What is Assam Rifles?

- It is one of the **six central armed police forces (CAPFs)** under the administrative control of the **Ministry of Home Affairs (MHA)**.
- The other forces being the Central Reserve Police Force (CRPF), the Border Security Force (BSF), the Indo-Tibetan Border Police (ITBP), the Central Industrial Security Force (CISF) and the Sashastra Seema Bal (SSB).
- **Task: maintenance of law and order in the North East** along with the Indian Army and also guards the **Indo-Myanmar border** in the region.
- It has a sanctioned **strength of over 63,000 personnel and has 46 battalions** apart from administrative and training staff.

How is it unique?

- It is the **only paramilitary force with a dual control structure**.
- While the **administrative control of the force is with the MHA**, its **operational control is with the Indian Army**, which is under the Ministry of Defence (MoD).
- This means that **salaries and infrastructure for the force is provided by the MHA**, but the deployment, posting, transfer and deputation of the personnel is decided by the Army.

- The force is the **only central paramilitary force (CPMF) in real sense** as its operational duties and regimentation are on the lines of the Indian Army.
- This has created two sets of demands from both within the Assam Rifles and by MoD and MHA for **singular control over the force by one ministry**.
- CAPF officers have recently been granted **non-functional financial upgradation (NFFU) to at least financially address the issue of stagnation in their careers due to lack of avenues for promotion**. But Army personnel also get **one rank one pension** which is not available to CAPFs.

Why do both MHA and MoD want full control?

MHA arguments

- All the border guarding forces are under the operational control of the ministry and so Assam Rifles coming under MHA will give border guarding a comprehensive and integrated approach.
- Assam Rifles continues to function on the pattern set during the 1960s and the ministry would want to make guarding of the Indo-Myanmar border on the lines of other CAPFs.

MoD arguments

- Assam Rifles has worked well in coordination with Army and frees up the armed forces from many of its responsibilities to focus on its core strengths.
- Assam Rifles was always a military force and not a police force and has been built like that.
- Giving the control of the force to MHA or merging it with any other CAPF will confuse the force and jeopardise national security.

How old is the issue?

- Both MHA and MoD have wanted full control of the force for a long time.
- In 2013, MHA first made a **proposal to take operational control of the Assam Rifles and merge it with the BSF**.
- In 2019, the proposal was renewed – this time with a **plan to merge Assam Rifles with the ITBP**.
- The matter **pending with the Cabinet Committee on Security**.

What has been the contribution of Assam Rifles?

Pre-Independence role of the Assam Rifles:

- Assam Rifles is the **oldest paramilitary force** raised way back in 1835 in British India with just 750 men.
- Since then, it has gone on to fight in **two World Wars, the Sino-Indian war of 1962** and used as an anti-insurgency force against militant groups in the North East.
- Given its contribution in opening the region to administration and commerce, it is known as the “**right arm of the civil and left arm of the military**”.

Post-Independence role of the Assam Rifles:

- **conventional combat role during Sino-India War 1962**
- **operating in foreign land as part of the Indian Peace Keeping Force (IPKF) to Sri Lanka in 1987 (Op Pawan)**
- **Peacekeeping role in the North-Eastern areas of India.**
 - It remains the **most awarded paramilitary force in both pre- and post-independent India**.

HYPERSONIC WEAPONS

GS-III SECURITY & DEFENSE

The story so far

- China tested a nuclear-capable hypersonic missile in August that circled the globe before speeding towards its target.
- This and other recent developments have put the spotlight on hypersonic weapons development, especially the **advancements made by China and Russia**.

What are hypersonic weapons?

- They are **manoeuvrable weapons that can fly at speeds in excess of Mach 5, five times the speed of sound**.
 - The **speed of sound is Mach 1**, and speeds **upto Mach 5** are **supersonic** and speeds **above Mach 5** are **hypersonic**.

Difference between Ballistic and hypersonic missile

- Ballistic missiles, though much faster, **follow a fixed trajectory and travel outside the atmosphere to re-enter only near impact**.
- Hypersonic weapons
 - Can **travel within the atmosphere** and can manoeuvre midway which combined with their high speeds makes their detection and interception extremely difficult.

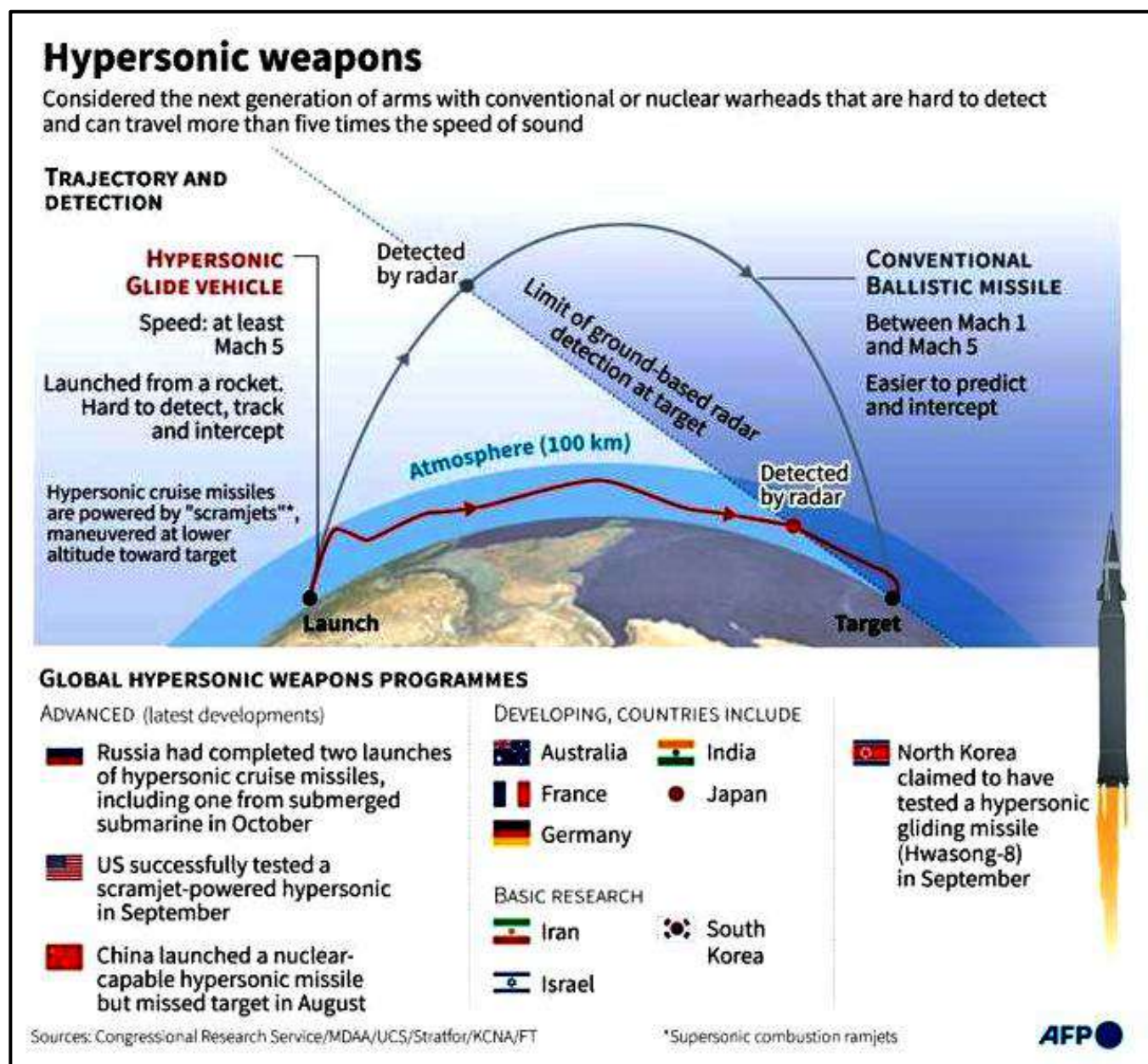
- Radars and air defences cannot detect them till they are very close and little time to react.
- These are a new class of threat because they are capable both of manoeuvring and of flying faster than 5,000 kms per hour, which would enable such missiles to penetrate most missile defences and to further compress the timelines for response by a nation under attack.

Two classes of hypersonic weapons are

- **Hypersonic glide vehicles (HGV):** HGVs are launched from a rocket before gliding to a target
- **Hypersonic cruise missiles (HCM):** HCMs are powered by high-speed, air-breathing engines, or scramjets, after acquiring their target.

What is the status of Chinese and Russian programmes and where does the U.S. stand?

- Russia announced that it had successfully test launched a Tsirkon hypersonic cruise missile.
- Most U.S. hypersonic weapons, in contrast to those in Russia and China, are not being designed for use with a nuclear warhead."
- Widespread perception that hypersonic weapons are a game-changer has increased tensions among the U.S., Russia and China, driving a new arms race and escalating the chances of conflict



What is the status of development by other countries?

- A number of other countries - including Australia, India, France, Germany, and Japan—are also developing hypersonic weapons technology.

India's status:

- India operates approximately **12 hypersonic wind tunnels** and is capable of testing speeds of up to **Mach 13**.
- India is also **developing an indigenous, dual-capable hypersonic cruise missile** as part of its **Hypersonic Technology Demonstrator Vehicle (HSTDV) program** and successfully tested a Mach 6 scramjet in June 2019.

INDIA'S DEFENCE EXPORTS

GS-III SECURITY & DEFENSE

Context

- India's defence exports have increased from Rs. 1,521 crore in 2016-17 to Rs. 8,434.84 crore in 2020-21.

Current situation of defence sector

- Government has set an ambitious target to **achieve exports of about Rs. 35,000 crore (\$5 billion)** in aerospace and defence goods and services **by 2025**.
- There was an **overall drop in India's arms imports between 2011-15 and 2016-20**.
- According to **SIPRI report of 2020**, India remained among the top importers, it was also included in the **Top 25 defence exporters**.

Which Indian companies are major exporters?

- According to SIPRI report, three Indian companies figure among the top 100 defence companies in the 2020 rankings –
 - Hindustan Aeronautics Limited (HAL)**
 - Ordnance Factory Board** and
 - Bharat Electronics Ltd (BEL)**.

What are the big-ticket items that India can export?

- India was ready to supply different types of missile systems, LCA/helicopters, multi-purpose light transport aircraft, warships and patrol vessels, artillery gun systems, tanks, radars, military vehicles, electronic warfare systems and other weapons systems to IOR nations.
- Assistance in capacity building and capability enhancement** to Indian Ocean littoral states.

INDIAN DEFENCE PRODUCTION & EXPORTS		
YEAR	Defence Production (in crore)	Defence Exports (in crore)
2016-17	₹74,121	₹1,521
2017-18	₹78,817	₹4,682
2018-19	₹80,502	₹10,745
2019-20 (TARGETED)	₹90,000	₹15,000
TARGETED DEFENCE EXPORT FOR 2024: ₹35,000 CRORE		
IANS GRAPHICS		

What are the steps taken by the Centre to boost defence production?

Measures announced to boost exports include

- simplified defence industrial licensing
- relaxation of export controls and grant of no-objection certificates
- specific incentives were introduced under the foreign trade policy
- Ministry of External Affairs has **facilitated Lines of Credit for countries to import defence product**.
- defence attaches in Indian missions abroad have been empowered to promote defence exports.
- On the domestic front, to boost indigenous manufacturing, the Government had **issued two "positive indigenisation lists" consisting of 209 items that cannot be imported** and can only be procured from domestic industry.
- A percentage of the capital outlay of the defence budget has been reserved for procurement from domestic industry.

RADIOACTIVE POLLUTION IN WATER

GS-III ENVIRONMENT & ECOLOGY

Context

- Water pollution is a severe concern for the current generation. However, radioactive pollution of water is **newly emerging** but is of grave concern for water pollution and human health.

What is Radioactivity?

- It is the **phenomenon of spontaneous emission of particles or waves from the unstable nuclei of some elements**.
- There are three types of radioactive emissions: **Alpha, Beta and Gamma**.
- Alpha particles are **positively charged He atoms**, beta particles are **negatively charged electrons** and gamma rays are **neutral electromagnetic radiations**.
- Radioactivity is **measured in Becquerel (SI unit) or in Curie**. Energy absorbed per unit mass is measured by Gray, while the unit Sievert measures the quantity of radiation absorbed by human tissues.
- A **small amount of radiation is found in all types of water** but the extended amount of radiation is harmful to human health.
- Radioactivity in drinking water can be **determined by a gross alpha test**.

How radioactive contamination occurs?

- Radioactive contamination is **more prevalent in groundwater** as compared to surface water since it is much exposed to radioactive elements found in the rocks.
- Sometimes, **magma also releases radioactive gases into the environment**.
- The **deposition of these radioactive gases in waterbodies** also causes radioactive contamination.
- Atmospheric deposition (both dry and wet) of cosmogenic radionuclides** also adds radioactive nuclei in the surface water.

Radioactive contaminants are

- A number of radionuclides are found in surface and subsurface waters, among which **^3H , ^{14}C , ^{40}K , ^{210}Pb , ^{210}Po , ^{222}Rn , ^{226}Ra , ^{228}Ra , ^{232}Th and $^{234,235,238}\text{U}$** are common.
- Uranium, thorium and actinium** are **three NORM series** that contaminate water resources.
- Radium**, a descendant of the NORM series, is one of the **decidedly radiotoxic elements** found in aquatic systems and can be penetrated into groundwater via
 - aquifer rock dissolution
 - decaying of ^{238}U and ^{232}Th , or
 - desorption processes.

Sources of radioactive contamination of water

Natural sources

- Radioactive elements are **naturally found in the earth's crust**.
- Percolation of naturally occurring radioactive materials (NORM) from the soil sediments to the aquifer** causes groundwater contamination.
- Oceans and seas are the natural repositories of naturally occurring uranium.

Anthropogenic sources

- In anthropogenic sources of radioactive pollution, **nuclear weapon investigation, nuclear calamities, nuclear power houses and dumping of radioactive waste** are major sources of contamination.
- The application of radioactive elements in nuclear weapons, X-rays, MRI and other medical equipment causes their exposure to human beings.
- Dumping of these radioactive wastes** in surface waterbodies causes water pollution.
- Nuclear reactors and nuclear warhead experiments** are the key sources of human-induced radionuclides discharge.
- Nuclear reactors produce **radioisotopes (Cobalt-60, Iridium-192, etc)** that hand out as **sources of gamma radiation in radiotherapy and numerous industrial appliances**.
- Strontium-90, Caesium-137, etc are also formed by nuclear reactors, along with numerous unnecessary radioisotopic wastes.
- Mining activities of radioactive elements** like uranium and thorium also pollute surface and groundwater.
- Nuclear power plants placed at the coastal regions** add to the radiological contaminants in the marine water by releasing atomic wastes. **Water is also used as coolants** in these powerhouses, which also get contaminated.
- Nuclear submarines cause radioactive contamination** in the marine environment. Radioactive pollution due to submarine accidents and sinking have been reported.

Impacts of radioactive contamination

- Radioactive elements have an **effect on the environment** and can **cause a risk to human healthiness if inhaled, injected or exposed**.
- Human tissues **absorb radiation through polluted water and foodstuff**, which can cause serious health risks.
- High doses of radiation can cause **acute radiation syndrome or cutaneous radiation injury**.
- Exposure to radiation causes various **disorders in human physiology, including cancer, leukaemia, genetic mutations, osteonecrosis, cataracts and chromosomal disruption**.
- Immediate, recoverable consequences distressing skin, lungs, genitals, and causing hair fall
- Long-standing, permanent outcomes such as various infections like **radiation damage, bone marrow fatality, cataract initiation, cancer stimulation, cholera, dysentery, tuberculosis and pneumonia**. Sometimes, these outcomes may be fatal also.
- **Genetic effects ionizing radiation** induces **mutations in germ cells** (male sperm cells and female egg cells) or germ cells, resulting in structural alteration in germ cell DNA that are passed on to offsprings. Hereditary disorders can lead to premature death and severe mental illness.

Solutions to Radioactive Pollution

- **Proper Method of Disposing of Radioactive Waste:** Radioactive waste cannot be incinerated or buried. Since there is a likelihood of seepage, this waste should be stored in heavy and thick concrete containers.
- **Proper Labeling:** Containers with such elements should be well labeled in order to make one use protective gear when handling them.
- **Banning of Nuclear Tests:** Nuclear power has a lot of latent power that is very destructive, these tests, though done in the deserts, end up escaping from one ecosystem to another, eventually affecting the lives of many people.
- **Proper Storage:** Proper storage means no harm and can minimize cases of accidental leakage.
- **Reusing:** Since it is not easy to store or dispose the waste, it can be recycled and used for other purposes like in another reactor as fuel thereby protecting the environment.
- **Precautions at the Personal Level:** The radon level needs to be removed. Those who work with radioactive material are also at great risk. They need protective measures to keep away from radioactive contamination.

ELECTRONIC WASTE MANAGEMENT

GS-III ENVIRONMENT & ECOLOGY

Context

- According to "Global E-waste Monitor 2020", **Global e-waste will increase by 38 per cent in the decade between 2020 and 2030**.
- The Global E-waste Monitor 2020 is a collaborative product of the Global E-waste Statistics Partnership, formed by the United Nations University, International Telecommunication Union, International Solid Waste Association, UN Environment Programme.

Key highlights of Global E-waste Monitor 2020

- There was **6 million tonnes of electronic waste in 2019** which is an average of **7.3 kg per capita**. That is a nearly 21 per cent increase in just five years
- **Asia generated the greatest volume of e-waste in 2019**.
- **Less than 18 per cent of the e-waste generated in 2019 was collected and recycled**.
- The **number of countries that have adopted a national e-waste policy, legislation or regulation has increased from 61 to 78 and includes India**.
- It is far from the target set by the International Telecommunication Union to raise the percentage of countries with an e-waste legislation to 50 per cent.

E-Waste

- E-Waste is short for **Electronic-Waste** and the term used to describe old, end-of-life or discarded electronic appliances.
- It is **categorized into 21 types under two broad categories: Information technology and communication equipment and Consumer electrical and electronics**.
- E-waste includes their components, consumables, parts and spares.
- E-waste contains **several toxic additives or hazardous substances such as mercury, brominated flame retardants (BFR), CFCs and HCFCs**.
- The **increasing levels of e-waste, low collection rates, and non-environmentally sound disposal and treatment of this waste stream pose significant risks to the environment and to human health**.
- **International E-Waste Day** has been observed on **14th October** since 2018.

India specific

- There are **312 authorised recyclers of e-waste in India**, with the capacity for treating approximately 800 kilotonnes annually.
- About **90 per cent of the country's e-waste is recycled in the informal sector**.
- India's **first e-waste clinic for segregating, processing and disposal of waste from household and commercial units has been set-up in Bhopal, Madhya Pradesh**.
- According to the Central Pollution Control Board (CPCB), **India generated more than 10 lakh tonnes of e-waste in 2019-20, an increase from 7 lakh tonnes in 2017-18**.

Concerns

- **Toxicity:** E-waste consists of toxic elements such as Lead, Mercury, Cadmium, Chromium, Polybrominated biphenyls and Polybrominated diphenyl.
- **Effects on Humans:** Some of the major health effects include serious illnesses such as lung cancer, respiratory problems, bronchitis, brain damages, etc. due to inhalation of toxic fumes, exposure to heavy metals and alike.
- **Effects on Environment:** E-waste is an environmental hazard causing groundwater pollution, acidification of soil and contamination of groundwater and air pollution due to the burning of plastic and other remnants.

Challenges Related to Management of E-Waste in India

- A key factor in used electronic devices not being given for recycling was because **consumers themselves did not do so**.
- In India, about **5 lakh child laborers in the age group of 10-14 are observed to be engaged in various E-waste activities** and that too without adequate protection and safeguards in various yards and recycling workshops.
- There is **absence of any public information on most State Pollution Control Boards (SPCBs)/PCC websites**.
- **No clear guidelines are there for the unorganized sector** to handle E-waste.
- **No incentives are mentioned to lure people engaged to adopt a formal path for handling E-waste**.
- **80% of E-waste in developed countries meant for recycling is sent to developing countries such as India, China, Ghana and Nigeria**.
- **Lack of coordination between various authorities** responsible for E-waste management and disposal including the non-involvement of municipalities.
- End of life computers often contain sensitive personal information and bank account details which, if not deleted leave **opportunity for fraud**.

International Conventions and government initiatives

- Originally the **Basel Convention** did not mention e-waste but later it addressed the issues of e-waste in 2006 (COP8).
- **Nairobi Declaration** was adopted at COP9 of the Basel Convention. It aimed at creating innovative solutions for the environmentally sound management of electronic wastes.
- **Rotterdam Convention, 2004** seeks to promote exchange of information among Parties over a range of potentially hazardous that may be exported or imported.
- In 2016, the **E-Waste (Management) Rules, 2016** were enacted which replaced the 2011 Rules. The Rules were amended in 2018.
- CPCB has also issued guidelines **Environmentally Sound Management of E-waste (on Collection, Storage, Dismantling & Segregation, Recycling, and Treatment & Disposal of E-Waste)**
- **Awareness Program on Environmental Hazards of Electronic Waste** initiated by Ministry of Electronics and Information Technology
- **Creation of Management Structure for Hazardous Substances** seeks to raise awareness among people about the 2016 Rules and its implementation.
- **Swachh Digital Bharat** seeks to create awareness among the public about the hazards of e-waste recycling by the unorganised sector, and to educate them about alternate methods of disposing of their e-waste.

NGT's Directions

- **Further steps should be taken for scientific enforcement of E-Waste Management Rules, 2016 (EWMR)** in the light of the reports of the CPCB.
- The CPCB may consider steps for compliance of Rule 16 requiring **reduction in the use of Hazardous substances in the manufacture of electrical and electronic equipment and their components or consumables or parts or spares**.
- This needs **special attention for constant vigilance in such hotspots**. This also requires review and updation of siting norms for e-waste by the CPCB which may be done within three months.
- **All the state pollution control boards need to identify the hotspots by constant vigil and to coordinate with the District Administration** at local levels to prevent damage to the environment and public health and meaningful enforcement of rule of law.

E-Waste Management Rules, 2016

- The **Ministry of Environment, Forest and Climate Change** notified the E-Waste Management Rules, 2016 in supersession of the E-waste (Management & Handling) Rules, 2011.
- **Over 21 products (Schedule-I) were included under the purview of the rule.** It included Compact Fluorescent Lamp (CFL) and other mercury containing lamps, as well as other such equipment.
- For the first time, the **rules brought the producers under Extended Producer Responsibility (EPR), along with targets.** Producers have been made responsible for the collection of E-waste and for its exchange.
- Various producers can have a **separate Producer Responsibility Organisation (PRO) and ensure collection of E-waste**, as well as its disposal in an environmentally sound manner.
- **Deposit Refund Scheme** has been introduced as an additional economic instrument.
- The **role of State Governments has been also introduced** to ensure safety, health and skill development of the workers involved in dismantling and recycling operations.
- A provision of penalty for violation of rules has also been introduced.
- **Urban Local Bodies (Municipal Committee/Council/Corporation) have been assigned the duty to collect and channelize the orphan products** to authorized dismantlers or recyclers.
- **Allocation of proper space to existing and upcoming industrial units for e-waste dismantling and recycling.**

Best Practices

- **'Take-back' and 'Planet ke Rakwale' campaign-** Nokia: Nokia set up drop boxes across the country to take back used phones, chargers and accessories, irrespective of the brand, at Nokia Care Centres. Nokia launched "Planet Ke Rakhwale" take-back and recycling campaign which extended to 28 cities across India.
- **"Green Warriors" in Telangana** have been a part of the recycling / refurbishing chain, and has contributed towards the successful implementation of measures to control e-pollution. Their efforts have also been recognized by the Telangana government in its Telangana e-waste management policy, 2017

Way Forward

- There is need for **better implementation methodologies and inclusion policies** that provide accommodation and validation for the informal sector to step up and help us meet our recycling targets in an environmentally sound manner.
- There is a need to **strengthen the domestic legal framework** to address the issue of unregulated imports of e-waste
- Government should **introduce vocational training programs** to rightly skill the current unorganized sector employees to ensure their smoother transition to working with organized sector
- Governments must **encourage research into the development of better environmentally-sustainable e-waste recycling techniques**
- There is urgent need for a **detailed assessment of the E-waste** including quantification, characteristics, existing disposal practices, environmental impacts.
- **Mass awareness programmes** should be initiated to encourage consumers to reuse/ recycle electronic products.

NATIONAL WATERWAY III

GS-III ENVIRONMENT & ECOLOGY

Context

- The 205-km-long Kollam-Kottappuram National Waterway III, which was inaugurated in 2007 has failed to attract attention 14 years after its inauguration.

About National Waterway III

- The **West Coast Canal or National Waterway No 3** is a 205-km stretch of this inland navigational route located in Kerala, India and runs from **Kollam to Kottappuram** and was declared a National Waterway in 1993.
- NW 3 is the **first National Waterway in the country with 24-hour navigation** facilities along the entire stretch.
- It has been extended to Kozhikode as per National Waterways Act, 2016.

Other National Waterways of India

- In 2016, the government **notified 111 inland waterways** as National Waterways of India under the National Waterways Act, 2016.
- Of these, **13 National Waterways are operational** for shipping and navigation and cargo/passenger vessels are moving on them.
- The **Inland Waterways Authority of India** under the Ministry of Shipping is developing the National Waterways for commercial navigation, including with assistance from the **World Bank**.
- Inland waterways mode of transport has been recognised as **environmentally friendly and economical, especially for cargo**

that do not depend on speed of delivery.



Problems of Inland Water Transport

- There is a **seasonal fall in water level** in rivers especially in the Rain-fed Rivers of the peninsula which become nearly dry during summer.
- **Reduced flow due to diversion of water for irrigation**, for instance, in the Ganga which makes it difficult even for steamers to ply.
- There is **reduced navigability due to siltation**, as in the Bhagirathi-Hooghly and in the Buckingham Canal.
- There are **problems in smooth navigation because of waterfalls and cataracts**, as in Narmada and Tapi.
- **Salinity**, especially in the coastal stretches, affects navigation.

Measures taken by government to boost this sector

- The **Inland Water Transport Policy, 2001**, prepared by the Ministry of Shipping supported and encouraged private participation.
- Apart from **streamlining the regulatory framework**, the government has provided **viability gap funding**, and has enabled the IWAI to enter into joint ventures adopting the **build, operate and transfer model** offering up to 40% equity for terminals and inland waterways.
- The sector can also receive **100% foreign direct investment** through the **automatic route**.

LANDSLIP PROJECT

GS-III DISASTER MANAGEMENT

Context

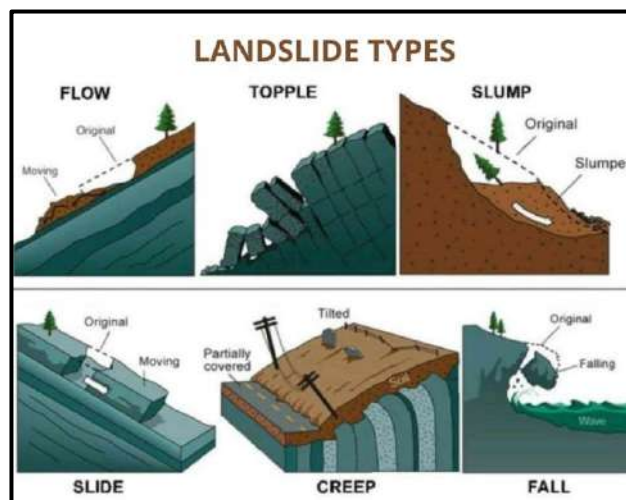
- Geological Survey of India (GSI), Ministry of Mines in collaboration with the British Geological Survey (BGS) under the National Environmental Research Council (NERC), UK funded, multi-consortium LANDSLIP project has developed a prototype regional Landslide Early Warning System (LEWS) for India.
- The same is currently being evaluated and tested by GSI in two pilot areas in India (Darjeeling district, West Bengal, and the Nilgiris district, Tamil Nadu).

About

- GSI through the LANDSLIP project is engaged in developing an experimental regional Landslide Early Warning System (LEWS) based on rainfall thresholds since 2017.
- The LANDSLIP research has developed a prototype model in 2020 based on the terrain-specific rainfall thresholds for two test areas (Darjeeling district, West Bengal, and the Nilgiris district, Tamil Nadu)

Landslide

- Landslides, also known as landslips, are **several forms of mass wasting** that may include a wide range of ground movements, such as rockfalls, deep-seated slope failures, mudflows, and debris flows.
- Gravity is the primary driving force for a landslide to occur**, but there are other factors affecting slope stability that produce specific conditions that make a slope prone to failure.
- In many cases, the landslide is triggered by a specific event (such as a heavy rainfall, an earthquake, a slope cut to build a road, and many others).



Natural Causes of Landslides

- Climate: A significant upsurge in precipitation or ground saturation would dramatically increase the level of ground water. When sloped areas are completely saturated with water, landslides can occur.
- Earthquakes
- Weathering
- Erosion
- Volcanoes
- Forest fires
- Gravity
- Human causes of landslides
- Mining
- Clear cutting: Clear cutting is a technique of timber harvesting that eliminates all old trees from the area. This technique is dangerous since it decimates the existing mechanical root structure of the area.

Effects of Landslides

- Lead to economic decline
- Decimation of infrastructure
- Loss of life
- Affects beauty of landscapes
- Impacts river ecosystems

Indian examples of devastating landslides

- In past years, there have been some serious and fatal landslides in India. Here is a list of worst landslides :
- 1948 Guwahati landslide, Assam
- 1938 Darjeeling landslide, West Bengal
- 2000 Mumbai landslide, Maharashtra
- 2013 Kedarnath landslide, Uttarakhand

Landslide mitigation

There are a wide range of technologies available for landslide mitigation. These include:

- India's **National Disaster Management Agency (NDMA)** has a focus on site-specific landslide mitigation that involves making geological investigations on selected sites (NDMA, 2015).
- Its approach is based on co-operation with various government agencies such as the Geological Survey of India to designate certain areas as landslide-prone areas.
- India has not as yet witnessed a comprehensive hands-on technological approach to landslide mitigation.
- However, technology for this is available, and the problem is a matter of managing costs with the possibility of a high failure rate.
- On the other side however, a few timely evacuations might open a new vista for the NDMA in terms of disaster preparedness.

SHORT NEWS ARTICLES

GS-I CULTURE & HISTORY

Kaavi Art

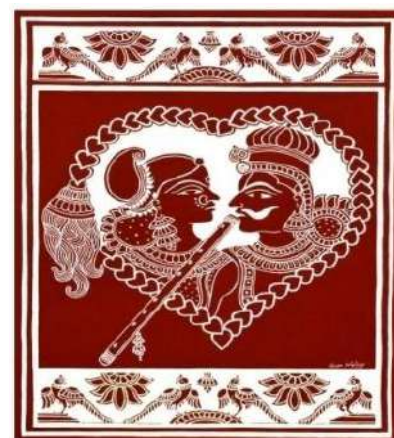
In News

- During his Mann Ki Baat address, the Prime Minister spoke about a dying form of art known as Kaavi Art.
- He has urged people to work towards preserving such ancient forms in the country.

About

- Kaavi art is a **form of murals found in Konkan region especially in temples of Goa, parts of coastal Maharashtra and Karnataka.**
- Kaavi murals can also be seen in old houses, small shrines.
- The term Kaav in Konkani refers to Indian red pigment which is the only color used in this painting, is **obtained from the laterite soil.**
- Reddish brown murals against white sandblasted backgrounds are the specialties of Kaavi art.
- The painting is done on wet plaster in a manner **similar to frescoes.**

Note: Fresco is a technique of mural painting executed upon freshly laid ("wet") lime plaster.



Rare Black Rock Art Depictions

Context

- Rare black stick-like drawings of humans have been discovered in two caverns near the Kundu River in Paibogula village, Kurnool district, Andhra Pradesh.

About

- These drawings date **from the Megalithic Period (1500 to 500 BC)** and the early Historical Period (500 BC to 600 AD).

Location

- The recently discovered rock art sites in **the Kundu river valley** in Gadivemula Mandal are 40 kilometers from Kurnool city and are known locally as **Yedoorlagayi, Siddhulagayi, and Gurralapadah.**

Findings

- These sites feature rock art in black, red, and white paints, as well as cupules or cup markings of various sizes, which need to be investigated further for an exact date.
- Gneissic granite, a particularly hard and erosion-resistant rock type, was used to create these cupules.

Kundu River

- The Kundu River also known as 'kunderu', 'Kumurduthi' is a **tributary of the Penna River in the Rayalaseema region of Andhra Pradesh.**
- It is known for frequent floods that bring heavy damage to the Nandyal and Koilkuntla areas, and hence it is popularly called the **"Sorrow of Nandyal."**

Tai Khamti-British War

Context

- The Tai Khamti-British War of 1839 – and not the Sepoy Mutiny of 1857 – could well be India's first war of independence, believes Arunachal Pradesh Deputy Chief Minister Chowna Mein.

About

- Tai Khamti took place in 1839 **between the Tai Khamti people and the British.**
- Location:** The theatre of this war was some 2,400 km east of Meerut in Uttar Pradesh where the mutiny began.
- Motive:** Tai Khamtis resisted colonisation by the British.

- **Outcome:** Some 80 British soldiers, including Col. Adam White, were killed in the resultant conflict.

About Tai Khamti

- **Inhabit:** The Khamti people, who follow Theravada Buddhism, number a little more than 1,00,000 today and live in areas straddling Arunachal Pradesh and Assam.
- **Arrived from:** They came from the Hkamti long region, the mountainous valley of the Irrawaddy.
- **Script:** They have their own script for their language, known as 'Lik Tai', which originated from the Shan (Tai) script of Myanmar.
- **Festival:** Sangken is the main festival of the Khamti.



Sumi Tribe of Nagas

Context

- The Sumi tribe of Nagas uses several ecological indicators to facilitate agricultural practices and predict seasonal variation; but this wisdom is vanishing with the passage of time

About

- The 'Sümi Naga' are the major ethnic group among nagas in Nagaland.
- There are also seven Sümi villages in Tinsukia District of Assam.
- The Sümis practised headhunting like other Naga peoples before the arrival of the Christian missionaries and their subsequent conversion to Christianity.
- Anthropological study of the Sümis is documented in the book The Sema Nagas by J. H. Hutton.
- The Sümi is one of the recognised scheduled tribes of India.
- The ancestral religion of the Sümis was the worship of nature.

Festivals

- Tuluni is a festival of great significance for the Sümi.
- Ahuna is a traditional post-harvest festival of the Sümis.
- Ahuna signifies the celebration of the season's harvest in Thanksgiving,

Raigad Fort

In News

- President Ram Nath Kovind visited the Raigad Fort to pay tribute to Chhatrapati Shivaji Maharaj.

About

- Raigad is a hill fort situated in Mahad, Raigad district of Maharashtra.
- The British Gazette states the fort was known to early Europeans as the Gibraltar of the East.
- The fort, which was earlier called Rairi, was the seat of the Maratha clan Shirke in the 12th century.
- The fort changed hands a number of times from the dynasty of Bahaminis to the Nizamshahis and then the Adilshahis.
- In 1656, Chhatrapati Shivaji captured it from the More's of Javli who were under the suzerainty of the Adilshahi Sultanate.
- In 1662, Shivaji formally changed the fort's name to Raigad and added a number of structures to it.
- By 1664, the fort had emerged as the seat of Shivaji's government.
- On June 6, 1674, Shivaji was coronated at Raigad by Gagabhatt where he took on the title of Chhatrapati.
- Six years later, Shivaji passed away in Raigad in 1680 and was cremated at the fort.

Kala Sanskriti Vikas Yojna

Context

- Recently the Ministry of Culture implemented a Scheme of Financial Assistance for the Development of Buddhist/Tibetan Culture and Art under "Kala Sanskriti Vikas Yojna (KSVY).

About

- Kala Sanskriti Vikas Yojana (KSVY) is an umbrella scheme under the Ministry of Culture for the promotion of art and culture in the

13 ICH traditions recognised by UNESCO			
1.	Tradition of Vedic chanting, 2008	8.	Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir, India, 2012
2.	Ramlila, the traditional performance of the Ramayana, 2008	9.	Sankirtana, ritual singing, drumming and dancing of Manipur, 2013
3.	Kutiyattam, Sanskrit theatre, 2008	10.	Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab, India, 2014
4.	Ramman, religious festival and ritual theatre of the Garhwal Himalayas, India, 2009	11.	Yoga, 2016
5.	Mudiyettu, ritual theatre and dance drama of Kerala, 2010	12.	Nowruz, 2016
6.	Kalbelia folk songs and dances of Rajasthan, 2010	13.	Kumbh Mela, 2017
7.	Chhau dance, 2010		

country.

- It is a **central sector scheme**.

Objective

- To promote and disseminate the art & culture of the country by providing financial support to drama/theatre groups/dance groups/ music ensembles/ folk theatre & music and other genres of performing art activities.

Sub schemes

- Scheme of Financial Assistance for Promotion of Art and Culture.
- Scheme of Financial Assistance for Creation of Cultural Infrastructure.
- Scheme for Safeguarding the Intangible Cultural Heritage, which aims to promote the 13 intangible cultural heritage of India, recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Ramna Kali Temple

Context

- Recently, the Indian President has inaugurated the reconstructed Ramna Kali temple in Ramna, Dhaka (Bangladesh),

About

- In Nepalese folklore, the Ramna Kali Temple was founded by the devotees of the Goddess Kali.
- Although the temple had stood for centuries, it was largely developed in the early 20th century.
- The temple was **developed under the patronage of Rani Bilashmoni Debi, wife of Rajendra Narayan (1882-1913)**. At this time, the temple was one of Dhaka's tallest landmarks.
- On March 25, 1971, the Pakistan Army began its "**Operation Searchlight**" to oppose a Bengali nationalist movement in what was then East Pakistan. It led to a genocide and to the Bangladesh Liberation War.
- Operation Searchlight focused on prominent Hindu sites including the Ramna Kali Mandir.

Tolkāppiyam

Context

- Recently, the Minister of State for Education, released the Hindi translation of Tolkāppiyam and the Kannada translations of 9 books of Classical Tamil literature.

About

- Tolkāppiyam is the most **ancient extant Tamil grammar text and the oldest extant long work of Tamil literature**.
- The surviving manuscripts of the Tolkappiyam consists of three books (atikaram), each with nine chapters (iyal), with a cumulative total of 1,610 sutras.
- Tamil tradition place the text in the mythical **second sangam, variously in 1st millennium BCE or earlier**.
- The author of the work is Tolkappiyar. As per available records, he lived before 4,200 B.C.



Jyotirlingam Temples of Maharashtra

Context

- Ministry of Tourism under its Dekho Apna Desh Initiative organised a webinar on 'Jyotirlingam Temples of Maharashtra'.

About

- A Jyotirlinga or Jyotirlingam, is a devotional representation of the Hindu god Shiva.
- There are 64 original Jyotirlinga shrines in India and Nepal, 12 of which are most sacred and they are called the **Maha Jyotirlingam**.
- The five Jyotirlingas of Maharashtra are **Aundha Nagnath, Bhimashankar, Ghrishneshwar, Parali Vajinath, and Trimbakeshwar**.
- Trimbakeshwar Jyotirlingam is one of four places where Sinhastha Fair (Kumbh Mela) is held which draws people from all over India.
- Out of 12 Jyotirlingas, the southernmost of these is located at Rameswaram in Tamil Nadu while the northernmost is located in the Himalayas at Kedarnath in Uttarkhand.

12 Jyotirlinga in India		
12-Jyotirlinga		
Jyotirlinga List with Location		
No	Jyotirlinga	Location
1	Somnath Jyotirlinga	Seurashtra, Gujarat
2	Mahakaleshwar Jyotirlinga	Ujjain, Madhya Pradesh
3	Omkareshwar Jyotirlinga	Shivpuri, Madhya Pradesh
4	Mallikarjuna Jyotirlinga	Srisailem, Andhra Pradesh
5	Vajinath Jyotirlinga	Parli, Maharashtra
6	Kedarnath Jyotirlinga	Kedarnath, Uttarakhand
7	Nageshwar Jyotirlinga	Darukavanam, Gujarat
8	Trimbakeshwar Jyotirlinga	Nasik, Maharashtra
9	Bhimashankar Jyotirlinga	Pune, Maharashtra
10	Rameshwar Jyotirlinga	Rameshwaram, Tamil Nadu
11	Grishneshwar Jyotirlinga	Aurangabad, Maharashtra
12	Kashi Vishwanath Jyotirlinga	Varanasi, Uttar Pradesh

Scheme for Protection and Preservation of Endangered Languages of India

Context

- The Government of India has initiated a Scheme known as "Scheme for Protection and Preservation of Endangered Languages of India" (SPPEL).

Details

- The Scheme for Protection and Preservation of Endangered Languages (SPPEL) was instituted by Ministry of Education in 2013.
- Aim:** The sole objective of the Scheme is to document and archive the country's languages that have become endangered or likely to be endangered in the near future.
- Monitored by:** The scheme is monitored by Central Institute of Indian Languages (CIIL) located in Mysuru, Karnataka. The CIIL has collaborated with various universities and institutes across India for this mission.

Features

- At the moment, the languages which are spoken by less than 10,000 speakers or languages which are not linguistically studied earlier are chiefly considered to be documented in this Government of India scheme.
- Presently, 117 languages have been listed for the documentation.
- Documentation in the form of grammar, dictionary and ethno-linguistic profiles of about 500 lesser known languages are estimated to be accomplished in the coming years.

Konyak Tribe

Context

- At the centre of the violence which followed the killing of six civilians in Oting village of Mon district in Nagaland, and which led to the killing of eight more civilians, are the Konyaks – among the largest tribes in the state.

The Tribe

About

- The Konyaks are one of the major Naga ethnic groups.

Habitation

- In Nagaland, they inhabit the Mon District – also known as 'The Land of The Anghs'.
- They are found in Arunachal Pradesh; Assam; and also in Myanmar.

Traditional Practices

- The Anghs/Wangs are their traditional chiefs whom they hold in high esteem.
- Facial tattoos were earned for taking an enemy's head.
- Other unique traditional practices that set the Konyaks apart are: gunsmithing, iron-smelting, brass-works, and gunpowder-making. They are also adept in making 'janglāi' (machetes) and wooden sculptures.

Festivals

- Aoleng, a festival to welcome the spring and also to invoke the Almighty's (Kahwang) blessing upon the land before seed-sowing, is the biggest festival of the Konyaks.
- Another festival, 'Lao Ong Mo', is the traditional harvest festival.

Vernacular Innovation Program

Context

- Atal Innovation Mission (AIM), NITI Aayog has come up with a first of its kind Vernacular Innovation Program (VIP).
- VIP is an initiative to lower the language barrier in the field of innovation and entrepreneurship such that will systematically decouple creative expressions and languages of transaction.

Aim

- To empower innovators and entrepreneurs across the country.
- To enable innovators and entrepreneurs in India to have access to the innovation ecosystem in 22 scheduled languages by the Government of India.

Features

- To build the necessary capacity for the VIP, AIM has identified and will be training a Vernacular Task Force (VTF) in each of the 22 scheduled languages.
- Each task force comprises of vernacular language teachers, subject experts, technical writers, and the leadership of regional Atal Incubation Centers (AICs).

Need

- India derives its identity from the diverse social and cultural fabric with regional languages being one of the most prominent

cultural assets.

- According to 2011 Census, only 10.4% of Indians speak English, most as their second, third, or fourth language.
- Only 0.02% of Indians spoke English as their first language.
- Ten years later these numbers are not likely to be very different.
- We need to create equal opportunity for the vernacular innovators who represent the staggering 90% of our population.
- By providing access to learning in one's language and culture, AIM looks forward to enriching the local, regional, national and global innovation pipelines.

Significance

- Vernacular Innovation Program will strengthen the design and innovation capabilities of our communities, thereby assisting local entrepreneurs, artisans and innovators to seamlessly assimilate the knowledge cum technical materials that AIM will develop.
- This would assist India in building a strong local network of design experts and innovation practitioners.
- This one of its kind initiative by Atal Innovation Mission, will help in overcoming the barriers of language and empower innovators in the farthest areas of the country.

GEOGRAPHY

Barbados

Context

- Nearly 400 years after the country became a British colony, Barbados has become the world's newest republic.
- The Caribbean island nation removed Queen Elizabeth II as the head of the state in a ceremony attended by Prince Charles. Barbados, however, will continue to be one of the 54 Commonwealth nations.

About

Location

- Barbados is an island country in the Lesser Antilles of the West Indies, in the Caribbean region of the Americas.
- It is in the western part of the North Atlantic, 100 km east of the Windward Islands and the Caribbean Sea.
- Barbados is located roughly 13°N of the equator.
- Barbados is outside the principal Atlantic hurricane belt.
- Capital - Bridgetown

CARICOM

- Barbados is part of Caribbean Community (CARICOM) which was formed in 1973.



The Caribbean Community (CARICOM) is an intergovernmental organisation of 15 member states (14 nation-states and one dependency) throughout the Caribbean. They have the primary objectives of promoting economic integration and cooperation among its members, to ensure that the benefits of integration are equitably shared, and to coordinate foreign policy.

Coonoor Ghat

Context

- Chief of Defence Staff (CDS) General Bipin Rawat perished when an Indian Air Force (IAF) Mi-17V5 helicopter carrying them crashed into a heavily wooded area of the Coonoor ghat in the Nilgiris in western Tamil Nadu.

About

- Coonoor Ghat is also known as the Kallar Ghat.
- The Coonoor ghat rises steeply from Mettupalayam and the Coonoor river flows through the deep gorge with sheer cliff faces on both sides.

Some important Passes



Cold Wave

Context

- The India Meteorological Department (IMD) has predicted a cold wave in parts of Punjab, Haryana, Chandigarh, Gujarat, Rajasthan and Uttar Pradesh over the next few days.

What is a cold wave?

- The IMD defines a cold wave qualitatively as “a condition of air temperature which becomes fatal to the human body when exposed.”
- The IMD records a cold wave **when**
 - the minimum temperature is equal to or less than 10 degree Celsius at a weather station in the plains,**
 - and the min temperature is 4.5 degrees to 6.4 degrees below the normal temperature for that period.**
- A cold wave may also be recorded at a station in the plains when the minimum temperature is less than or equal to 4 degree Celsius.
- For hilly regions, a cold wave is declared when the minimum temperature is less than or equal to 0 degree Celsius and the minimum temperature is 4.5 degrees to 6.4 degrees below the normal.
- The ‘normal’ temperature is calculated for every five days by taking the average temperature for these days over the past 30 years.

Cause of this cold wave

- Cold waves usually occur from mid-December to the end of February.
- According to the IMD, the factors that bring cold waves to India include **the movement of cold air masses brought about by upper-level winds.**
- They can be triggered by strong **westerly winds approaching northwest India and transporting cold air towards the southeast direction.**
- Build up of an extended area of relatively high pressure over northwest Asia can also bring cold waves.

Western Disturbance and cold wave

- A western disturbance as a cyclonic circulation lies over north Pakistan and adjoining Jammu and Kashmir.
- Western disturbances are storms that originate in the Mediterranean region and bring winter rainfall to northwest India.
- After this western disturbance moves, there is a brief gap. The next western disturbance will set in only on December 22 night.
- In this gap of five to six days, the IMD expects strong northwesterly and westerly cold winds over north India.

Typhoon Rai

Context

- Super typhoon Rai is battering the southern Philippines, forcing thousands of people to take shelter amid warnings of widespread flooding and destruction.
- The storm made landfall in **Siargao**, a popular tourist island, packing winds of about 175km/h.

Details

- **Typhoon Rai**, known in the Philippines as **Typhoon Odette**, is a powerful tropical cyclone **over the South China Sea** which recently passed through the Philippines.
- Rai became the third **Category 5 super typhoon to form in South China Sea** after Pamela of 1954 and Rammasun of 2014.

Category	Wind speeds
5	More than 157 MPH
4	From 130 to 156 MPH
3	From 111 to 129 MPH
2	From 96 to 110 MPH
1	From 74 to 95 MPH

Lakadong Turmeric

Context

- Agri tech firm AgNext Technologies, in partnership with Spices Board of India has deployed its innovative curcumin testing technology for assessment of **Lakadong turmeric**.

About

- **Lakadong turmeric** is grown in the **Jaintia Hills, Meghalaya**.
- Lakadong turmeric is **globally considered to be one of the best quality turmeric** with high curcumin content (between 7-12%), as compared to other varieties of turmeric where the average curcumin content is measured between 3-5%.
- Meghalaya's Lakadong turmeric is renowned for its **highest curcumin content in the world**.

Significance of Curcumin Testing Technology

- This is the first time in Meghalaya that AI-based technology is being used for rapid quality assessment of Lakadong turmeric.
- Traditional testing time of turmeric can take hours, and depending on the distance, it can even take days for the test results to come back.
- This leads to loss of time and resources for both farmers and traders.
- Rapid quality testing helps to mitigate these losses by analyzing curcumin content in less than 1 minute.

Lakadong Turmeric is a special variety Turmeric from Lakadong in Meghalaya. This turmeric is well-known for its medicinal properties. The healing properties consist of healing back pain, improving brain functions, boosts immunity, protects the heart, promotes healthy skin and eases stomach pain. The highest

Chillai Kalan

Context

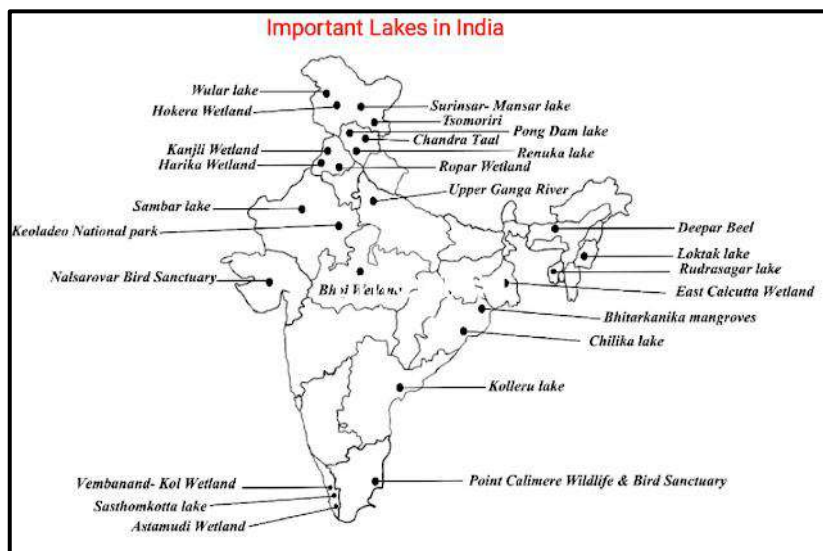
- Kashmir is currently under the grip of 'Chillai-Kalan'.

About of 'Chillai-Kalan'

- It is a **40-day harshest winter period when a cold wave grips the region and the temperature drops considerably leading to the freezing of water bodies** including the famous Dal Lake here as well as the water supply lines in several parts of the valley.
- The chances of snowfall are the most frequent and maximum during this period and most areas, especially in the higher reaches, receive heavy snowfall.
- The cold wave continues even after Chillai Kalan in Kashmir with a 20-day-long 'Chillai-Khurd' (small cold) and a 10-day-long 'Chillai-Bachha' (baby cold)

Dal Lake

- It is a lake in Srinagar, Jammu and Kashmir.
- It is an urban lake, which is the second largest in the union territory of Jammu and Kashmir.
- It is integral to tourism and recreation in Kashmir and is named the "Lake of Flowers", "Jewel in the crown of Kashmir" or "Srinagar's Jewel".
- The lake is also an important source for commercial operations in fishing and water plant harvesting.
- The **floating gardens**, known as "Rad" in Kashmiri, blossom with lotus flowers during July and August.
- Dal is mentioned as **Mahasarit** in ancient Sanskrit texts.



Katchatheevu Island

Context

- Thirteen Indian fishermen, hailing from Tamil Nadu, were arrested by the Sri Lankan Navy on the charge of crossing the **International Maritime Boundary Line (IMBL)**.

Geography

- Katchatheevu is a **163-acre uninhabited island administered by Sri Lanka and was a disputed territory claimed by India until 1976**.
- The island is located between Neduntheevu, Sri Lanka and Rameswaram, and has been traditionally used by both Sri Lankan Tamil and Indian fishermen.



Class 70 140-Foot Double-Lane Modular Bridge

Context

- Defence Minister Shri Rajnath Singh dedicated to the Nation 24 bridges and three roads, built by Border Roads Organisation (BRO) in four States and two Union Territories.

Class 70 140-feet Double-Lane Modular Bridge

- Class 70 140-feet Double-Lane Modular Bridge, is built at the height of 11,000 **feet at Flag Hill Dokala, Sikkim and Chisumle-Demchok road at Umling La Passat over 19,000 feet in Ladakh** which also holds the Guinness World Record of world's highest motorable road.

Umling La Pass

- It is one of the highest motorable roads in the world.
- Located in the **Ladakh region of Jammu and Kashmir**.
- Stretching to a distance of almost 86km, **connects Chisumle and Demchok villages**.
- Both these villages lie in close proximity to the Indo-China border in the eastern sector.**



Bina (MP)-Panki (UP) Multiproduct Pipeline Project

Context

- The Multiproduct pipeline from Bina Refinery (MP) to POL Terminal at Panki, **Kanpur (UP)** was dedicated to the nation by the Prime Minister Shri Narendra Modi.

About

- The **356-km Bina-Panki multi-product pipeline**, to be operated by Bharat Petroleum Corporation Limited (BPCL).
- This project will strengthen the supply of petroleum products in Kanpur, Lucknow, Aonla, Shahjahanpur, Baitalpur and Gonda in eastern and central UP, Kathgodam in southern Uttarakhand and Muzaffarpur in northern Bihar.

Significance

- The pipeline, will cater to the demand of petroleum products from northern states.
- The Project provided direct & indirect employment of close to 5 lakh man-days during construction phase.
- The Project will also provide employment to approx. 200 people for operation and maintenance.



- Pipelines are the safe & environment friendly mode of transporting large quantity of petroleum products in an economical and reliable manner, reducing carbon foot prints by avoiding tank wagon and tank lorry movements.

Saryu Canal National Project

Context

- Prime Minister Narendra Modi will inaugurate the Saryu Canal National Project in Balrampur district of Uttar Pradesh.

About

- The project involves interlinking of five rivers – **Ghaghara, Saryu, Rapti, Banganga and Rohin.**
- The Saryu Canal National Project starts from the Saryu Barrage at Bahraich.
- It will benefit nine districts in Eastern Uttar Pradesh – Bahraich, Shravasti, Balrampur, Gonda, Siddharthnagar, Basti, Sant Kabir Nagar, Gorakhpur and Maharajganj.

Saryu

- The Sarayu is a river that originates at a ridge south of Nan kida Kot mountain in Bageshwar district in Uttarakhand
- It discharges into the Sharda River at Pancheshwar at the India – Nepal border.

Char Dham Highways

Context

- The Supreme Court upheld the Government's mandate to broaden three Himalayan highways, considered crucial by the Ministry of Defence (MoD) for quick troop build-up along the India-China border.

About

- The three National Highways – **Rishikesh to Mana, Rishikesh to Gangotri and Tanakpur to Pithoragarh** – act as feeder roads to the northern border with China.
- They are part of the Char Dham Highway project.

Char Dham

- The Char Dham (meaning: four abodes) is a set of four pilgrimage sites in India.
- The **four Dhams are, Badrinath, Dwarka, Puri and Rameswaram.**
- The **Char Dham as defined by Adi Shankaracharya** consists of four Hindu pilgrimage sites.
- Another small circuit in Uttarakhand of four pilgrimage sites-Yamunotri, Gangotri, Kedarnath, and Badrinath is referred to as **Chota Char Dham.**



Golan Heights

Context

- Israeli Prime Minister Naftali Bennett recently said the country intends to double the number of settlers living in the Israeli-controlled Golan Heights with a multimillion-dollar plan meant to further consolidate Israel's hold on the territory.

About

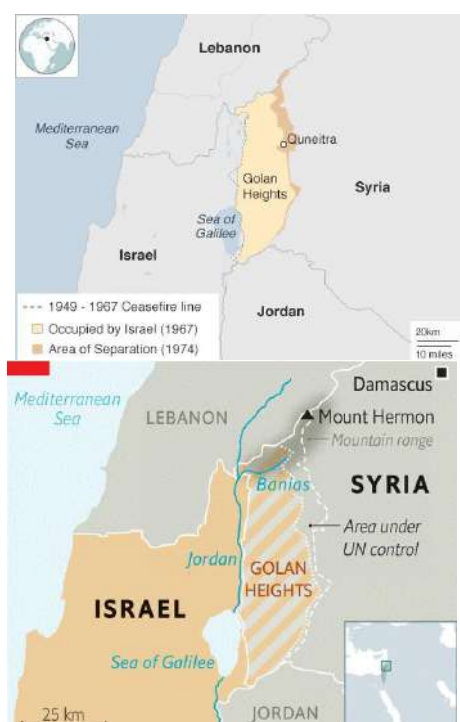
Borders

- Golan Heights refers to a basaltic plateau bordered by the Yarmouk River in the south, the Sea of Galilee and Hula Valley in the west, the Anti-Lebanon with Mount Hermon in the north and Wadi Raqqad in the east.

History

- As a geopolitical region, the Golan Heights refers to the border region captured from Syria by Israel during the Six-Day War of 1967.
- The territory has been occupied by the latter since then and was subject to a de facto Israeli annexation in 1981.

Note: India has also not recognized Golan heights as Israel territory and has called for the return of Golan Heights to Syria.



GS-II

POLITY

World Press Freedom Index

Context

- The Centre does **not agree with the conclusions drawn by Reporters Without Borders** about press freedom in India.

About Press Freedom Index

- India dropped two places on the global press freedom index ranking to 142nd place.
- **India's neighbors – Bhutan, Nepal and Sri Lanka – are ranked higher in the list.**
- It is **released by Reporters Without Borders.**
- It has been published every year since 2002.
- The **Index ranks 180 countries and regions according to the level of freedom available to journalists.**
- It is a **snapshot of the media freedom situation based on an evaluation of pluralism, independence of the media, quality of legislative framework and safety of journalists in each country and region.**
- It **does not rank public policies even if governments obviously have a major impact on their country's ranking.**
- It is not an indicator of the quality of journalism in each country or region.

Finding Related to India

- India was ranked **142nd in 2020** and there is **no improvement in the environment** it provides to journalists.
- India has a **low score in neighboring countries, with Nepal at 106, Sri Lanka at 127 and Bhutan at 65.** Pakistan follows 145th place.
- India is one of the countries **rated "bad" for journalism and one of the most dangerous countries for journalists trying to get their jobs done right.**

Reports without Borders

- Reporters Sans Frontières (RSF) or Reporters Without Borders is based in Paris.
- RSF is an independent NGO with consultative status with the United Nations, UNESCO, the Council of Europe and the International Organization of the Francophonie (OIF).

Question Hour

Context

- A question by Rajya Sabha MP Venugopal, listed for a reply, has been removed.

About Question Hour

- **The first hour of every parliamentary sitting is slotted for this.** During this time, the members ask questions and the ministers usually give answers. The questions are of three kinds, namely, starred, unstarred and short notice.
- **A starred question** (distinguished by an asterisk) requires an oral answer and hence supplementary questions can follow.
- **An unstarred question**, on the other hand, requires a written answer and hence, supplementary questions cannot follow.
- **A short notice question** is one that is asked by giving a notice of fewer than ten days. It is answered orally.
- **The list of starred, unstarred, short notice questions and questions to private members are printed in green, white, light pink and yellow colour, respectively, to distinguish them from one another.**
- In addition to the ministers, **the questions can also be asked to the private members. Thus, a question may be addressed to a private member** if the subject matter of the question relates to some Bill, resolution or other matter connected with the business of the House for which that member is responsible.

Restriction imposed

Restriction in Rajya Sabha

- Question "shall be pointed, specific and confined to one issue only;
- It shall not bring in any name or statement not strictly necessary to make the question intelligible;
- If it contains a statement the member shall make himself responsible for the accuracy of the statement;
- It shall not contain arguments, inferences, ironical expressions, imputations, epithets or defamatory statements

Restrictions in Lok Sabha

- repetitive or have been answered previously;
- matters that are pending for judgment before any court of law or under consideration before a Parliamentary Committee.

Cost of Living Report

Context

- Recently, the Worldwide Cost of Living report has been released highlighting that Tel Aviv (Israel's capital) is the world's most expensive city to live in.
- The report is compiled by the Economist Intelligence Unit (EIU). It compares the cost of living indices in different cities.

Report Methodology

- The index is benchmarked against prices in New York City, hence cities with currencies that are stronger against the US dollar are likely to appear higher in the rankings.

Findings of the Report

- In the 2021 report Paris and Singapore came joint second, followed by Zurich and Hong Kong.
- New York came in sixth, and Geneva took seventh place.

India Specific

- Ahmedabad, Gujarat has been listed in the top ten cheapest cities of the survey.

About Economic Intelligence Unit

- The Economist Intelligence Unit is the research and analysis division of The Economist Group, which is the sister company to The Economist newspaper.
- The EIU also releases the Democracy Index, which provides a snapshot of the state of democracy worldwide in 165 independent states and two territories.

GOVERNANCE

National Disaster Response Fund

Context

- Funds are being provided with an extra Rs. 15,000 crore for emergency COVID-19 response from national disaster response fund.

Objectives

- It is a **fund managed by the Central Government for meeting** the expenses for emergency response, relief and rehabilitation due to any threatening disaster situation or disaster.
- Constituted to **supplement the funds of the State Disaster Response Funds (SDRF) of the states to facilitate immediate relief in case of** calamities of a severe nature.
- National Calamity Contingency Fund (NCCF) was renamed as National Disaster Response Fund (NDRF)** with the enactment of the Disaster Management Act in 2005.
- Section 46 of Disaster Management Act -2005** puts it into the Public accounts category.

Calamities covered

- The NDRF is placed in the **"Public Account" of GOI under "reserve funds not bearing interest"**.
- Natural calamities **such as earthquakes, cyclones, drought, fire, tsunami, floods, landslide, hailstorm, avalanche, pest attack and cloud burst** deemed to be of severe nature by the Indian Government and for which the state government requires funds in excess of the balance available with its SDRF.

Financing

- It is Financed through the levy of a cess on certain items, chargeable to excise and customs duty, and approved annually through the Finance Bill.

Calamities Covered under NDRF

- Natural disasters classified by the Indian government as serious, **such as earthquakes, cyclones, droughts, fires, tsunamis, floods, landslides, hail, avalanches, pest epidemics**, torrential rains, etc. SDRF.
- This fund will be used to **provide emergency assistance to those affected by the above disasters in the event of a national shortage** of funds. However, NDRF (or SDRF) is **not used to mitigate, recover, rebuild, and mitigate disaster risk**.

Statehood for Ladakh

Context

- Ladakh observed a **shut down on December 13 to press for four demands** – statehood for Ladakh, protection under Sixth Schedule of the Constitution, filling of 12,000 vacancies, allocation of two Lok Sabha seats and one Rajya Sabha seat.

Demands

- Amending the Ladakh Autonomous Hill District Council (LAHDC) Act to clarify the role and responsibilities of the Ministry of Home Affairs (MHA).

- Land, employment and cultural identity of Ladakh be protected under the Sixth Schedule.
- Filling of 12,000 vacancies
- Allocation of two Lok Sabha seats and one Rajya Sabha seat.
- Statehood for Ladakh

About 6th Schedule

- The Sixth Schedule consists of provisions for the administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram, according to Article 244 of the Indian Constitution.
- It seeks to safeguard the rights of tribal population through the formation of Autonomous District Councils (ADC).
- ADCs are bodies representing a district to which the Constitution has given varying degrees of autonomy within the state legislature.
- The governors of these states are empowered to reorganise boundaries of the tribal areas.
- The roles of the central and state governments are restricted from the territorial jurisdiction of these autonomous regions.
- The councils are empowered to make legislative laws on matters like land, forests, fisheries, social security, entertainment, public health, etc.

About Regional Council

- The Sixth Schedule also provides for separate Regional Councils for each area constituted as an autonomous region.
- Each autonomous district and regional council consist of not more than 30 members, of which four are nominated by the governor and the rest via elections.



Gram Ujala Scheme

Context

- Convergence Energy Services Limited (CESL), a wholly owned subsidiary of Energy Efficiency Services Limited (EESL), has achieved a remarkable milestone of distributing 50 lakhs LED bulbs under Project Crore of their Gram Ujala program.

About the Scheme

- Gram Ujala scheme is being implemented in rural households in Bihar, Uttar Pradesh, Andhra Pradesh, Karnataka, and Telangana.
- CESL is providing high quality 7-Watt and 12-Watt LED bulbs with 3 years guarantee at a cost of INR 10 per bulb in exchange of working incandescent bulbs.
- Every household can exchange a maximum of 5 bulbs.

About CESL

- Convergence Energy Services Limited (CESL) is a subsidiary of state-owned Energy Efficiency Services Limited, a joint venture of public sector companies under the Ministry of Power, Government of India.
- CESL is focused on delivering clean, affordable, and reliable energy.

Significance of the Scheme

- This will have a major impact on India's climate change measures, energy savings of 225 million kWh / year, and CO₂ reduction of 1.65 million tonnes / year.
- It also enables better lighting at an affordable price, resulting in better living standards, economic savings, more economic activity, and more safety for local people.
- It removes price barriers for local consumers. In addition, the energy savings achieved reduce household energy consumption, enabling higher disposable income and savings.

Mid-Day Meal

Context

- Karnataka has decided to provide eggs to students in government and aided schools in seven districts from December to check the malnourishment.

About Mid-Day Meal Scheme

- It was started in India on 15 August 1995 as 'National Program of Nutritional Support to Primary Education (NP-NSPE)'.
- It was renamed as the 'National Program of Mid-Day Meal in Schools' in October 2007, also known as the Mid-Day Meal

(MDM) Scheme.

- The Midday Meal Scheme is **covered by the National Food Security Act, 2013.**
- Under the MDM scheme, **one meal is provided to all children enrolled in government schools, local body schools, government-aided schools, special training centers (STC),** madrasas supported under the Sarva Shiksha Abhiyan.
- Cooked meals are provided to **every child enrolled and attaining school from six to fourteen years.** Meals are provided to children studying in Class I to VIII.
- The **central and state governments share the cost of the Midday Meal Scheme,** with the center providing 60 percent and the states 40 percent.
- The central government provides grains and financing for other food. Costs for facilities, transportation, and labour is shared by the federal and state governments

Objectives of Mid-Day Meal Scheme

- To increase **the enrolment in the schools of the children who belong to disadvantaged sections of the society.**
- To **increase the attendance of the children in government and government-aided schools.**
- To **retain the children studying in class I to VIII.**
- To **give nutritional support to the children studying in the elementary stage,** especially in the drought-affected areas.
- To address hunger and malnutrition and improve socialisation among castes.

Features Of Mid-Day Meal Scheme

- Every **school should have a hygienic cooking infrastructure for hygienically cooked mid-day meals.**
- The **mid-day meals are to be served only on the school premises on all working days of the school.**
- The **Food and Drugs Administration Department of the State can collect samples** for ensuring the quality and nutritional value of the meals.
- The **State Steering-cum Monitoring Committee (SSMC) will oversee the implementation of this scheme,** including establishing a mechanism to maintain the quality and nutritional standards of the meals.
- Food **allowance is provided to the children when the cooked meals cannot be provided** because of unforeseen circumstances.

Election Symbol

Context

- The Delhi High Court asked the **Election Commission (EC) to allot a common election symbol to Chandra Shekhar Azad's political party** for the upcoming assembly elections in five states.

About election Symbol

- Elections or election symbols are standardized symbols assigned to political parties.
- These are used by political parties during the campaign and are displayed on the Electronic Voting Machine (EVM), where **voters select a symbol to vote for the relevant political party.**
- Introduced to **facilitate voting for illiterate people** whose party names cannot be read at the time of voting.
- In the 1960s, it was **proposed that the regulation, reservation, and assignment of election symbols would be done by parliamentary law.**
- In response to this proposal, the ECI stated that **party approvals are monitored by the 1968 election symbol (reservation and assignment) provisions,** as well as symbol assignments.

Power of election Commission

- The Election Symbols (Reservation and Allotment) Order, 1968 empowers the EC to recognise political parties and allot symbols.
- Under Paragraph 15 of the Order, it can decide disputes among rival groups or sections of a recognised political party staking claim to its name and symbol.

Types of Symbol

- For the purpose of this Order symbols are either reserved or free.
- Reserved symbol is a symbol which is reserved for a recognised political party for exclusive allotment to contesting candidates set up by that party.
- Free symbol is a symbol other than a reserved symbol.

Allotment of Symbol

- As per the guidelines, to get a symbol allotted:
 - A party/candidate has to provide a list of three symbols from the EC's free symbols list at the time of filing nomination papers.
 - Among them, one symbol is allotted to the party/candidate on a first-come-first-serve basis.
 - When a recognized political party splits, the Election Commission takes the decision on assigning the symbol.

SOCIAL JUSTICE

Atal Ranking of Institutions on Innovation Achievements (ARIIA)

Context

- The **Atal Ranking of Institutions on Innovation Achievements (ARIIA)** have been announced for the current year.
- Seven Indian Institutes of Technology and the Indian Institute of Science, Bengaluru, are among the top 10 central institutions. The top rank has been bagged by the IIT, Madras.

About ARIIA Ranks

- ARIIA ranks are announced in 9 separate categories, including Centrally funded technical institutions such as IITs, NITs, State standalone technical colleges, State Universities, Private standalone technical colleges, Private universities and non-technical government colleges.
- It is a **joint initiative of Ministry of Education and AICTE**, that systematically rank higher educational institutions across India on indicators like start-up, Innovation, and Entrepreneurship Development amongst students and faculty.
- Under the initiative, **institutions are evaluated on parameters such as number of registered students & faculty start-ups, patent filing & granted**, fund generation by incubated start-ups, etc.
- Its **first edition was launched in 2018**.

Major Parameters

- Programs and Activities on IPR, Innovation, Start-up and Entrepreneurship.
- Pre Incubation & Incubation Infrastructure & Facilities to Support I&E.
- Annual Budget Spent on Promoting and Supporting I&E Activities.
- Courses on Innovation, IPR and Entrepreneurship Development.
- Intellectual Property (IP), Technology Transfer and Commercialization.
- Successful Innovation and Start-ups & Funding Innovation & start-ups.

Objective of the Ranking

- One of the main objectives of ARIIA is to **improve India's rank in the Global Innovation Index (GII) and bring it in the top 30** in a period of 5 years (by 2025).
- It aims to direct **Higher Education Institutes (HEI)s towards focusing on establishing a strong startup ecosystem** on campus.
- It aims to focus **more on quality aspects of Startup ecosystems**. The quantity of such ecosystems too is evaluated.
- It measures the impact of HEIs' innovations and startup on society and the market.

Pradhan MantriShram Yogi Maan-Dhan Pension Scheme

Context

- According to the Ministry of Labour & Employment, nearly 46 lakh Unorganised Workers (UW) have been registered under the **Pradhan MantriShram Yogi Maandhan (PM-SYM) pension scheme**.

About the Scheme

- It is a voluntary and contributory pension scheme under which the subscriber would receive a minimum assured pension of Rs 3000/- per month after attaining the age of 60 years
- if the subscriber dies, the spouse of the beneficiary shall be entitled to receive 50% of the pension as family pension.
- Family pension is applicable only to spouse.
- The applicants between the age group of 18 to 40 years will have to make monthly contributions ranging between Rs 55 to Rs 200 per month till they attain the age of 60
- On the maturity of the scheme, an individual will be entitled to obtain a monthly pension of Rs. 3000/-.

Eligibility Criteria

- For Unorganized Worker (UW)
- Entry age between 18 to 40 years
- Monthly Income Rs 15000 or below

Benefits

- Minimum Assured Pension: Each subscriber under the scheme will receive minimum assured pension of Rs 3000 per month after attaining the age of 60 years.
- In case of death during receipt of pension: If the subscriber dies during the receipt of pension, his or her spouse will be entitled to receive 50 percent of the pension as family pension. This family pension is applicable only to spouse.
- In case of death before the age of 60 years: If a beneficiary has given regular contribution and dies before attaining the age of 60 years, his or her spouse will be entitled to continue the scheme subsequently by payment of regular contribution or may even exit the scheme.

POSHAN Abhiyan

Context

- The Ministry of Women and Child Development has spent over ₹1,000 crore on its Poshan or Nutrition Tracker, but the data hasn't been made public.

About Poshan Tracker

- The Poshan Tracker gives the Ministry daily data from 12.3 lakh anganwadicentres, with 9.8 lakh beneficiaries, including children, in the age of six months to six years, as well as pregnant women and lactating mothers.
- It was set up with the aim of tracking and improving various services delivered at anganwadis and to ensure nutritional management of beneficiaries.
- Poshan Tracker data is not available in the public domain, unlike the MGNREGA (Mahatma Gandhi Employment Guarantee Act) data or the Health Management Information System (HMIS) of the Ministry of Health for monitoring of the National Health Mission and other health-related programmes.

Collected data

- vaccination status of the child;
- the nutrition status of pregnant women and lactating mothers;
- whether an anganwadi was opened on a particular day;
- how many children attended the anganwadi;
- how many received take-home rations and hot cooked meals

Need of the Hour

- Poshan Tracker records real-time data, surveys such as NFHS come out once in few years, and there is a lag between when the data is collected and when the report is released.
- Poshan Tracker data needs to be in the public domain as it is built from public money and involves public data.
- Its availability will improve transparency and accountability.

About Poshan Abhiyaan

- POSHAN Abhiyaan is an **overarching umbrella scheme to improve** the nutritional outcomes for children, pregnant women and lactating mothers.
- It does by holistically addressing the **multiple determinants of malnutrition and attempts to prioritize the efforts** of all stakeholders on a comprehensive package of intervention and services targeted on the first 1000 days of a child's life.
- It **seeks to do so through an appropriate governance structure by leveraging and intensifying the implementation** of existing programs across multiple Ministries while at the same time trying to rope in the expertise and energies of a whole range of other stakeholders – State Governments, Communities, Think tanks, Philanthropic Foundations and other Civil Society Actors.

Targets

- It aims to **reduce child stunting, underweight and low birth weight by 2** percentage points per annum and anaemia among children (and young females) by 3 percentage points per annum.
- It is based on 4 pillars Ensuring access to quality services across the continuum of care to every woman and child; particularly during the first 1000 days of the child's life.

4 Pillars

- Ensuring convergence of multiple programs and schemes:** ICDS, PMMVY, NHM (with its sub components such as JSY, MCP card, AnaemiaMukt Bharat, RBSK, IDCF, HBNC, HBYC, Take Home Rations), Swachh Bharat Mission, National Drinking water Mission, NRLM etc.
- Leveraging technology** (ICDS-CAS) to empower the frontline worker with near real time information to ensure prompt and preventive action; rather than reactive one.
- Jan Andolan:** Engaging the community in this Mission to ensure that it transcends the contours of being a mere Government programme into a peoples' movement inducing large scale behaviour change with the ownership of the efforts being vested in the community rather than government delivery mechanisms.

Successful Case Study

- Osmanabad district has stood first in Maharashtra in implementing the Centre's 'poshanabhiyaan' and bringing down the number of malnourished kids as well as stunting among children.
- The schemes were implemented by the child and women welfare department of the Osmanabad ZP through 'bachat gats' (self-help groups), Anganwadi workers, their officers and public participation.

National Rurban Mission

Context

- Telangana stood first in the implementation of the Shyama Prasad Mukherji Rurban Mission (SPMRM) that was launched four years ago to stimulate local economic development, enhance basic services and create well planned clusters.

About the Rurban Mission

- Large parts of rural areas in the **country are not stand-alone settlements** but part of a cluster of settlements, which are relatively proximate to each other.
- These clusters **typically illustrate potential for growth, have economic drivers** and derive locational and competitive advantages.
- These clusters once **developed can then be classified as 'Rurban'**.
- Hence taking cognizance of this, the Government of India has proposed the Shyama Prasad Mukherji Rurban Mission (SPMRM), **aimed at developing such rural areas by provisioning of economic, social and physical infrastructure facilities.**

Targeted objectives

- Bridging the rural-urban divide-viz: economic, technological and those related to facilities and services.
- Stimulating local economic development with emphasis on reduction of poverty and unemployment in rural areas.
- Spreading development in the region.
- Attracting investment in rural areas.

Role of States

- The State Government identifies the clusters in accordance with the Framework for Implementation prepared by the MoRD.
- For the selection of clusters, the MoRD is adopting a scientific process of cluster selection which involves an objective analysis at the district, sub district and village level, of the Demography, Economy, Tourism and pilgrimage significance and transportation corridor impact.

Sustainable Urban Services

Context

- The Government of India and the Asian Development Bank (ADB) signed a \$350 million policy-based loan to improve access to urban services

Conditions for the loans

- The first subprogram will establish essential policies and guidelines for urban reforms at the national level followed by specific reform actions and program proposals at the state and ULB-level under second subprogram.

Benefits

Support to Government Programs

- It will support to India's recently launched national flagship missions, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0 that envisages accelerated universal access of piped water supply and sanitation.

Improved Financial Conditions

- The program will also promote performance-based central fiscal transfers to ULBs on the recommendations of the 15th Finance Commission by linking fiscal transfers to improved urban service delivery.
- This will help boost local financial resource generation in ULBs resulting in improved urban governance.

Role of Asian Development Program

Knowledge Dissemination

- ADB will provide knowledge and advisory support to the Ministry of Housing and Urban Affairs in program implementation, including monitoring and evaluation.

Support local bodies

- It will also support urban local bodies particularly in select low-income states to implement policy reforms, prepare investment plans.

Provide linkages

- It will also provide recommendations on cross-cutting issues like climate change, environmental and social safeguards assessment, and gender equality and social inclusion.

About Asian Development Bank

Establishment	1966
Head office	Manilla, Philippines
Membership	68 shareholding members including 49 from the Asia and Pacific region
Purpose	To provide prosperity, inclusivity, resilience, and sustainability to Asia and Pacific along with eradication of poverty
Strategy 2030 for ADB	Strategy 2030 sets the course for the Asian Development Bank (ADB) to respond effectively to the region's changing needs. Under Strategy 2030, ADB will sustain its efforts to eradicate extreme poverty and expand its vision to achieve a prosperous, inclusive, resilient, and sustainable Asia and the Pacific
Indian Status	Founding Member

Recent India and ADB tiesups

- ADB and India have signed a loan of \$206 million to strengthen urban services in 5 Tamil Nadu cities
- Asian Development Bank (ADB) has listed its 10-year masala bonds worth Rs 850 crore on the global debt listing platform of India INX
- Asian Development Bank (ADB) had prepared a Conceptual Development Plan (CDP) for Vizag-Chennai Industrial Corridor (VCIC)
- ADB has offered to provide USD 4 million to member countries to contain coronavirus outbreaks.
- The Asian Development Bank (ADB) will provide Rs 100 crore loan to hospital chain Medanta for healthcare services and medical equipment to fight the COVID-19 pandemic. The project will support the purchase of personal protective equipment, basic hygiene products, and patient care equipment such as ventilators and beds.

INTERNATIONAL RELATIONS

G20 Troika

Context

- India has joined the G20 Troika.
- India will **assume the G20 Presidency** on December 1, 2022 from Indonesia, and **will convene the G20 Leaders' Summit for the first time in India in 2023.**

About G-20 troika

- **Membership:** Troika refers to the **top grouping within G20** that consists of the **current, previous, and incoming presidencies (Indonesia, Italy and India).** Indonesia assumed the G20 Presidency and will convene various G20 meetings throughout the year.
- **Purpose:** to ensure consistency and continuity of the G20's agenda.

About G-20

- It is the **premier forum for international economic cooperation**, which reflects a recognition that global prosperity is interdependent and our economic opportunities and challenges are interlinked.
- As a **founding member of the G20**, India has used the platform to raise issues of vital importance and those that impact on the most vulnerable around the world.
- Apart from the G7 countries, the G20 comprises **Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea, and Turkey.**
- Together, the G20 countries make up around 80% of the world's economy and two-thirds of the world's population.



Global Gateway Plan

Context

- EU unveils 'Global Gateway' €300 billion global infrastructure plan.

About 'Global Gateway' plan

- This **international infrastructure plan** is a "road map for investment" in the developing world.
- **Aim:**
 - to mobilize €300 billion (\$340 billion) in public and private infrastructure investment.
 - to make Global Gateway a **trusted brand** that stands out because of high quality, reliable standards and high level of transparency and good governance.
 - to spread European technology and expertise out in developing countries.
- **Countering China:** It is being seen as a European effort to **challenge China's Belt and Road Initiative**, which was launched in 2013 and funds infrastructure projects in the developing world.

How EU's Global Gateway will work?

- It will **mobilize fund between 2021 and 2027** by joining the "resources of the EU, member states, European financial institutions and national development finance institutions."

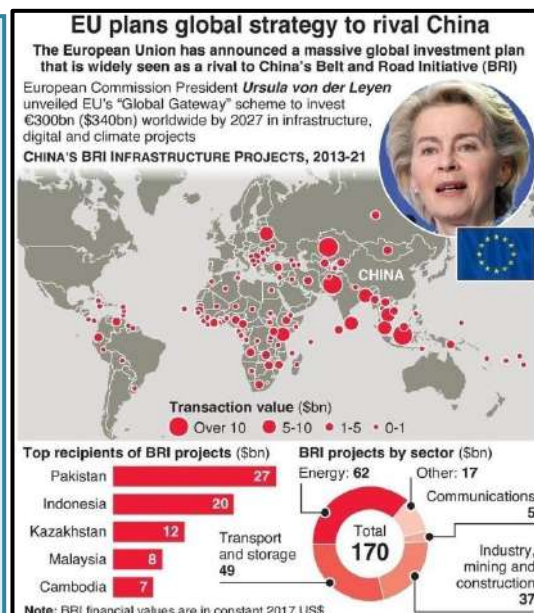
- It will require buy-in from **international institutions and the private sector** as well.
- **Build Back Better World** and Global Gateway will mutually reinforce each other.

Build Back Better World (B3W):

- It is an **initiative undertaken by G7 countries**.
- It was launched in June 2021.
- It is **designed to provide an alternative to China's Belt and Road Initiative (BRI) for the infrastructure development of low and middle income countries**.
- Led by the United States, the G7 countries will work to address the \$40 trillion worth of infrastructure needed by developing countries by 2035.
- **Aim:**
 - to **catalyze funding for quality infrastructure** from the private sector
 - encourage private-sector investments that support "climate, health and health security, digital technology, and gender equity and equality".
- It builds on the **Blue Dot Network**, a collaboration that aims to build a **global network through lending-based financing to build roads, bridges, airports, ports, power plants**

What is China's Belt and Road Initiative?

- Launched in **2013**, the global investment strategy known as the Belt and Road Initiative is a signature project of Chinese President Xi Jinping



Need for adopting this plan

- **Debt trap policy of China:** to help developing country from falling into China's debt trap policy through BRI.
- **Democratic approach adoption:** So that developing countries have sustainable and eco friendly development.
- **Transparent fund mobilization:** based on values and without any dependencies.

India-Central Asia Dialogue

Context

- Third India-Central Asia Dialogue hosted in New Delhi.

About India-Central Asia Dialogue

- India considers Central Asia as part of its extended neighbourhood.
- Further strengthening of relations between India and Central Asian countries with particular focus on **trade, connectivity and development cooperation** was discussed.
- The second India-Central Asia Dialogue was also organised by India in October last year via video conferencing.
- It is symbolic of the interest on part of all member countries for greater engagement between them in a spirit of friendship, trust and mutual understanding.

Background

- 1st meeting of the India-Central Asia Dialogue was held in 2019 in **Uzbekistan**.
- **Outcome:** It established a platform for strengthening cooperation between India and the Central Asian countries in political, security, economic and commercial, development partnership, humanitarian and cultural spheres as well as exchanging views on regional and international issues of mutual interest and enhancing cooperation under the framework of UN and other multilateral fora.
- **Importance:** It called for building a comprehensive and enduring India-Central Asia partnership on the basis of their historical, cultural and civilizational bonds as well as traditionally close people-to-people contacts.

Key outcomes of 2nd meet

- It emphasized the need to continue close cooperation between the Sanitary and Epidemiological Services of India and the Central Asian countries in the fight against Covid-19 pandemic.
- Launched India-Central Asia Business Council (ICABC) in New Delhi.

U.S. pivot to Asia

Story so far

- U.S. Secretary of State made a maiden trip across Southeast Asia, which includes meetings in **Indonesia, Malaysia and Thailand**.
- These visit signals Washington's sustained interest in having strong ties with countries in the region even as tensions with China continue to mount across different policy issues.

U.S. 'Asia pivot' or 'regional rebalancing'

Purpose

- Under this strategic approach, Washington would seek to **deepen ties with likeminded Asian nations**.
- Its unstated **goal is to balance the aggressive rise of China as a regional hegemon**.
- Provide a framework for **maritime security, technology, public health and biosecurity, trade and investment and climate change**.
- Make a shift from present U.S. approach that **focus more on economic competition with China rather than strategic confrontation**.

What specific goals is Washington pursuing in Asia?

- **Focus on soft power:** to forge agreements in areas of policy such as maritime cooperation and education and Peace Corps exchanges.
- **Leverage the opportunities** for cooperation and international assistance that have opened during the pandemic, including as regarding vaccine supply.
- Focus on **advocating for human rights**.

What are the major challenges U.S. strategic policy is facing in Asia?

Trade gap

- **Economic issue:**
 - U.S. **Lack of a broad Asia economic strategy**.
 - U.S. is **not party** to the two mega-trade pacts in Asia, the **Regional Comprehensive Economic Partnership (RCEP)** and the **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)**.
- **China's trade position:** With every country across the Indo-Pacific region **China almost uniformly surpasses U.S. trade**.

China's BRI

- China Belt and Road Initiative that focuses on **construction of infrastructure including roads, railways, and ports**.

South China sea

- China's **aggressive actions in the South China Sea**, and its **fraught relationship with Taiwan**.
- Beijing have **deployed anti-ship** and surface-to-air missiles in this sensitive arena, disregarding a decision in 2016 of an international tribunal that China's claim over most of (the South China Sea) did not have any historical or legal basis.

Organisation of Islamic Cooperation

Context

- **Organisation of Islamic Cooperation** agreed to establish a **humanitarian trust fund to address the growing economic crisis in Afghanistan**.
- The fund will be set up under the **Islamic Development Bank** to channel aid to Afghanistan in coordination with other groups.

About Islamic Development Bank

- It is a **multilateral development finance institution** that is focused on Islamic finance located in Jeddah, Saudi Arabia.
- There are 57 shareholding member states with the **largest single shareholder being Saudi Arabia**.
- The IDB is an **observer at the United Nations General Assembly**.

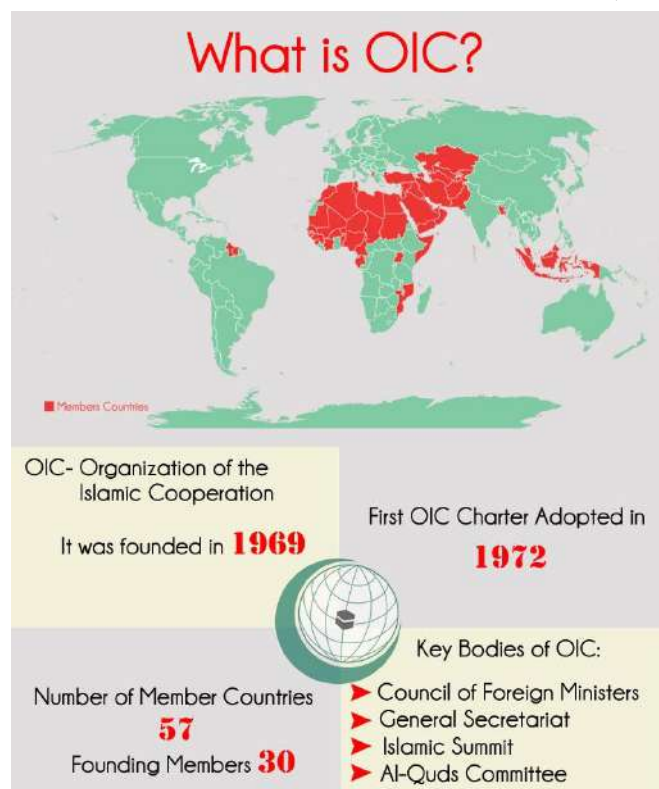
About Organisation of Islamic Cooperation

- It was formerly known as the **Organisation of the Islamic Conference**.
- It is an international organization founded in 1969, consisting of 57 member states, with 49 countries being Muslim-majority countries.
- **Organisation goal:** to "safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony".
- The OIC has **permanent delegations to the United Nations and the European Union**.

India and OIC

- Islam is the **second-largest religion** in India after Hinduism, with over 200 million Muslims making up approximately 15% of the country's total population.

- India has the **largest Muslim population outside of Muslim-majority** or Islamic states.
- However, India's relationship with Pakistan, has been riddled with hostilities and armed conflict since the 1947 Partition of India.
- The poor relationship between the two states has had a **direct impact on India-OIC relations** due to **Pakistan's status as a founding member of the organization**.
- India has pushed for the OIC to accept it as a member state, arguing that Indian Muslims comprise 11% of the world's total Muslim population; **Pakistan has staunchly opposed the entry of India into the organization**.
- Pakistan has cited its conflict with India over the **Kashmir region** as the reason for its opposition, and frequently accuses India of perpetrating widespread human rights abuses against Kashmiris in the Indian-administered territory of Jammu and Kashmir, which has witnessed an ongoing militant uprising since the 1980s.



Counter Terrorism Committee of UNSC

Context

- India to chair Counter Terrorism Committee of UNSC in January 2022 after ten yrs.

About Counter Terrorism Committee of UNSC

- It was established by Security Council **resolution 1373** adopted unanimously on 28 September 2001 in the **wake of the 9/11 terror attacks in the US**.
- **Responsibilities:**
 - It is tasked with monitoring implementation of resolution 1373 which requested countries to **implement a number of measures aimed at enhancing their legal and institutional ability to counter terrorist activities at home and around the world**.
 - This includes taking steps to **criminalize the financing of terrorism, freezing any funds related to persons involved in acts of terrorism, deny all forms of financial support for terrorist groups, suppress the provision of safe haven, sustenance or support for terrorists** and share information with other governments on any groups practicing or planning terrorist acts.
 - It monitors steps taken to cooperate with other governments in the investigation, detection, arrest, extradition and prosecution of those involved in terror acts and criminalizes active and passive assistance for terrorism.

UNSC Resolution 2615

Context

- The United Nations Security Council (UNSC) unanimously passed a resolution permitting a carveout in sanctions against the Taliban to facilitate the delivery of humanitarian aid to Afghanistan.

UNSC Resolution (2615)

- It is **put forward by the U.S**.
- It **"strongly encourages"** providers of assistance to try and ensure that benefits do not accrue to entities designated on the 1988 Sanctions List.
- It **"calls on all parties"** to respect human rights and observe international humanitarian law.
- Humanitarian assistance should be based on the **principles of neutrality, impartiality, and independence** and disbursement to the age should be non-discriminatory and accessible to all irrespective of ethnicity, religion, or political belief.
- The assistance should **reach the most vulnerable first**, including women, children and minorities."

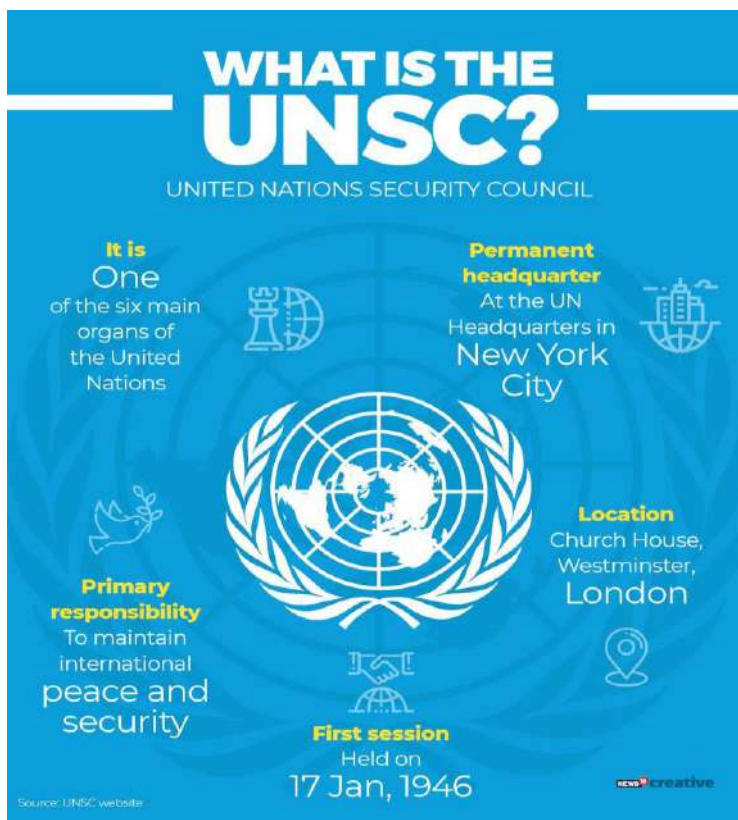
Why this resolution is adopted?

- UN agency UNICEF had warned of **"alarming disruptions in health and nutrition services"** in Afghanistan and "a

disastrous food crisis," drought and the spread of diseases in a report.

- The U.S. and other countries had **frozen more than \$10 billion** after the Taliban ousted the Ashraf Ghani government in August this year.
- The United Nations Development Program (UNDP) had released a report saying the **country's banking and financial report** are "in disarray."

What is UNSC?



India at UNSC

- India has recently **taken over the presidency of the United Nations Security Council**.
- India began its **eighth term as a non-permanent member** of the UNSC on January 1 and will remain as such for a period of **two years**.
- India's bid for a permanent seat at the UN Security Council has support from four of the **five P5 nations, namely the US, UK, France and Russia**.
- **China is the only permanent member** which is yet to officially back India's bid.

Composition of UN Security Council

- The UN Security Council is composed of
 - **15 members, including five permanent member states - China, France, Russian Federation, the United States, and the United Kingdom - and**
 - **10 non-permanent member states elected by the United Nations General Assembly (UNGA).**
- Each non-permanent member gets the opportunity to work as UNSC president.
- Ten non-permanent members are elected to the UNSC every year for a two-year term. India's current term began on January 1 of this year and will last until December 31, 2023.
- The 10 non-permanent seats are distributed among the regions of the world: five seats for **African and Asian countries** (three are for Africa and two for Asia), one for Eastern European countries, two for Latin American and Caribbean countries, and the remaining two for Western European and other countries.
- The Africa and Asia Pacific group takes turns every two years to put up an Arab candidate.

How does presidency of UNSC rotate?

- **Each non-permanent member gets the opportunity to operate as president of the UN Security Council** during the two years it is part of the grouping.
- The **presidency of UNSC changes hands every month between its members** in the English alphabetical order of the member states' names.
- In August, the presidency was passed on from France to India. Similarly, Ireland is slated to take over the presidency from India in September.
- India will be in **line for the presidency again in December 2022**.

- The country's last term as a non-permanent member of the UNSC was in 2011-12, which was preceded by stints in **1991-92, 1984-85, 1977-78, 1972-73, 1967-68, and 1950-51.**

Powers of the UNSC President

- The presidency **derives responsibility from the Provisional Rules of Procedure of the United Nations Security Council** as well as UNSC's practice.
- The holder of the presidency is considered to be the **'face' and spokesperson of the UNSC.**

Responsibilities of the UNSC president include

- Calling meetings of the UN Security Council
- Appealing to parties in a conflict to "exercise restraint"
- Reading statements of the UN Security Council to the press
- Approving provisional agenda (proposed by the secretary-general)
- Presiding at UNSC meetings and deciding questions relating to policy and overseeing any crisis

Veto power of UNSC member states

- The UN defines **'veto' as a "special voting power"**, which provides that "if any one of the five permanent members cast a negative vote in (UNSC), the resolution or decision would not be approved".
- However, the **"veto power" is restricted to P5 member states of the UN Security Council. Non-permanent members of the UNSC do not enjoy this privilege.**
- Article 27 of the UN Charter says each member of the UNSC shall have one vote and that decisions on "procedural matters" shall require no more than the affirmative vote of nine out of the 15 members.
- Decisions on any other matter need not only an affirmative vote of nine members but also the concurring votes of the permanent members.

BRICS New Development Bank

Context

- India welcomes Egypt as 4th member of BRICS New Development Bank.

About New Development Bank

- It aims to **mobilize resources for development projects in BRICS, emerging economies, and developing countries.**
- It formerly referred to as the **BRICS Development Bank.**
- It is a **multilateral development bank** established by the **BRICS states (Brazil, Russia, India, China and South Africa).**
- It support **public or private projects** through loans, guarantees, equity participation and other financial instruments.
- The bank is headquartered in **Shanghai, China.**
- In September 2021, **Bangladesh, the United Arab Emirates and Uruguay** joined the NDB.
- In December 2021, the NDB admitted **Egypt as new member.**

AUKUS pact

Context

- Australia formalized the exchange of 'naval nuclear propulsion info' as part of AUKUS pact.

More about news

- It is the first agreement on the technology to be publicly signed since the three countries (**Australia, U.K. and U.S**) announced the **formation of a defence alliance, AUKUS, to confront strategic tensions in the Pacific where China-US rivalry is growing**
- Under the AUKUS deal, **Australia would obtain eight state-of-the-art, nuclear-powered but conventionally armed submarines capable of stealthy, long-range missions.**

AUKUS aim: to "update and enhance shared ability to take on the threats of the 21st century.

What are the terms of the grouping?

- Intent for AUKUS is to **preserve a free and open Indo-Pacific in the long term.**
- It drew a sharp response from China, whose territorial ambitions across the Indo-Pacific may well have been a key factor behind the formation of this group.
- Beijing's consternation that **AUKUS will "undermine" regional peace and "intensify" an arms race.**
- Cornerstone of AUKUS:** U.S. and the U.K. will **transfer technology to build a fleet of nuclear-powered submarines for Australia** within 18 months.

Will AUKUS be a game changer?

It is unlikely and the **reasons are**

- U.S., as a leading global military power, already has a strong presence in the Indo-Pacific, especially in a grouping that includes Australia, India, and Japan** – the Quadrilateral Security Dialogue, or Quad.
- U.S., the U.K., Australia, Canada, and New Zealand are members of **Five Eyes, an intelligence-sharing alliance**, which also has regional security implications.

- AUKUS will not likely deter Beijing's strategic calculus across the region, particularly relating to its maritime ambitions and territorial expansionism.
- AUKUS that has potential to cause a recalibration of China's plans in this realm is the nuclear-powered submarines.
- It will raise the stakes over strategic flashpoints such as the South China Sea and Taiwan.

Does India stand to gain from this development?

- New Delhi may derive secondary benefits from having three advanced nations with arguably the most sophisticated military know-how in the world coming together to support a free and open Indo-Pacific.
- Given the inroads that Beijing has made in recent decades with its Belt and Road Initiative, including through projects or proposals for infrastructure development in Southeast Asia, Sri Lanka, the Maldives, and beyond into Central Asia, fears in South Block over 'encirclement' by China may be partially mitigated by AUKUS.
- India will work with the transnational institutional arrangements in place, roping in like-minded nations into symbiotic partnerships, and calibrate future alliance plans to evolving security situations across one of the most complex strategic ecosystems in the world.

The Benefits of a Nuclear Submarine Fleet in Australia

An Australian submarine fleet would need to defend shipping lanes from the Persian Gulf to the North Pacific Ocean. Nuclear submarines can travel at faster speeds (about 20 knots, on average) compared to conventional submarines (6.5 knots) and stay on station for significantly longer periods of time.



HEALTH

Parvovirus

Context

- Nearly 2,000 pet and stray dogs in Amravati city were affected by canine parvovirus virus last month with veterinarians cautioning pet owners against a severe outbreak.

About

- It is a **highly contagious viral disease** that can also be life-threatening in puppies and dogs.
- **Treatment:** Parvovirus **has no cure** and inoculating a puppy or a dog gives them a fighting chance against the infection. **To properly protect canines, it is necessary to administer the vaccine to them while they are puppies** and then continue to do the same every year.

State Health Index

In News

- NITI Aayog released the **fourth edition of the State Health Index for 2019-20**.

The Report

- The State Health Index is annual tool to assess the performance of states and UTs on their **year-on-year incremental performance in health outcomes** as well as their overall status. The index is being compiled and published since 2017.
- It is a weighted composite index **based on 24 indicators grouped under the domains of 'Health Outcomes', 'Governance and Information', and 'Key Inputs/Processes'.**

ABOUT THE DISEASE

WHAT IS IT? <ul style="list-style-type: none"> ➤ Parvovirus infection is a highly contagious viral illness among dogs 		PREVENTION <ul style="list-style-type: none"> ➤ Compulsory vaccination of puppies within 6 to 8 weeks ➤ Puppies must not be allowed to mix with other dogs ➤ Owners must dispose of feces immediately to avoid spread of intestinal parasites to other dogs
How it spreads? <ul style="list-style-type: none"> ➤ Through fecal-oral route ➤ Through contact with infected dogs 	SYMPTOMS ASSOCIATED WITH PARVOVIRUS <ul style="list-style-type: none"> ➤ Vomiting ➤ Drastic weight loss ➤ Bloody diarrhea ➤ Lethargy 	

- Each domain has been assigned weights based on its importance with higher score for outcome indicators.
- To ensure comparison among similar entities, the ranking is categorized as '**Larger States**', '**Smaller States**' and '**Union Territories**'.
- This particular edition focuses on measuring and highlighting the overall performance and incremental improvement of states and UTs over the period 2018–19 to 2019–20.

Developed by

- The report has been developed by NITI Aayog, with technical assistance from the World Bank, and in close consultation with the Ministry of Health and Family Welfare (MoHFW).

Findings of the latest edition

- Among the 'Larger States', in terms of annual incremental performance, Uttar Pradesh, Assam and Telangana are the top three ranking states.
- Among 'Smaller States', Mizoram and Meghalaya registered the maximum annual incremental progress.
- Among UTs, Delhi, followed by Jammu and Kashmir, showed the best incremental performance.
- On overall ranking based on the composite index score in 2019–20, the top-ranking states were Kerala and Tamil Nadu among the 'Larger States', Mizoram and Tripura among the 'Smaller States', and DH&DD and Chandigarh among the UTs.

Significance of the Report

- The reports aim to nudge states/UTs towards building robust health systems and improving service delivery.
- States can take cognizance of indices such as the State Health Index and use them in their policymaking and resource allocation.
- The index encourages healthy competition and cross-learning among States and UTs.
- This report is an example of both competitive and cooperative federalism.

GS 3 ECONOMY

Competition Commission of India

Context

- The Competition Commission of India (CCI) froze its approval given in November 2019 to Amazon's investment in a Future Group unit.
- The antitrust regulator also imposed a penalty of ₹200 crore on Amazon for failing to notify the details of its 'combination', as required in law.
- It also imposed a separate penalty of ₹2 crore for suppressing the actual scope and purpose of the combination, a term used in competition law for acquisition, merger or amalgamation of two or more enterprises.

Need of the Competition

- Competition is the **best means of ensuring that the 'Common Man' or 'Aam Aadmi' has access to the broadest range of goods and services at the most competitive prices.**
- Competition is a **process of economic rivalry between** market players to attract customers.
- With increased competition, producers will have **maximum incentive to innovate and specialize.** This would result in reduced costs and wider choice to consumers.
- A fair competition in the market is **essential to achieve this objective.**
- Its main goal is to **create and sustain fair competition in the economy** that will provide a 'level playing field' to the producers and make the markets work for the welfare of the consumers.
- Free and fair competition is one of the pillars of an efficient business environment.

The Competition Act

- The Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007, follows the philosophy of modern competition laws.

Deal goes awry | A brief look at the tussle between Amazon and Future Group

- In Aug. 2019, Amazon signed a **\$200 million deal** to acquire a **49% stake** in Future Coupons, which owns 7.3% equity in Future Retail, with the right to buy into Future Retail after a period of three to 10 years

- In August 2020, Reliance entered into a deal with Future Group to acquire its retail assets for **₹24,713 crore**



- **Amazon contested the deal, arguing that the terms agreed in its 2019 deal prevented Future Group from selling its retail business to certain rivals, including Reliance**

- The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control and M&A), which causes or likely to cause an appreciable adverse effect on competition within India.
- In accordance with the provisions of the Amendment Act, the Competition Commission of India and the Competition Appellate Tribunal have been established.
- The Competition Commission of India is now fully functional with a Chairperson and six members.
- The provisions of the Competition Act relating to anti-competitive agreements and abuse of dominant position were notified under this Act.

Objectives

- The objectives of the Act are sought to be achieved through the Competition Commission of India, which has been established by the Central Government with effect from 14th October 2003.
- CCI consists of a Chairperson and 6 Members appointed by the Central Government.
- It is the duty of the Commission to eliminate practices having adverse effect on competition, promote and sustain competition, protect the interests of consumers and ensure freedom of trade in the markets of India.
- The Commission is also required to give opinion on competition issues on a reference received from a statutory authority established under any law and to undertake competition advocacy, create public awareness and impart training on competition issues.

Anti-Competitive behaviour by firms and companies

- Foreclosing competitors/ competition.
- Unfair or discriminatory pricing/ conditions.
- Limiting or restricting 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.

Need of the hour

- Firms should fix internal protocols for decision making and information sharing with regard to sensitive financial and commercial information.
- Firms should create awareness and run regular training programs amongst all employees handling sensitive financial and commercial information.
- A competition law due diligence should be conducted by firms that have a high market share or perhaps have exclusive rights at ports etc. so as to avoid anti-competitive clauses in agreements with suppliers, vendors and other market players.
- Communication with competitors with regard to any business discussion should be limited/ restricted as well as recorded properly to mitigate any competition law risk.
- Any pricing below the cost must have a sound economic rationality to justify its efficiency and business

Foreign Exchange Management Act

Context

- Bollywood actor Aishwarya Rai Bachchan appeared before the Enforcement Directorate (ED) for recording her statement in connection with a “Panama Papers” related probe.
- It has been issued under the Foreign Exchange Management Act.

About Foreign Exchange Management Act (FEMA)

- The Foreign Exchange Management Act (FEMA) was passed by Parliament in 1999.
- It had replaced FERA (Foreign Exchange Regulations Act), 1973 which had become incompatible after economic reforms and pro-liberalization policies of government.
- It aims at facilitating external trade and payments and for promoting the orderly development and maintenance of foreign exchange market in India.
- It makes offenses related to foreign exchange civil offenses.
- It enables new foreign exchange management regime consistent with emerging framework of World Trade Organisation (WTO).

About Foreign Exchange Regulation Act (FERA)

- The Foreign Exchange Regulation Act (FERA) was legislation passed in India in 1973 that imposed strict regulations on certain kinds of payments, the dealings in foreign exchange (forex) and securities and the transactions which had an indirect impact on the foreign exchange and the import and export of currency.

- FERA came into **force with effect from January 1, 1974**.
- FERA was **introduced at a time when foreign exchange (Forex) reserves of the country were low**, Forex being a scarce commodity.
- ERA therefore **proceeded on the presumption that all foreign exchange earned by Indian residents rightfully belonged to the Government of India** and had to be collected and surrendered to the Reserve Bank of India (RBI).
- FERA **primarily prohibited all transactions not permitted by RBI**.

Difference Between FERA and FEMA

FERA VERSUS FEMA

Origin	1973	1999
Violation	Non-compoundable	Compoundable
Punishment	Imprisonment	Monetary Penalty
Approach	Quiet, Restrictive, & Conservative	Flexible
Foreign Exchange Reserve	Challenging	Satisfactory
Residential Status	Citizens	More than 6 Months
Sections	81	49

FEMA a change from FERA

- As is clear from the name of the Act itself, the emphasis under FEMA is on 'exchange management' whereas under FERA the emphasis was on 'exchange regulation' or exchange control.
- Under FERA it was necessary to obtain Reserve Bank's permission, either special or general, in respect of most of the regulations there under.

Measures taken to Control the Inflation

Context

- Recently, Finance Minister outlined that government has taken measures to control the inflation.

Steps Taken

Crude Oil/Petroleum Products

- To check the petrol and diesel prices, Central Government has reduced Central Excise Duty on Petrol & Diesel by Rs. 5 and Rs. 10 respectively.
- In response many states governments have also reduced Value Added Tax on petrol and diesel.

Pulses

- A **buffer stock target of 23 lakh metric tonne (LMT)** has been approved for 2021-22.
- Stocks **are subsequently utilised for cooling down prices through supply to states and disposal through Open Market sales**
- Imposition of stock limits on some pulses under the Essential Commodities Act, 1955 in July 2021 to prevent hoarding.
- **Changes in the import policy by keeping Tur and Urad under 'free' category** till 31st December, 2021.
- **Basic import duty and Agriculture Infrastructure and Development Cess** on Masur have been brought down to zero and 10% respectively.
- **5-year memorandum of understanding (MoUs)** have been signed with Myanmar for annual import of 2.5 LMT of Urad and



1 LMT of Tur, and with Malawi for annual import of 0.50 LMT of Tur and MoU with Mozambique for annual import of 2 LMT Tur has been extended for another 5 years.

Edible Oils

- To soften the prices of edible oils, the import duty on edible oils have been rationalised and stock limits imposed to avoid hoarding upto a period of March 31, 2022.
- National Mission on Edible Oils- Oil Palm has been approved with a financial outlay of Rs.11,040 crore to encourage domestic production and availability of oil palm.

Special Category States

Context

- Government has said that the Central government has extended a special package in lieu of the Special Category Status (SCS) to Andhra Pradesh.
- It has been issued under the Foreign Exchange Management Act.

About Special Category Status (SCS)

- Special category status is a classification given by the Centre to assist development of states that face geographical and socio-economic disadvantages.
- This classification was done on the recommendations of the Fifth Finance Commission in 1969.
- SCS was first accorded in 1969 to Jammu and Kashmir, Assam and Nagaland. Since then eight more states have been included (Arunachal Pradesh, Himachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim, Tripura and Uttarakhand).
- There is no provision of SCS in the Constitution.
- Special Category Status for plan assistance was granted in the past by the National Development Council to the States that are characterized by a number of features necessitating special consideration.

Elimination of Special Category Status

- Now, it is done away by the central government.
- The 14th Finance Commission has done away with the 'special category status' for states, except for the Northeastern and three hill states.
- Instead, it suggested that the resource gap of each state be filled through 'tax devolution', urging the Centre to increase the states' share of tax revenues from 32% to 42%, which has been implemented since 2015.

Parameters for Special Category Status

- Hilly Terrain;
- Low Population Density And/Or Sizeable Share of Tribal Population;
- Strategic Location along Borders With Neighbouring Countries;
- Economic and Infrastructure Backwardness;
- Nonviable Nature of State finances.

Benefits to States with SCS

- The Centre pays 90% of the funds required in a centrally-sponsored scheme to special category status states as against 60% or 75% in case of other states, while the remaining funds are provided by the state governments.
- Unspent money does not lapse and is carried forward.
- Significant concessions are provided to these states in excise and customs duties, income

CAG Report on Railway Finances

Context

- THE COMPTROLLER and Auditor General of India in its report on Railways' finances tabled in Parliament noted that the Indian Railways' operating ratio of 98.36% in 2019-2020 does not reflect its true financial performance and if the actual expenditure on pension payments is taken into account, the ratio will be 114.35 %.

About Operating Ratio

- OR represents the ratio of working expenses to traffic earnings and a higher ratio indicates poorer ability to generate surplus.

Findings of the CAG

Issues in Receipt

- Last year, the Indian Railways was able to lower its expenditure and make up for the shortfall in traffic through revenue generated by freight operations.
- The CAG report noted that against a target of 95% in the budget estimates, the operating ratio of the Indian Railways was 98.36% in 2019-20.
- During 2019-20, the Indian Railways generated total receipts of Rs 1,74,694 crore against budget estimates of Rs 2,16,935 crore.
- It could not achieve even the revised estimate target of Rs 2,06,269 crore.

- The **total receipts decreased by 8.30% during 2019-20** as compared to the previous year.
- There was heavy dependence on transportation of coal which constituted around 49% of the total freight earnings during 2019-20.

Poor Procedures

- Indian Railways failed in **achieving automation of budgetary control through implementation of Integrated Payroll and Accounting System (IPAS)**.
- There was **lack of proper validation control besides** absence of extant provisions inbuilt into IPAS for efficient delivery of output.

Recommendation of CAG

Diversification of Freight basket

- **Any shift in bulk commodities transport pattern could** affect the freight earnings significantly.
- CAG has also **recommended taking steps to diversify their freight basket to enhance** freight earnings and also consider exploiting its idle assets to increase other earnings.

Better Accounting Practice

- CAG has **emphasised the need to ensure that surplus and operating ratio represent** a true picture of its financial performance.

Increasing Fare

- In order to tide over the losses, it **has suggested increasing the train fare**.
- **National carrier needs to revisit the passenger and** other coaching tariffs to recover the cost of operations in a phased manner.

Financing of Indian Railways

- Indian Railways is financed through: **About Doping Its own internal resources (freight and passenger revenue, and leasing of railway land)**,
- **Gross Budgetary support (GBS)** from the central government,
- **Extra budgetary resources (EBR)**: Primarily borrowings but also includes institutional financing, public private partnerships, and foreign direct investment).

Government Actions to improve the Railway Finances

- A **National Rail Plan (NRP) 2030 has been developed with a view to develop infrastructure** by 2030 to cater to the traffic requirements upto 2050.
- Indian Railway Finance Corporation (IRFC) is **mobilizing resources with sufficient moratorium period and projects are being targeted to be completed** well before expiry of moratorium period.
- **super-critical (58) and critical projects (68)** have been identified and prioritized.
- **onus clause for early completion, measures to improve cash flows** and recognition of credentials issued by big companies and non-insistence of credentials for smaller works have been embodied in the revised conditions of contract.
- Indian Railways' **massive pension bill of more than Rs 51,000 crore** in the current financial year has been converted into a loan by the finance ministry.

Tokenisation

Context

- The Reserve Bank of India has **extended the implementation date of card-on-file (CoF) tokenisation norms** by six months to June 30, 2022.

RBI Circular

- In September 2021, the RBI prohibited merchants from storing customer card details on their servers with effect from January 01, 2022,
- It mandated the adoption of card-on-file (CoF) tokenisation as an alternative to card storage.
- It applies to domestic, online purchases.

About Tokenisation

- Tokenisation refers to replacement of actual credit and debit card details with an alternate code called the "token", which will be unique for a combination of card, token requestor and device.

Process After tokenization

- A **tokenised card transaction is considered safer as the actual card details are not shared with the merchant during** transaction processing.
- Customers **who do not have the tokenisation facility will have to key in their name**, 16-digit card number, expiry date and CVV each time they order something online.

Impact of Guidelines

- India has an **estimated 100 crore debit and credit cards**, which are used for about 1.5 crore daily transactions worth Rs 4000 crore, according to CII data.

- **Digital payments have triggered and sustained economic growth**, especially through the trying times of the pandemic.
- Online merchants can lose up to 20-40% of their revenues post 31 December due to tokenisation norms, and for many of them, especially smaller ones, this would sound the death knell, causing them to shut shop.

Consumer Impact

- An estimated 5 million customers, who have stored their card details for online transactions on various platforms, could be impacted if the online players and merchants are not able to implement the changes at their backend.
- E-commerce platforms, online service providers and small merchants could be especially hit.
- Equated monthly instalments and subscription-based transactions that are paid through stored cards will also have to adhere to new rules.
- While 90 per cent of banks are ready for tokens on the Visa platform, Mastercard is yet to catch up.

Implementation of Tokenisation

- Three steps have to be completed for smooth implementation of tokenisation.

Token provisioning

- The consumer's card number should be convertible into a token, which means the card networks have to be ready with the relevant infrastructure.

Token processing

- Consumers should be able to complete their transaction successfully through the tokens.

Scale-up for multiple use cases:

- Consumer should be able to use the token for things like refunds, EMIs, recurring payments, offers, promotions, guest checkouts etc.

Certificate of Origin

Context

- The Centre has suspended till 31st January 2022, a mandatory obligation imposed on exporters to obtain online Certificates of Origin (CoO) for every outbound consignment.

About Online Certificates of Origin

- It was put in place in late 2019 for exports to countries with whom India had a preferential trade pact.
- It was expanded to cover all merchandise exports from November.
- It was initiated by the Directorate General of Foreign Trade (DGFT).

Benefits of it

- This online facility provides 'ease of doing business' to the exporting community
- It gives a verifiable authentication mechanism to the partner countries to confirm the genuineness of the issued CoOs through a QR code which adds credibility to the issued e-CoO.

Reasons for suspension

- Several exporters across States had reported difficulties in registering on the e-CoO platform on the Directorate General of Foreign Trade (DGFT) portal with the stipulated high-quality digital signature certificates and obtaining the certificates for their shipments.
- Customs house agents had not been able to share data on exporters' behalf, as the DGFT had not shared the API (Application Programming Interface) for the new platform.

Indian Exports

- India's monthly merchandise exports have crossed \$30 billion for seven months in a row
- It is largely on course to reach the government's target of a record \$400 billion in 2021-22.

Types of Trade Agreements

Trade and Investment Framework Agreement (TIFA)

- TIFA is a trade pact between two or more countries which establishes a framework for expanding trade and resolving outstanding disputes between countries.
- It is a first step towards FTA.

Bilateral Investment Treaty (BIT)

- It is a bilateral agreement in which two countries sit together and decide the conditions for private investments by citizens and firms of the two countries.
- At present, India has around 83 BITs or BIPAs.

Free Trade Agreement (FTA)

- A free trade agreement is an agreement in which two or more countries agree to provide preferential trade terms, tariff concession etc. to the partner country.
- India has negotiated FTA with many countries e.g. Sri Lanka and various trading blocs as well e.g. ASEAN.

Preferential Trade Agreement (PTA)

- PTAs or Generalized System of Preferences (GSP) is a **special status given in trade by various countries. In this type of agreement, two or more partners give preferential right of entry to certain products** by reducing duties on an agreed number of tariff lines.
- Tariffs may **even be reduced to zero for some products even in a PTA**. India signed a PTA with Afghanistan.

Comprehensive Economic Partnership Agreement (CEPA)

- Partnership agreement or cooperation agreement are more comprehensive than an FTA.
- CEPA covers negotiation on the trade in services and investment, and other areas of economic partnership.
- India has signed CEPAs with South Korea and Japan.

Comprehensive Economic Cooperation Agreement (CECA)

- CECA generally covers negotiation on trade tariff and TRQ (Tariff Rate Quotas) rates only. It is not as comprehensive as CEPA. India has signed CECA with Malaysia.



Figure 1: Level of Economic Integration

Common Market

- A common market is a type of trade bloc which is composed of a free trade area (for goods) with common policies on product regulation, and freedom of movement of the factors of production (capital and labour) and of enterprise and services.

Financial Stability Report

Context

- The Financial Stability Report released by RBI projects **banks' gross NPAs rising to 8.1% of total assets** by September 2022 **from 6.9% in Sept 2021** under a baseline scenario **and to 9.5% under severe stress** scenario.

Findings of the Report

- Balance sheets of banks remain strong and capital and liquidity buffers are being bolstered to mitigate future shocks.
- Emerging signs of stress in micro, small and medium enterprises (MSME)** as also in the micro finance segment call for close monitoring of these portfolios going forward.
- The RBI Governor has also flagged **inflation concerns** and the **below-par performance of private investment and consumption in the Indian economy**.
- The report also expresses doubt over the **government's ability to contain fiscal deficit** at the budgeted 6.8% this fiscal year.
- the overall provisioning coverage ratio **moved up from 67.6 per cent in March 2021 to 68.1 percent** in September 2021.

Checking the Financial Stability

- The RBI checks the resilience of banks' balance sheets to **unforeseen shocks emanating from the macroeconomic environment using macro-stress tests through which impairment and capital ratios are projected over a one-year horizon** under a baseline and two adverse (medium and severe) scenarios.

Terms

Non-Performing Asset:

- A non-performing asset (NPA) is a classification used by financial institutions for loans and advances on **which the principal is past due and on which no interest payments have been made** for a period of time.
- In general, loans become NPAs **when they are outstanding for 90 days or more, though some lenders use a shorter window in considering a loan** or advance past due. Lenders usually provide a grace period before classifying an asset as non-performing.

Gross NPA and Net NPA

- GNPA:** GNPA stands for gross non-performing assets. **GNPA is an absolute amount.** It tells you the total value of **gross non-performing assets for the bank in a particular quarter** or financial year as the case may be.
- NNPA:** NNPA stands for net non-performing assets. **NNPA subtracts the provisions made by the bank from the gross NPA.** Therefore **net NPA gives you the exact value of non-performing assets** after the bank has made specific provisions for it.

Capital to Risk Weighted assets ratio

- CRAR also known as Capital Adequacy Ratio (CAR) is the **ratio of a bank's capital to its risk**.
- CRAR is **decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process**.
- The Basel III norms stipulated a capital to risk-weighted assets of 8%.

Provision Coverage Ratio

- Provisioning Coverage Ratio (PCR) is **essentially the ratio of provisioning to gross non-performing assets (NPA)** and

indicates the extent of funds a bank has kept aside to cover loan losses.

PM MITRA Parks

Context

- Government has approved setting up of 7 (Seven) PM Mega Integrated Textile Region and Apparel (PM MITRA) Parks.
- The scheme is under the Textiles Ministry.

Components of the Scheme

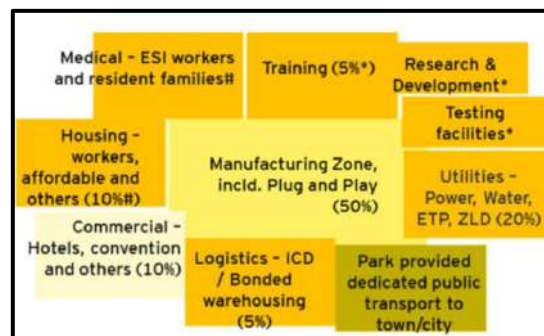
- PM MITRA parks will be established by a special purpose vehicle, owned by the state governments and the Centre in a public-private partnership (PPP) model.
- This is in a form of viability gap funding to make the project attractive for the participation of the private sector.
- The parks will have 50% area for manufacturing activity, 20% for utilities, and 10% area for commercial development.
- The textile parks will include an incubation centre and plug-and-play facility, developed factory sites, roads, power, water, and waste-water system, common processing house and CETP, and other related facilities like design centre, testing centre, among others. The parks will also have workers' hostels and housing, logistics park, warehousing, medical, training and skill development facilities.

Capital Support

- An additional Rs 300 crore will be provided as Competitiveness Incentive Support for the early establishment of textiles manufacturing units in each of these parks.
- Investors who set up "anchor plants" that employ at least 100 people will be eligible for incentives of upto Rs 10 crore every year for upto three years.

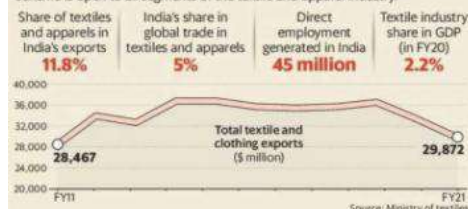
PM MITRA benefits

- The Parks will enhance the competitiveness of the textiles industry.
- It will help the industry achieve economies of scale.
- It will create huge job opportunities for millions of people.
- The scheme will help Indian companies to emerge as global champions.



Policy Boost

The Prime Minister's Mega Integrated Textile Region and Apparel (Mitra) scheme is aimed at helping the sector achieve global competitiveness. The scheme is open to all segments of the textile and apparel industry.



AGRICULTURE

NAFED

Context

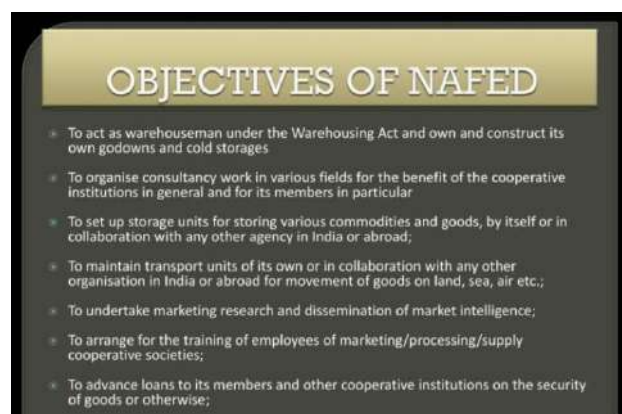
- AgriTech NSE -1.33 % firm AgNext Technologies has partnered with NAFED to digitise quality assessment for Arunachal Pradesh's organic kiwis.

About

- National Agricultural Cooperative Marketing Federation of India (NAFED) was established in 1958.
- NAFED is registered under the Multi State Co-operative Societies Act.

Aim

- It was setup with the object to promote co-operative marketing of agricultural produce to benefit the farmers.



Members

- Agricultural farmers are the main members of NAFED, who have the authority in the form of members of the General Body in the working of the body.

NABARD

Context

- National Bank for Agriculture and Rural Development (NABARD) has projected a credit potential of Rs 36,292 crore for the state of Assam for the financial year 2022-23.

NABARD

About

- National Bank for Agriculture and Rural Development (NABARD) is an apex regulatory body for overall regulation of regional rural banks and apex cooperative banks in India.

Jurisdiction

- It is under the jurisdiction of Ministry of Finance.

Brief Objectives

- The bank has been entrusted with "matters concerning policy, planning, and operations in the field of credit for agriculture and other economic activities in rural areas in India".
- NABARD is active in developing & implementing Financial Inclusion.

Establishment:

- NABARD was established on the recommendations of B.Sivaraman Committee in 1982.

Role of NABARD

- ▶ 1. Providing refinance to lending institutions in rural areas
- ▶ 2. Bringing about or promoting institutional development and
- ▶ 3. Evaluating, monitoring and inspecting the client banks
- ▶ 4. Acts as a coordinator in the operations of rural credit institutions.
- ▶ 5. Extends assistance to the government, the Reserve Bank of India and other organizations in matters relating to rural development.
- ▶ 6. Offers training and research facilities for banks, cooperatives and organizations working in the field of rural development.
- ▶ 7. Helps the State Governments in reaching their targets of providing assistance to eligible institutions in agriculture and rural development.
- ▶ 8. Acts as regulator for cooperative banks and RRBs.

Food Corporation Of India

Context

- In a bid to revamp India's wheat storage infrastructure and reduce the overall wastage, the Food Corporation of India (FCI) will soon start the bidding of 249 storage silos at 249 locations.

FCI

About

- The Food Corporation of India (FCI) is a statutory corporation.

Jurisdiction

- It is under the jurisdiction of Ministry of Consumer Affairs, Food and Public Distribution, formed in Food Corporation Act, 1964.

Chairman and set-up

- Its top official is designated as Chairman who is a central government civil servant of the IAS cadre. It was set up in 1965.

Mandate

- Effective price support operations for safeguarding the interests of the poor farmers.
- Distribution of foodgrains throughout the country for Public Distribution System (PDS).
- Maintaining a satisfactory level of operational and buffer stocks of food grains to ensure National Food Security.
- Regulate market price to provide foodgrains to consumers at a reliable price.

Unique Identification (ID) of Farmers

Context

- The government is in the process of creating unique identification (ID) of farmers who have availed agricultural schemes.

About

- The unique identifier of the farmer will link the farmer profile with all the agricultural schemes, which have been availed by the farmer.
- The government is in the process of preparing a Farmers Database across the country.
- Note: Only farmers included in the database will be able to avail the benefits.



Significance

- With the help of Unique Identity Card, farmers will be able to avail the benefits of various schemes of Central and State Government without any hassle.
- Farmers no longer need any intermediaries to avail the benefits of the government scheme.
- The scheme of making identity cards has a provision of verification of farmers **by e-Know Your Farmers (e-KYF).**
- With this, there will be no need to submit documents frequently in different departments and offices to avail benefits under different schemes.
- It will also provide access to field-based and customized advisories as well as ease the process of accessing the damage to crops due to extreme weather condition.

UNESCO's Intangible Heritage List

In News

- The 16th Committee of UNESCO for safeguarding of the Intangible Cultural Heritage (ICH) in its meeting held in Paris has **inscribed DURGA PUJA in KOLKATA on the representative list of Intangible Cultural Heritage of Humanity.**
- This is the **1st festival in Asia to achieve recognition as UNESCO ICH of Humanity.**

About the list

- UNESCO's list of intangible culture is an annual list which focuses on those forms of performing art which are of outstanding value but are vulnerable due to lack of support.
- Convention for the Safeguarding of the Intangible Cultural Heritage was adopted in 2003.
- **India and the Convention:**
India ratified the convention in 2007. In total, 14 Intangible Cultural Heritage elements from India have now been inscribed on UNESCO's Representative List.

13 ICH traditions recognised by UNESCO			
1.	Tradition of Vedic chanting, 2008	8.	Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir, India, 2012
2.	Ramlila, the traditional performance of the Ramayana, 2008	9.	Sankirtana, ritual singing, drumming and dancing of Manipur, 2013
3.	Kutiyattam, Sanskrit theatre, 2008	10.	Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab, India, 2014
4.	Ramman, religious festival and ritual theatre of the Garhwal Himalayas, India, 2009	11.	Yoga, 2016
5.	Mudiyettu, ritual theatre and dance drama of Kerala, 2010	12.	Nowruz, 2016
6.	Kalbelia folk songs and dances of Rajasthan, 2010	13.	Kumbh Mela, 2017
7.	Chhau dance, 2010		

List of the Intangible Cultural Heritage of Humanity

- Aim: UNESCO established its Lists of Intangible Cultural Heritage with the aim of ensuring better protection of important intangible cultural heritages worldwide and the awareness of their significance.
- The list was established in 2008 when the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage took effect.

AgriTech COHORT

Context

- Atal Innovation Mission (AIM), NITI Aayog and the United Nations Capital Development Fund (UNCDF) rolled out their first AgriTech Challenge cohort for its ambitious innovative Agri-tech program.

Aim

- Agri-tech program aims to help smallholder farmers across Asia and Africa to address their challenges in the aftermath of the pandemic.

Details

South-South Innovation Platform

- AIM, NITI Aayog in partnership with UNCDF, Bill & Melinda Gates Foundation and Rabo Foundation launched a **South-South innovation platform** to enable cross-border exchange of innovations, insights and investments in July this year 2021.
- Through this platform, cross-border collaborations among emerging markets **across India, Indonesia, Malawi, Malaysia, Kenya, Uganda, Zambia would be enabled.**

First Cohort within the platform

- For its first platform AgriTech Challenge Cohort and Agri-Fintech innovators, applications were invited to facilitate their expansion to the international markets through two tracks- Main track and AIM track.
- The key objective of the main track applications was **'Expansion - Support solution pilot in the chosen international market.'**
- The Cohort represents a diverse range of solutions across the value chain of the smallholder farmer, including
 - soil analysis,
 - farm management & intelligence,

- dairy ecosystem,
- carbon credits,
- solar-based cold storage,
- digital marketplace,
- Fin-tech,
- Livestock insurance, among others.

United Nations World Food Program (WFP)

Context

- Aiming at a more diversified food basket under its free food distribution programme with focus on coarse grains and millets, NITI Aayog has entered into an agreement with United Nations World Food Program (WFP) to address issues related to inclusion of millets in government programmes.

United Nations World Food Program

About

- The World Food Programme (WFP) is the food-assistance branch of the United Nations.
- It is the world's largest humanitarian organization the largest one focused on hunger and food security, and the largest provider of school meals.

Establishment and HQ

- Founded in 1961, it is headquartered in Rome and has offices in 80 countries.

Mandate

- In addition to emergency food relief, WFP offers technical assistance and development aid, such as building capacity for emergency preparedness and response, managing supply chains and logistics, promoting social safety programs, and strengthening resilience against climate change.

Membership

- WFP is an executive member of the United Nations Sustainable Development Group, a consortium of UN entities that aims to fulfil the 17 Sustainable Development Goals (SDG), with a priority on achieving SDG 2 for "zero hunger" by 2030.

Award

- The World Food Programme was awarded the Nobel Peace Prize in 2020 for its efforts to provide food assistance in areas of conflict, and to prevent the use of food as a weapon of war and conflict.

Funding

- WFP operations are funded by voluntary donations principally from governments of the world, and also from corporations and private donors.

Governance

- WFP is governed by an executive board which consists of representatives from 36 member states, and provides intergovernmental support, direction and supervision of WFP's activities.

Observer:

- The European Union is a permanent observer in WFP and, as a major donor, participates in the work of its executive board.

Read: <https://www.iasgyan.in/daily-current-affairs/diversification-of-food-basket-in-programmes>

Seed Village Programme

Context

- Govt of India spent 12 crore on Seed Village Programme (Beej Gram Yojana) in 2021-22.

Seed Village Programme

About

- Govt. of India is implementing Seed Village Programme (Beej Gram Yojana) since 2014-15 to upgrade the quality of farmer's saved seeds.

Provisions

- Under this programme financial assistance for distribution of foundation/certified seeds at 50% of seed cost for cereal crops and 60% for pulses, oilseeds, fodder and green manure crops is available for up to one acre per farmer.
- The seed produced in these seed villages will have to be preserved/stored till the next sowing season.
- In order to encourage farmers to develop storage capacity of appropriate quality, assistance will be given to farmers for making/procuring of Pusa Bin/Mud bin/Bin made from paper pulp for storing of seed produced by the farmers on their farms.

Implementing Agencies

- The implementing agencies will be State Departments of Agriculture, State Agriculture Universities, Krishi Vigyan Kendras, State Seeds Corporation, National Seeds Corporation, State Farms Corporation of India (SFCI), State Seeds Certification

Agencies, Department of Seed Certification.

- One implementing agency will be identified for the area/locality and is to be authorized by the State Government.

Objectives

- To improve the quality of farmers saved seed through use of different seed enhancement techniques.
- To ensure the disease & insect free quality seed production by use of suitable plant protection measures.
- To train the farmers about seed production technology, use of quality seed along with improved package of practices for different seed crops.

Monitoring of the Scheme

- The scheme will be monitored by the Seeds Division of the Department of Agriculture and Cooperation.
- The implementing agencies will be required to send quarterly progress.

MSPs for Copra

In News

- The Cabinet Committee on Economic Affairs (CCEA) chaired by the Prime Minister Shri Narendra Modi, has given its approval for the Minimum Support Prices (MSPs) for copra for 2022 season.
- The MSP for Fair Average Quality (FAQ) of milling copra has been increased.

Details

- Copra refers to the dried coconut kernels from which coconut oil is expelled.
- The increase in MSP for copra for 2022 season is **in line with the principle of fixing the MSP at a level of at least 1.5 times the all India weighted average cost of production** as announced by the Government in the Budget 2018-19.

MSP Recommendation

- The decision is **based on recommendations of the Commission for Agricultural Costs and Prices (CACP)**.
- As of now, CACP recommends **MSPs of 23 commodities**, which **comprise 7 cereals (paddy, wheat, maize, sorghum, pearl millet, barley and ragi), 5 pulses (gram, tur, moong, urad, lentil), 7 oilseeds (groundnut, rapeseed-mustard, soyabean, sesamum, sunflower, safflower, nigerseed), and 4 commercial crops (copra, sugarcane, cotton and raw jute)**.
- **Nodal Agency:** The National Agricultural Cooperative Marketing Federation of India Limited and National Cooperative Consumer Federation of India Limited will continue to act as Central Nodal Agencies to undertake price support operations at the MSP in the coconut growing States.

Read about MSP in details here: <https://www.iasgyan.in/daily-current-affairs/msp-to-farmers>

Soya Meal

Context

- In a bid to cool down the domestic prices of Soya Meal, Government has notified an Order under the **Essential Commodities Act to declare 'Soya Meal' as an Essential Commodities up to 30th June, 2022 by amending the Schedule of the Essential Commodities Act, 1955**.

Essential Commodities Act

Definition of an 'essential commodity'

- There is no specific definition of essential commodities in The EC Act.
- Section 2(A) of the act states that an "essential commodity" means a commodity specified in the "Schedule" of this Act.
- By declaring a commodity as essential, the government can control the production, supply, and distribution of that commodity, and impose a stock limit.

Addition and Removal of Commodity

- The Act gives **powers to the central government** to add or remove a commodity in the "Schedule."
- The Centre, if it is satisfied that it is necessary to do so in public interest, can notify an item as essential, **in consultation with state governments**.

Presently notified Essential Commodities

- At present, the "Schedule" contains 9 commodities – **drugs; fertilisers, whether inorganic, organic or mixed; foodstuffs, including edible oils; hank yarn made wholly from cotton; petroleum and petroleum products; raw jute and jute textiles; seeds of food-crops and seeds of fruits and vegetables, seeds of cattle fodder, jute seed, cotton seed; face masks; and hand sanitisers**.
- The latest items added to this schedule are **face masks and hand sanitisers**, which were declared essential commodities with effect from March 13, 2020 in the wake of Covid-19 outbreak.
- Now, Soya Meal is the new addition.

Recent Removals

- The essential Commodities Act 2020 **removed cereals, pulses, oilseeds, edible oils, onion and potatoes from the list of essential commodities**.

Significance of the adding soya meal to the list

- Soyameal processors, millers and plant owners **can now hold a maximum stock of 90 days production** and they are required to declare the storage location.
- The decision would empower the Union Government and all States/UTs to **regulate production, distribution etc. of Soya Meal and to smoothen the sale and availability of this item in the market.**
- It will **stop unfair market practices and enhance the availability** for consumers like Poultry farm and Cattle feed manufacturers.

SCIENCE & TECHNOLOGY

Azadi Ka Digital Mahotsav

Context

- The Ministry of Electronics and Information Technology (MeitY) hosted a unique event - 'Digital Payment Utsav' as part of the week-long 'Azadi Ka Digital Mahotsav'.

About

- The day celebrated the journey and rise of digital payments in India and brought together leaders from the Government, banking sector, fintech companies and startups.
- The event witnessed the unveiling of the **DIGIDHAN logo**, launch of an awareness campaign called **Digital Payments Sandesh Yatra** with digital payments anthem titled 'Chutki Baja ke' (cashless, touchless, paperless).
- MeitY also recognised the contribution of four payment system aggregators for onboarding street vendors **under the PM SVANidhi Scheme.**
- The event saw the launch of innovative solutions like:
 1. **Payments on the Go:** Wearables are re-defining the true paperless contactless payments, catalysing them further, Bank of Baroda and City Union Bank launched Rupay-on-the-Go.
 2. **Inclusive Credit for All:** Credit cards represent the next big in fintech and contactless is truly the way forward. To drive it to the next level, India Post Payments Bank-Punjab National Bank, Kotak Bank, YES Bank, Indian Overseas Bank, ICICI Bank, Indian Bank, Bank of Maharashtra, and City Union Bank launched Contactless Credit cards on the RuPay network.
 3. **Empowering Small Merchants:** India has close to 1.5 crore retail stores/ Kiryana stores. Union Bank announced an android-based SOFTPOS mobile app for point of sales, which will further the cause of digital payment adoption.

LCRD

Context

- Recently, NASA launched its new Laser Communications Relay Demonstration (LCRD) – the **agency's first-ever laser communications system** – from Cape Canaveral Space Force Station in Florida.

About

- The LCRD **will help the agency test optical communication in space.**
- Currently, most NASA spacecraft use radio frequency communications to send data.
- Optical communications will help increase the bandwidth 10 to 100 times more than radio frequency systems.
- LCRD has two optical terminals – one to receive data from a user spacecraft, and the other to transmit data to ground stations.
- The modems will translate the digital data into laser signals.
- This will then be transmitted via encoded beams of light.
- These capabilities make LCRD NASA's first two-way, end-to-end optical relay.



Laser communications and radio waves use different wavelengths of light.

Laser uses infrared light and has a shorter wavelength than radio waves. This will help the transmission of more data in a short time.

S-Gene Drop Out

Context

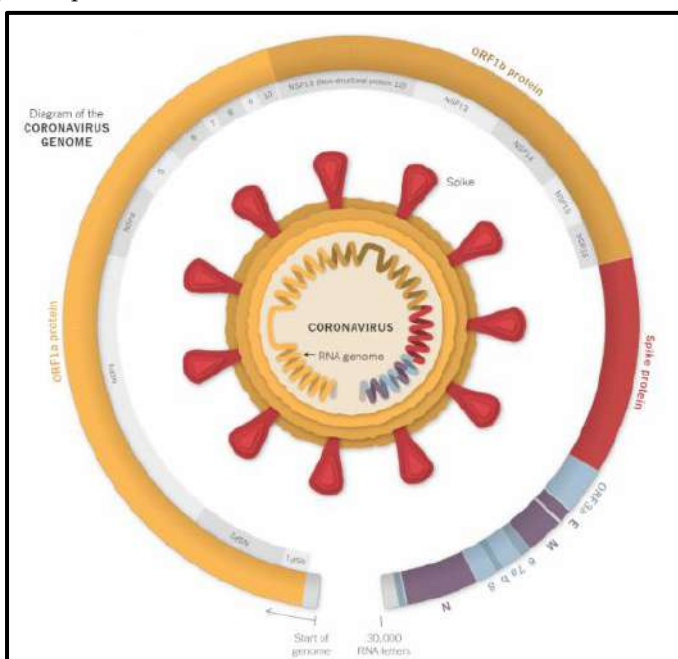
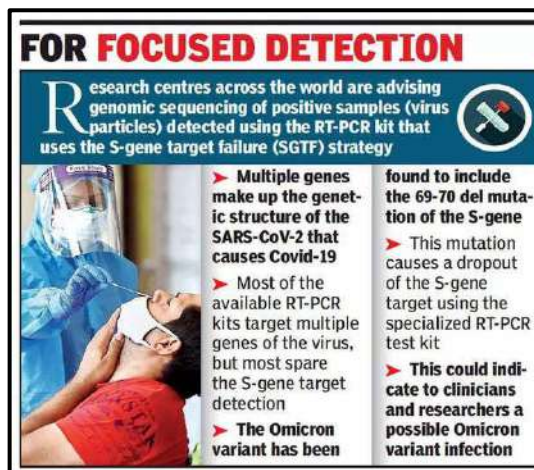
- The Omicron variant of the SARS-CoV-2 virus has been confirmed in India and in at least 30 other countries by the World Health Organization (WHO).

S-gene

- The WHO has also recommended that certain commonly used COVID-19 detection tests, with 'S-gene dropout' capabilities, can be used to quickly screen for an Omicron infection.
- The S-gene **refers to the gene that codes for the spike protein, or the most distinctive part of the coronavirus.**

S-Gene Target Failure (SGTF)

- Covid-19 Tests target "multiple genes" of the virus so that a broad range of variants are covered.
- For example, Tests usually look for three target genes related to parts of the virus: S (spike), N2 (nucleocapsid or inner area) and E (envelope or outer shell).
- In case of Omicron variant, the 'S' gene is not getting detected in the test **due to mutation in the gene**, while other gene targets such as ORF gene and N gene are getting detected.
- The occurrence is called as '**S' Gene Target Failure (SGTF) positive cases.**
- Such samples can be presumptively reported as Omicron positive and can be sent for fast-track genome sequencing for confirmation.



Ambergris

Context

- The Crime Branch of the Pimpri Chinchwad police has arrested two persons in Pune and seized 550 grams of ambergris, also known as 'floating gold'.

About

- Ambergris, which means gray amber in French, **is a waxy substance that originates from the digestive system of the protected sperm whales.**
- They slowly become a solid mass, growing over many years.
- The ambergris is said to be passed like feces and has a very strong fecal odor combined with a strong marine odor.

Value

- Its value to be somewhere between Rs 1 to 2 crores per kilogram, depending on the purity and quality.

Usage

- Traditionally, ambergris is used **to produce perfumes which have notes of musk.**
- While there are records of it being **used to flavor food, alcoholic beverages and tobacco in some cultures in the past**, it is rarely used for these purposes presently.



Plant Based Chewing Gum

Context

- Researchers at the University of Pennsylvania have developed a chewing gum that can potentially reduce transmission of the SARS-CoV-2 coronavirus.

Covid transmission

- When a person infected with SARS-CoV-2 sneezes, coughs or speaks, some of the viruses can be expelled and reach others.
- This virus then enters the human body, usually through nose and mouth cavities, by inhaling or swallowing the virus-laden fluid or saliva.
- ACE2 is a protein on the surface of body cells.** It is present in many cell types and tissues including the lungs and the gastrointestinal tract.
- When SARS-CoV-2 comes in contact with this ACE2 protein, it uses the spike-like protrusions on its surface to bind itself with the host cell.
- Hence, ACE2 effectively acts like a cellular doorway through which the virus gains entry into the cell.

Role of Chewing Gum

- The chewing gum is laced with a plant-grown protein that reduces the viral load in saliva and potentially lowers transmission.
- The gum does this by blocking the ACE2 receptor on the cells or binding directly to the spike protein, effectively preventing the viral particles from entering cells.

Vihangam

Context

- An internet-based platform called 'VIHANGAM' integrated with a Remotely Piloted Aircraft System (RPAS) at Mahanadi Coalfields Limited (MCL) was inaugurated on 1st September 2021.

Features

The salient features of the said system are as under:

- The system consists of a Ground Control Station (GCS), an RPAS, internet lease line of 40 Mbps and VIHANGAM portal.
- It has been deployed at two opencast mines of MCL namely Bhubaneswari and Lingaraj initially on trial basis.
- The system **enables real-time transmission of aerial video of mining activities from mines to internet platform which can be accessed through VIHANGAM portal by authorized personnel only having ID and password.**

Taste The Tv (TTTV)

In News

- A Japanese professor has developed a prototype lickable TV screen that can imitate food flavours, another step towards creating a **multi-sensory viewing experience.**
- Multisensory technologies, are technologies that are **designed to stimulate the human senses,** allow researchers to control the different inputs that accompany a given multisensory flavor, or food experience.

About

- The device, called Taste the TV (TTTV), uses a carousel of 10 flavour canisters that spray in combination to create the taste of a particular food.
- The flavour sample then rolls on hygienic film over a flat TV screen for the viewer to try.
- Application:** Potential applications include distance learning for sommeliers and cooks, and tasting games and quizzes.
- Goal:** The goal is to make it possible for people to have the experience of something like eating at a restaurant on the other side of the world, even while staying at home.

Significance

- In the COVID-19 era, this kind of technology **can enhance the way people connect and interact with the outside world.**

Magnetar

Context

- An international group of researchers has succeeded in measuring for the first time the characteristics of a flare on a distant magnetar.

Magnetar

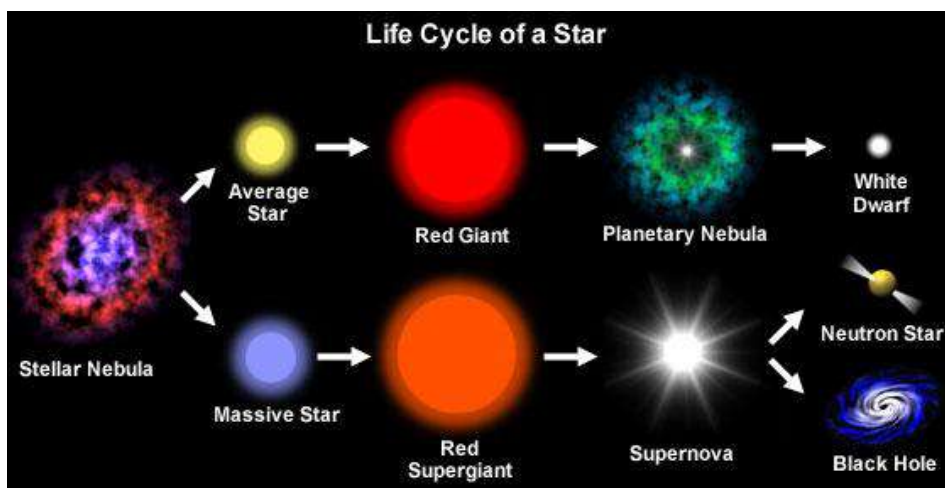
- A magnetar is a **type of neutron star** that **has an extremely powerful magnetic field.**

Neutron Star

- Neutron stars are **formed when the core of a massive star undergoes gravitational collapse** when it reaches the end of its life.
- This results in the matter being so tightly packed that even a sugar-cube sized amount of material taken from such a star weighs more than 1 billion tons.

Subclass- Magnetar

- Magnetars are a subclass of these neutrons and occasionally release flares with more energy in a fraction of a second than the Sun is capable of emitting in tens of thousands of years.
- Like other neutron stars, magnetars are around 20 kilometres in diameter and are formed by the collapse of a star with a mass 10-25 times that of the Sun and have a mass about 1.4 solar masses.
- The density of the interior of a magnetar is extremely high (tablespoon of its substance would have a mass of over 100 million tons)
- Magnetars are differentiated from other neutron stars by having even stronger magnetic fields, and by rotating more slowly in comparison. The active life of a magnetar is short.
- Magnetars are relatively rare objects, with only about thirty having been spotted within the Milky Way so far.



The Technology behind 5 G

Context

- The Department of Telecommunications (DoT) said that Gurugram, Bengaluru, Kolkata, Mumbai, Chandigarh, Delhi, Jamnagar, Ahmadabad, Chennai, Hyderabad, Lucknow, Pune, and Gandhi Nagar would be among the first cities to get 5G services in 2022.

About

- 5G is the fifth generation of cellular technology.
- It is a new global wireless standard after 1G, 2G, 3G, and 4G networks.
- 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.
- 5G wireless technology is meant to deliver higher multi-Gbps peak data speeds, ultra low latency, more reliability, massive network capacity, increased availability, and a more uniform user experience to more users.
- Network Standard: MIMO

Note: Latency is a measure of delay. In a network, latency measures the time it takes for some data to get to its destination across the network. Latency is usually measured in milliseconds (ms).

Network Slicing

- 5G network slicing is the use of network virtualization to divide single network connections into multiple distinct virtual connections that provide different amounts of resources to different types of traffic

MIMO (5G)

- MIMO or 'multiple-input, multiple-output' is a wireless technology/ radio antenna technology that, when deployed, uses multiple antennas at both the source (transmitter) and the destination (receiver).
- This allows for more data to be sent and received at the same time, unlike in conventional wireless communications where only a single antenna is used.
- MIMO utilises a natural radio-wave phenomenon known as 'multipath' or 'multipath wave propagation'.

Network Standards in previous Generations of Mobile Networks:

First generation - 1G

1980s: 1G delivered analog voice.

Second generation - 2G

Early 1990s: 2G introduced digital voice (e.g. CDMA- Code Division Multiple Access).

Third generation - 3G

Early 2000s: 3G brought mobile data (e.g. CDMA2000).

Fourth generation - 4G LTE

2010s: 4G LTE ushered in the era of mobile broadband.

1G, 2G, 3G, and 4G all led to 5G, which is designed to provide more connectivity than was ever available before.

Extreme Cold Weather Clothing System (ECWS)

Context

- DRDO handed over technology for indigenous extreme cold weather clothing system (ECWS) to 05 Indian companies in New Delhi.

About

- The extreme ECWS is required by Indian Army for its sustained operations in glacier and Himalayan peaks.
- The DRDO designed ECWCS is an **ergonomically designed modular technical clothing** with **improved thermal insulation and physiological comfort** based on the insulation required at various ambient climatic conditions in Himalayan regions during different levels of physical activity.

Features of EWCS

- Reduction in respiratory heat and water loss
- Unhindered range of motions and rapid absorption of sweat while providing water proof,
- wind proof features with adequate breathability and
- Enhanced insulation as well as strength features required for high altitude operations.

Webb vs. Hubble Telescopes

Context

- The James Webb Space Telescope, NASA's most powerful telescope, is scheduled to be rocketed into orbit no earlier than December 22. Though Webb is often called the replacement for the Hubble Space Telescope, NASA said it prefers to call it a successor.

Hubble Telescope

- The Hubble is a space telescope that was launched into low Earth orbit in 1990 and remains in operation.
- It was not the **first space telescope**, but it is one of the largest and most versatile, renowned both as a vital research tool and as a public relations boon for astronomy.
- The Hubble telescope is named after astronomer Edwin Hubble and is one of NASA's Great Observatories, along with the Compton Gamma Ray Observatory (1991–2000), the Chandra X-ray Observatory (1999–present), and the Spitzer Space Telescope (2003–2020).

JWST

- The James Webb Space Telescope (JWST or "Webb") is a joint NASA-ESA-CSA space telescope that is planned to succeed the Hubble Space Telescope as NASA's flagship astrophysics mission.
- JWST will study various phases in the history of the universe, from the formation of solar systems to the evolution of our own Solar System.
- The telescope must be kept very cold in order to observe in the infrared without interference, so it will be deployed in space near the Sun-Earth L2 Lagrange point.
- Also a large sunshield made of silicon-coated and aluminium-coated Kapton will keep its mirror and instruments below 50 K (−223.2 °C).

Differences between Webb and the Hubble Telescope

- **Wavelength**: The James Webb Space Telescope will observe primarily in the infrared range and provide coverage from 0.6 to 28 microns. The instruments on Hubble see mainly in the ultraviolet and visible part of the spectrum. It could observe only a small range in the infrared from 0.8 to 2.5 microns.
- **Size**: Webb's primary mirror has a diameter of 6.5 metres. Hubble's mirror was much smaller – 2.4 metres in diameter. So, Webb will have a larger field of view compared to the camera on Hubble.
- **Orbit**: Hubble orbits around the Earth at an altitude of ~570 km. Webb will not orbit the Earth. It will orbit the sun at about 1.5 million kilometres away from Earth.

Dhawan-1 Engine

Context

- Skyroot Aerospace, a Hyderabad-based space technology startup, has successfully test-fired the Dhawan-1 engine.

About

- Dhawan-1 engine India's first privately developed fully cryogenic rocket engine. It runs on two high-performance rocket propellants – liquid natural gas (LNG) and liquid oxygen (LoX) – a high-performance, low-cost and clean rocket fuel.
- The engine was developed using 3D printing with a superalloy reducing manufacturing time by more than 95%.

Cryogenic engines

- Cryogenic engines are given the name due to the use of propellants that are stored at cryogenic temperatures of less than negative 150 degrees Celsius.

SECURITY

GOCO (Government-Owned Company Operated) Model

What is the issue?

- **Comptroller and Auditor General (CAG) report findings:** The Army's ambitious plan for modernisation of the Army Base Workshops (ABWs) and implementation of 'Government-owned, contractor-operated (GOCO)' model is "delayed".
- The implementation of GOCO model fraught with **risks and operational challenges**.

What is GOCO (Government-Owned Company Operated) model?

- In this **model private industries will operate government-assets, sparing them of the need to invest in land, machinery or other support systems**.
- It was meant to **modernise the workshops as well free up Army personnel from maintenance work**.
- GOCO partner **need not make investment in land, machinery and other support system**.
- The **selected private industry partner will get enough independence** in implementing the mission using their best practices.

Sandhayak

Context

- 'Sandhayak', the first of the four Survey Vessels (Large) for the Indian Navy, was launched.

About Sandhayak

- It is a **survey vessel**.
- **Designed and developed by : Defence Public Sector Undertaking, Garden Reach Shipbuilders and Engineers (GRSE) Limited.**
- **Capability:**
 - Undertaking full scale coastal & deep-water hydrographic survey of Ports & Harbour approaches and determination of navigational channels & routes.
 - Survey of maritime limits and collection of Oceanographic & Geographical data for Defence applications, thus boosting the maritime capabilities of the country.
 - **Capable of performing roles such as Search & Rescue and Disaster Relief**, besides serving as Hospital ship with limited facilities during emergencies.
 - The ships will have a **retractable Hangar for stowage of a Utility helicopter**.
 - It has **over 80 per cent indigenous content by cost**.



Significance

- **Ensure safe navigation** of not just Indian ships, but of friendly foreign nations in the Indian Ocean Region.
- Help in **strengthening our bilateralities** and in opening up & promoting trade opportunities for our nation in the long term.

Exercise 'Ex Ekuverin'

Context

- 11th Edition of Exercise EKUVERIN between India & Maldives conducted at Maldives.

About Exercise EKUVERIN:

- It is a **bilateral military exercise** between India and Maldives .
- **Aim:** To **enhance synergy & inter-operability** between Armed Forces of both the Nations in terms of understanding transnational terrorism both on land & at sea, conducting Counter Terrorism & Counter Insurgency Operations and sharing best military practices and experiences.
- **Significance:** Strengthen India's relations with Maldives amidst emerging security dynamics in the Indian Ocean Region.

PANEX-21

Context

- **Humanitarian Assistance and Disaster Relief exercise**, PANEX-21, for BIMSTEC countries conducted.
- It is follow up of the success of the last two BIMSTEC Disaster Management Exercises (**DMEx-2017** at Delhi and **DMEx-2020** at Puri)

Need

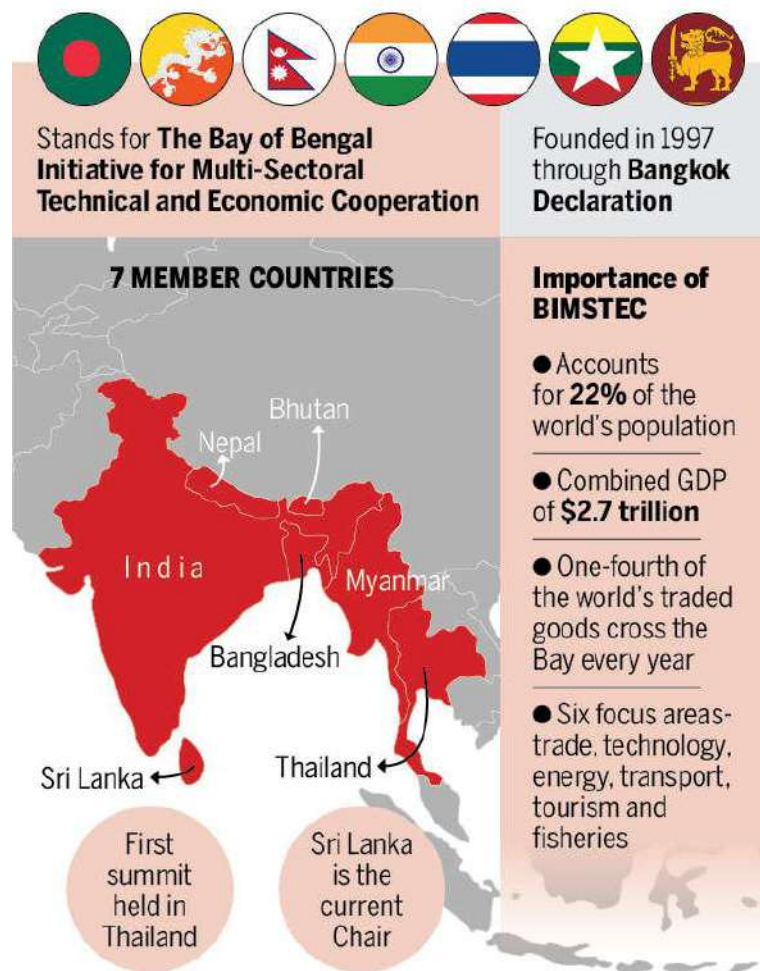
- Managing Natural Disasters in the backdrop of a viral pandemic.

- Providing relief to the affected population
- Save precious lives and minimize losses of livestock, property and infrastructure

About BIMSTEC

BIMSTEC

WHAT YOU SHOULD KNOW



Vertical Launch Short Range Surface to Air Missile

Context

- Vertical Launch Short Range Surface to Air Missile was successfully flight tested by Defence Research & Development Organisation (DRDO) from Integrated Test Range, Chandipur, off the coast of Odisha.

Significance

- To **validate integrated operation** of all weapon system components including the vertical launcher unit with controller, canisterised flight vehicle, weapon control system etc.
- To **enhance defence capability of Indian Naval Ships against aerial threats.**

MI-17 V5

The story so far

- The helicopter that crashed killing Chief of Defence Staff Bipin Rawat and others was an MI-17 V5, from Russia.

About MI-17 V5

- It is one of the latest versions of this **Russian-made military transport helicopter** available around the world.
- It belongs to the MI-8/17 family of military helicopters.
- It has a **digital flight data recorder** and a cockpit voice recorder on board to monitor flight parameters and cockpit conversations respectively.



- The MI-17 V5 is one of the **most modern modifications of the Mi-8/17 helicopter series** of Russian origin.
- The **twin-engine, single-rotor-scheme helicopter with a tail rotor** has an advanced performance design with a **dolphin-type nose**, an additional starboard sliding door and a portside widened sliding door.
- It has the **capability to land on unprepared sites at night** and in adverse weather conditions.
- The manufacturer, claims the **helicopter has the ability to land on even on a single-engine configuration in an emergency**.
- The MI-17 V5 has a **maximum speed of 250 km per hour** and a cruise speed of 230 km per hour.
- It can be used for **both transport personnel and cargo**, is the mainstay of the Indian Air Force's medium-lift helicopter fleet.
- Apart from India, it is used by the air forces of nearly 50 countries, including **Russia and Iraq**, and is also part of the erstwhile Afghan Air Force.

Pinaka-ER Multi Barrel Rocket Launcher System

Context

- The Pinaka-ER Multi Barrel Rocket Launcher System was successfully tested at Pokharan range.

About Pinaka-ER Multi Barrel Rocket Launcher System

- The Pinaka-ER is the **upgraded version of earlier Pinaka version** which has been in service with the Indian Army for the last decade.
- **Designed by:** laboratories of Defence Research and Development Organisation (DRDO) - Armament Research & Development Establishment (ARDE), Pune and High Energy Materials Research Laboratory (HEMRL), Pune.
- **Need:** The system has been designed in the light of **emerging requirements with advanced technologies enhancing the range**.
- A battery of six launchers of Pinaka can fire **a salvo of 72 rockets in 44 seconds**, thereby neutralising an area of 1000mX800m.



Stand-off Anti-tank (SANT) Missile

Context

- Defence Research and Development Organisation (DRDO) and Indian Air Force (IAF) flight-tested the **indigenously designed and developed Helicopter launched Stand-off Anti-tank (SANT) Missile** from Pokhran ranges.

About the Stand-off Anti-tank (SANT) Missile

- It is a **fourth generation upgraded variant of HELINA missile** developed for long distance airborne anti-armour role.
 - **HELINA (Helicopter-launched Nag)** is air-launched version of the Nag with extended range.
- The missile is equipped with a state-of-the-art MMW seeker which provides **high precision strike capability from a safe distance**.
- **Range:** The weapon can **neutralise targets in a range up to 10 kms**.

Supersonic Missile Assisted Torpedo (SMART)

Context

- India successfully tests long-range Supersonic Missile Assisted Torpedo off Balasore coasts

About Supersonic Missile Assisted Torpedo (SMART):

- **Developed by:** Defence Research and Development Organisation (DRDO) for the Indian Navy.
- **Aim:** to enhance anti-sub marine warfare capability far beyond the conventional range of the torpedo.

Kashmir Tigers

Context

- The J&K Police have named 'Kashmir Tigers', a little-known militant outfit, in the biggest attack on security forces since the abrogation of Article 370 in August 2019.

About Kashmir Tigers'

- It is a **militant group** that is operating in J&K.
- It portrays **militancy as secular and indigenous** and tries to create that there is a huge presence of militants in the Valley.

Indian Missiles

Anti-Tank Guided Missile

- Nag has already been inducted into the services.
- It is the **only "fire-and-forget ATGM** meeting all weather requirements for its range (around 20 km)".
- Recently **Heli-Nag was tested**, which will be operated from helicopters and will be inducted by 2022.
- There is also a **Stand-off Anti-Tank (SANT) missile**, with a **range over 10 km** it has a millimetre wave seeker, which enhances target detection in all weather conditions.

Surface-To-Air Missile

- The **short-range SAM system Akash** has already been inducted in the Army and the Air Force.
- For Akash 1, which has a seeker, the Army has already got the Acceptance of Necessity from the government.

Medium-Range SAM: Production of MRSAM systems for the Navy is complete.

- **AIR-TO-AIR: Astra**, India's **Beyond Visual Range Air-to-Air Missile (BVRAAM)**, has been completely tested and is under induction. It has a range of around 100 km. It uses **solid fuel ramjet technology, which enhances speed, and will have an indigenously-built seeker**.
- **AIR-TO-GROUND:**
 - **Rudram**, a New Generation Anti-Radiation Missile (NGRAM), has a maximum range of around 200 km, the missile mainly targets communication, radar and surveillance systems of the adversary, and was tested from the Sukhoi-30MKI fighter jet.
 - **BrahMos**, which India developed jointly with Russia, is already operational. It has a 300 km to 500 km range, and is a short-range, ramjet-powered, single warhead, supersonic anti-ship or land attack cruise missile.

Which of India's missile systems are most important?

- The two most important are **Agni and Prithvi**, both being used by the **Strategic Forces Command**.
- **Agni (range around 5,000)**, is India's **only contender for an inter-continental ballistic missile (ICBM)**, which is available with only a few countries.
- **Prithvi**, although a **short-range surface-to-surface missile** with a 350 km range, has strategic uses.
- India also tested **anti-satellite system** in April 2019. A modified **anti-ballistic missile named Prithvi Defence Vehicle Mk 2** was used to hit a low-orbit satellite. It put India only behind the **US, Russia and China** in this capability.

What about hypersonic technology?

- India has been working on this for a few years, and is just behind the **US, Russia and China**.
- DRDO **successfully tested a Hypersonic Technology Demonstrated Vehicle (HSTDV)** in September 2020, and demonstrated its **hypersonic air-breathing scramjet technology**.
- India has developed its **own cryogenic engine** and tries to make a hypersonic cruise missile, using HSTDV.
- **Only Russia has proven its hypersonic missile capability** so far, while China has demonstrated its HGV capacity.

What makes India good in missile technology?

- Under the IGMP, first came **Prithvi**, then **Agni**.
- BrahMos, at 2.5-3 times the speed of sound, was among the fastest in the world when developed.
- With Agni V ready, India is working on Agni VI and Agni VII, which should have a much longer range

Where do China and Pakistan stand compared to India?

- While China is ahead of India.
- China has given Pakistan the technology, "but getting a technology and really using it, and thereafter evolving and adopting a policy is totally different".

Agni Prime Missile

Context

- India successfully test-fired the Agni Prime missile off the coast of Odisha.

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**.

Controlled Aerial Delivery System

Context

- Defence DRDO conducts flight demonstration of Controlled Aerial Delivery System.

About CADS-500

- It is used for **precise delivery of payload upto 500 kgs** at predetermined location by making use of manoeuvrable capabilities of Ram Air Parachute (RAP).
- It **uses Global Positioning System** for the coordinates, altitude and heading sensors for the heading information during its flight.
- The CADS, with its onboard electronics unit, autonomously steers its flight path using waypoint navigation towards target location by operating controls.

Mormugao, indigenous stealth destroyer

Context

- Mormugao, Indian Navy's second indigenous stealth destroyer of the P15B class, proceeded on her maiden sea sortie.

About Mormugao

- **Built by:** It is being built at **Mazagon Dock Shipbuilders Ltd (MDSL)** as part of the **Project 15B destroyers**.
- The ship incorporates several niche indigenous technologies and is a shining example of Atma Nirbhar Bharat.
- It will add significantly to the Indian Navy's combat capabilities.

Project 15B

- This project is a **follow-on of the Kolkata class (Project 15A) destroyers** commissioned in the last decade.
- **Designed by:** Directorate of Naval Design, Indian Navy's in-house design organisation; and built by M/s Mazagon Dock Shipbuilders Ltd, Mumbai.
- The contract for four ships of Project 15B, as the Visakhapatnam class ships are known, was signed on 28 January 2011
- The four ships are christened after major cities from all four corners of the country viz. **Visakhapatnam, Mormugao, Imphal and Surat**.

About Y 12704 (Visakhapatnam)

- The 163 metres long warship has a full load displacement of 7400 tonnes and maximum speed of 30 knots.
- The overall **indigenous content of the project is approx. 75%**.
- Apart from myriad indigenous equipment in the 'Float' and 'Move' categories, the destroyer is also installed with major indigenous weapons which include: -
 - Medium Range Surface-to-Air Missiles (BEL, Bangalore).
 - BrahMos Surface-to-Surface Missiles (BrahMos Aerospace, New Delhi).
 - Indigenous Torpedo Tube Launchers (Larsen & Toubro, Mumbai).
 - Anti-Submarine Indigenous Rocket Launchers (Larsen & Toubro, Mumbai).
 - 76mm Super Rapid Gun Mount (BHEL, Haridwar).

Armoured Engineer Reconnaissance Vehicle

Context

- The first set of indigenously developed next generation Armoured Engineer Reconnaissance Vehicle inducted into the Corps of Engineers of Indian Army.

About Armoured Engineer Reconnaissance Vehicle

- **Designed by:** Defence Research and Development Organisation (DRDO) and manufactured by Ordnance Factory Medak & Bharat Electronics Limited, Pune.
- **Capability**
 - Carry out reconnaissance of water obstacles and boggy patches for execution of engineer tasks with capabilities to carry out reconnaissance and
 - Provide real time update to force commanders.
- **Significance:** enhance existing engineer reconnaissance capabilities of Indian Army and would be a major game changer in support of mechanised operations in future conflicts.



'Pralay' Missile

Context

- The first successful test flight of **short-range surface-to-surface Pralay ballistic missile** was conducted on from Dr APJ Abdul Kalam Island off the coast of Odisha.

Background

- Defence Research and Development Organisation (DRDO) started working on the project to develop a **short-range solid-fuel surface-to-surface missile**, sometime around 2015.

About Pralay ballistic missile



- It is a **new-generation surface-to-surface missile** equipped with modern technologies and the induction of the weapon system will provide the necessary impetus to the armed forces.
- **Range: can hit the target at a range of 150 to 500 kilometres** with an accuracy of less than 10 metres.
- This canisterised surface-to-surface tactical short-range ballistic missile (SRBM) for battlefield use is the **amalgamation of technologies** developed for **exoatmospheric interceptor missile Prithvi Defence Vehicle (PDV)** from Indian Ballistic Missile Defence Programme and Prahaar tactical missile.

ASIGMA

Context

- The Indian Army launched a contemporary messaging application named ASIGMA.

About ASIGMA

- ASIGMA stands for **Army Secure Indi-Geneous Messaging Application**.
- It is a **new generation, state-of-the-art, web based application** developed entirely in-house by team of officers of the Corps of Signals of the Army.
- The application is being **deployed on the Army's internal network** as a replacement of Army Wide Area Network messaging application which has been in service for past the 15 years.
- The application has been fielded on Army owned hardware.
- It has a variety of contemporary features including **multi-level security, message prioritisation and tracking**.
- This messaging application meet **real time data transfer and messaging requirements of the Army**, especially in the backdrop of current geo political security environment.
- It is in line with the Government's Make in India initiative.

High-speed Expendable Aerial Target - (HEAT) 'Abhyas'

Context

- DRDO successfully conducts flight test of **indigenously developed High-speed Expendable Aerial Target - (HEAT) 'Abhyas'** from Integrated Test Range at Chandipur off the coast of Odisha.

About Abhyas

- It is a **high-speed expendable aerial target (HEAT)**.
- **Built by:** Aeronautical Development Establishment (ADE) of the Defence Research and Development Organisation (DRDO) for the Indian Armed
- It has been **designed to meet the high-speed aerial target requirements of the Indian armed forces**.



INS Khukri

Context

- The INS Khukri, the first of the **indigenously built Missile Corvettes**, was decommissioned after 32 years of glorious service.

About INS Khukri

- The corvette was **built by the Mazagaon Dock Shipbuilders** on 23 August 1989 and had the distinction of being part of both the Western and Eastern Fleets.
- The ship was **affiliated with the Gorkha Brigade** of the Indian Army.



ENVIRONMENT & ECOLOGY

Kyhytysuka sachicarum

Context

- An international team of researchers has discovered a **new marine reptile**.

About Kyhytysuka sachicarum:

- This **fossil specimen** has meter-long skull.
- **Kyhytysuka means:** 'one that cuts with something sharp'.



Peechi-Vazhany Wildlife sanctuary

Context

- A butterfly survey at the Peechi-Vazhani wildlife division has recorded a remarkable increase in the species' numbers.

Common species found are:

- Southern Birdwing, the largest butterfly in India, and Grass Jewel, the smallest one.
- Buddha Peacock, the State butterfly of Kerala.

About Peechi-Vazhani wildlife sanctuary:

- Located in: **Kerala**, India.
- Consist of:** Palappilli- Nelliampathi forests including the area of **Chimmony Wildlife sanctuary**.
- Fauna available:** Bengal tiger, gaur, elephants, dhole, and flying squirrels.

Lesser Florican

Context

- Longest in-country migration route of lesser florican from Rajasthan tracked.

About lesser florican (*Sypheotides indicus*)

- It is one of three bustard species **endemic to India**, the others being the **Bengal florican** and the **Great Indian Bustard**.
- Name in local language:** 'tanmor' on 'kharmor', derived from the root word 'mor' for peacock
- Protection status:**
 - Listed as "**critically endangered**" on the International Union for Conservation of Nature's Red List of Threatened Species.
 - Appendix 2 of the Convention on International Trade in Endangered Species (CITES)** which "includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival."
 - Protected under Schedule 1 of the Indian Wildlife Act.**
- Availability range:** Rajasthan, Madhya Pradesh, Gujarat and some other regions during the monsoon season.



What are the issues with their conservations?

- Forests in India are better protected, but **grasslands are not even seen as having any ecological value**.
- Habitat under threat** due to the expansion of industries in grassland areas.
- In Rajasthan and Madhya Pradesh, **renewable energy projects** have been established on their grasslands, which is where these birds mate.

What is needed?

- There is needs to be a **wide-ranging policy** to arrest the sort of land-use change which is destroying the lesser floricans' habitat.

Chocolate-bordered Flitter

Context

- The new species of butterfly, now named the **Chocolate-bordered Flitter** discovered from **Sikkim**.

Naming

- Scientific name *Zographetus dzonguensis*, after Dzongu in north **Sikkim**, the place where it was discovered.
- The physical appearance of the species differ slightly and the internal structures of the males also differ slightly.



Project RE-HAB

Context

- Khadi and Village Industries Commission (KVIC)** Rolls Out Project RE-HAB in Assam to Prevent Elephant - Human Conflicts Using Tiny Bees.

About Project RE-HAB (Reducing Elephant-Human Attacks using Bees):

- KVIC** has launched Project RE-HAB for areas, which severely grapples with elephant-human conflicts.
- Under **Project RE-HAB**, "**Bee-fences**" are created by setting up bee boxes in the passage ways of elephants to block their entrance to human territories.
- The **boxes are connected with a string** so that when elephants attempt to pass through, a tug or pull causes the bees to swarm the elephant herds and dissuade them from progressing further.
- It is a **cost-effective way of reducing human-wild conflicts without causing any harm to the animals**.

- Elephants also fear that the bee swarms can bite their sensitive inner side of the trunk and eyes. The collective buzz of the bees is annoying to elephants that force them to return.
- It is prove to be a **sustainable solution to the human-elephant conflicts** that are very common in Assam.
- Project RE-HAB is a **sub-mission of KVIC's National Honey Mission**. Honey Mission is a programme to increase the bee population, honey production and beekeepers' income by setting up apiaries.
- In just 6 months, this project has reduced elephant attacks by over 70%.



Need

- To prevent **crop-raiding by elephants**.
- Reduce incidents of **Man-animal conflict**

Issi Saaneq

Context

- New dinosaur species Issi saaneq found, which roamed Greenland 214 mn years ago.

Story so far

- In 1994, palaeontologists from Harvard University unearthed two **well-preserved dinosaur skulls** during an excavation in East Greenland.
- One of the specimens was originally thought to be from a **Plateosaurus**, a well-known long-necked dinosaur that lived in Germany, France and Switzerland.



About Issi saaneq

- It was a **medium-sized, long necked herbivore** and a predecessor of the sauropods, the largest land animals ever to live.

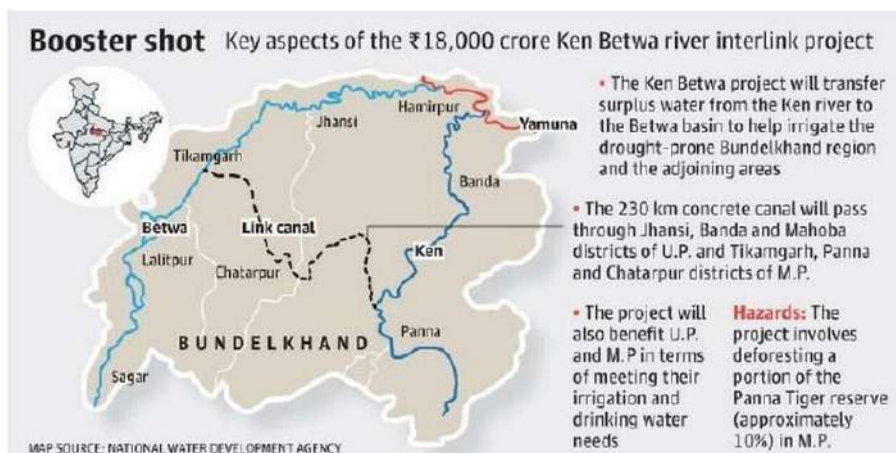
Ken-Betwa Interlink project

Context

- The Union Cabinet approved the **funding and implementation of Ken-Betwa inter-linking of rivers project with a total cost of Rs 44,605 crore.**
- The project will be completed in eight years.

What is the Ken-Betwa Link Project?

- It is the **first project** under the **National Perspective Plan for interlinking of rivers.**
- It envisages **transferring water from the Ken river to the Betwa river**, both tributaries of the Yamuna.
- The Ken-Betwa Link Canal will be **221 km long, including a 2-km long tunnel.**
- A **Special Purpose Vehicle (SPV)** called **Ken-Betwa Link Project Authority (KBLPA)** will be set up to implement the project.



National Interlinking of Rivers Authority

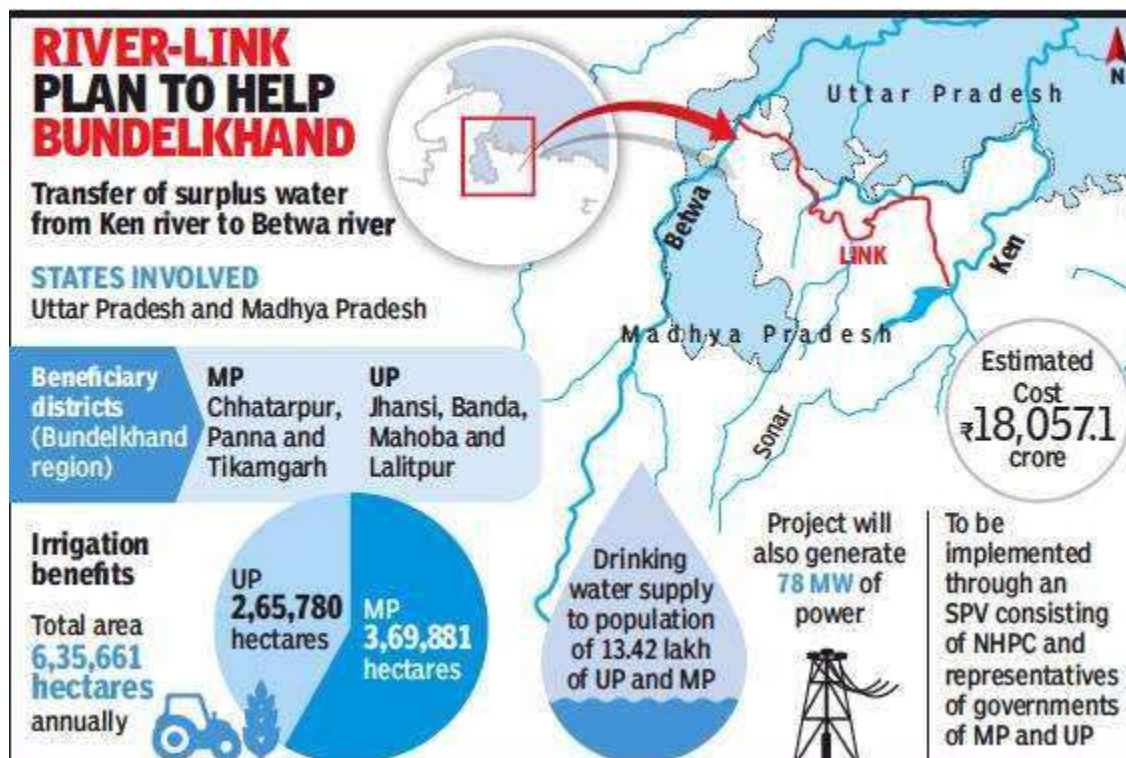
- Centre has set in motion the process of creation of **National Interlinking of Rivers Authority (NIRA)**, an independent autonomous body for **planning, investigation, financing and implementation of the interlinking of river (ILR)** projects in the country.
- The NIRA will have **powers to set up SPV for individual link projects.**

Which regions will benefit from it?

- The project lies in **Bundelkhand, a drought-prone region**, which spreads across 13 districts of Uttar Pradesh and Madhya Pradesh.

Will the project affect the Panna Tiger Reserve?

- The reservoir of Daudhan dam will involve **"a submergence of 9000 ha area, out of which 5803 ha comes under Panna Tiger Reserve.**
- The later includes 4141 ha of forest area which is about **7.6% of the total Panna Tiger Reserve area**".
- In order to mitigate adverse impacts on Panna Tiger Reserve, Landscape Management Plan to decide mitigation strategy with respect to Ken-Betwa Link entrusted to Wildlife Institute of India, Dehradun and is in its final stage.



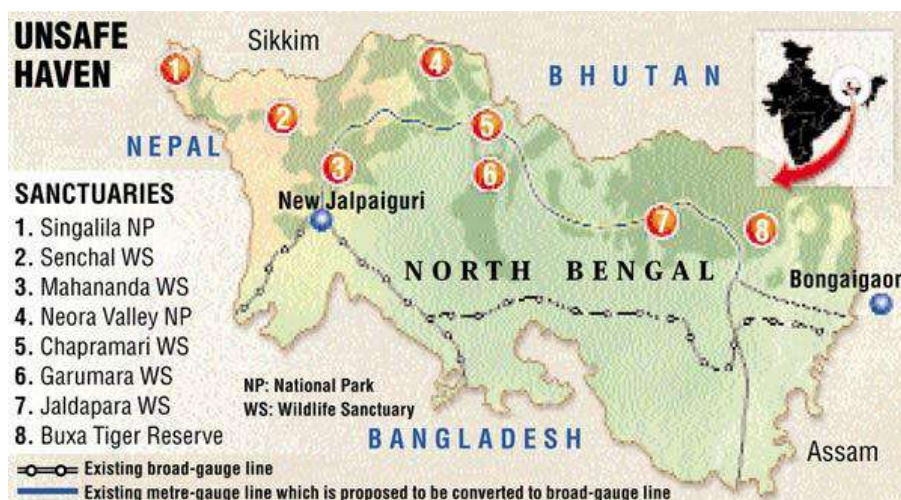
Buxa Tiger Reserve

Context

- An increase in the forest density and the big cat prey base, especially deer, had attracted a Royal Bengal tiger, a first such sighting in 23 years, to the Buxa reserve in north Bengal.

About Buxa Tiger Reserve

- It was created in 1983 as the 15th tiger reserve in India.
- Its northern boundary runs along the international border with Bhutan.
- The fragile "Terai Eco-System" constitutes a part of this reserve.
- Rajabhatkhawa Vulture Breeding Centre at Buxa Tiger Reserve for the breeding and conservation of endangered Indian vultures was established as the second such centre with the help of Bombay Natural History Society and British charity Royal Society for the Protection of Birds.



Water Innovation Challenge

Context

- Atal Innovation Mission, NITI Aayog and the Royal Embassy of Denmark to India announced the second edition of water innovation challenge to address the global water woes through innovations as part of the Indo-Danish Bilateral Green Strategic partnership.

Aim

- To identify innovative & next-gen solutions to solve proposed challenges in collaboration with corporate and public partners.
- The initiative will engage young talents from leading universities and innovation hubs across the nation to build their skills and apply their technical disciplines and innovation capacity.
- It will aid in catalysing global cross-sectorial learning environments, innovation & impact on SDGs.

Great Indian Bustard (GIB)

Context

- The Centre has approached the Supreme Court seeking modification of its order directing that **all transmission cables in the habitat of the Great Indian Bustard (GIB) be laid underground**.

Centre argued that the

- Area falling in Rajasthan and Gujarat contains a large proportion of the country's total solar and wind energy potential
- Undergrounding high voltage power lines is technically not possible as **"there is no manufacturer of underground/ insulated cables for 765 kV in the world"**.
- This process will **escalate the cost of renewable energy production and hurt India's renewable energy cause**.
- Energy transition is **essential for reducing emission and controlling climate change** and India has made international commitments including under the agreement signed in Paris in 2015 under the United Nations Framework Convention on Climate Change (UNFCCC) for transition to non-fossil fuels and for emission reduction.
- India has set a **target to achieve installed renewable energy capacity (excluding large Hydro) of 175 GW by 2022 and 450 GW by 2030**.
- It urged the court to allow high voltage and extra high voltage lines i.e. 66 kV and above power lines in Priority GIB Habitat to be laid as overhead power lines with **installation of appropriate mitigation measures such as bird diverters**.
 - The diverters are called fireflies because they look like fireflies from a distance, shining on power lines in the night.

What was SC order?

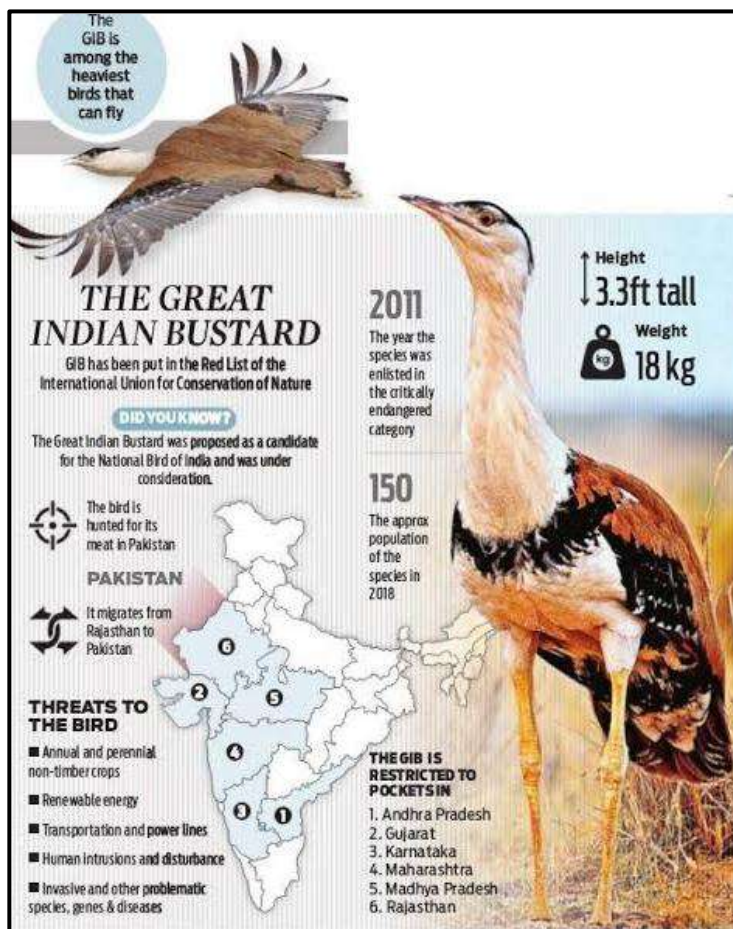
- In a bid to **check the dwindling numbers of the endangered Great Indian Bustard and Lesser Florican**, a Supreme Court bench directed that **overhead power lines be laid underground**, wherever feasible, passing along the habitat of the birds in Rajasthan and Gujarat.

Measure taken by the government

- To ensure conservation of the GIB and its habitat, MoEF&CC has developed the **National Bustard Recovery Plans** which are currently being implemented by conservation agencies.
- MoEF&CC, Rajasthan government and Wildlife Institute of India (WII) have also established a **conservation breeding facility in Desert National Park at Jaisalmer in June 2019**.

Need

- As per a report by the Wildlife Institute of India, **only 150 Great Indian Bustards** are left in India.
- The bird has disappeared from 90% of its original range.
- Great Indian Bustard habitats need to be declared as **conservation reserves**
- The mega fauna with largest wing span are on the "brink of extinction."



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.

UNSC and Climate Change

Context

- India and Russia have blocked a proposal that would have allowed the UN Security Council to deliberate on climate-related issues.
- The draft resolution, piloted by **Ireland and Niger**, sought to **create a formal space in the Security Council for discussions on climate change and its implications on international security**.

UNFCCC and UNSC

UNFCCC

- The UN Framework Convention on Climate Change or UNFCCC **specialised agency, for discussing all matters related to climate change**.
- The parties to the UNFCCC — over 190 countries — meet several times every year to work on a global approach to combat climate change.
- This process that has given **rise to the Paris Agreement**, and its predecessor the Kyoto Protocol, the international instrument that is designed to respond to the climate change crisis.

UNSC

- The Security Council, exists primarily to **prevent conflicts and maintain global peace**.
- For the last few years, a few European countries, led by **Germany**, **have been pushing for a role for Security Council in climate change discussions as well**, arguing that climate change had an international security dimension.
- Climate change-induced food or water shortage, loss of habitat or livelihood, or migration can exacerbate existing conflicts or even create new ones.
- This can have implications for the UN field missions that are deployed across the world in peacekeeping efforts.

The Proposal

- It called for UN Secretary General to **submit a report on security aspects of climate change** in the next two years.
- It also asked the Secretary General to **appoint a special envoy for climate security**.
- Further, it asked UN field missions to regularly report on climate change assessments in their areas of operation and take the help of climate experts in carrying out their routine functions.

UNSC and climate change

- Although **it is not the forum to discuss climate change**, the Security Council and its secretariat has hosted a few debates and informal discussions on the subject in the past.
- Russia and China, two permanent members with veto powers, have always been opposed to the move to bring climate change on the Security Council agenda.
- India, which started a two-year term in January, joined ranks with Russia and China.

Arguments for opposing

- The opposing countries have been arguing that the **UNFCCC must remain the appropriate forum for addressing all climate change-related issues**, and claim the Security Council does not have the expertise to do so.
- Unlike UNFCCC, where decisions are taken by consensus of all the 190-plus countries, the **UNSC would enable climate change decision-making by a handful of developed countries**.

Wildlife Crime Control Bureau

Context

- Between 2018 and 2020 about 2054 cases were registered for killing or illegal trafficking of wild animals in India.
- The data was made available on the basis of cases registered by the Wildlife Crime Control Bureau and State Forest and Police Authorities in the past three years.

Wildlife Crime Control Bureau (WCCB) led operations

- Operation "Save Kurma" : to focus on the **poaching, transportation and illegal trade of live turtles and tortoises**.
- "Operation Turtshield- I" and Operation Turtshield-II" :to tackle the **illegal trade of live turtles**.
- Operation "Lesknow", "Lesknow-II" and Operation "Lesknow-III": **to gain attention of enforcement agencies towards the illegal wildlife trade in lesser-known species of wildlife**.
- Operation Clean Art": **to drag attention of enforcement agencies towards illegal wildlife trade in Mongoose hair brushes**.
- "Operation Softgold": **to tackle Shahtoosh Shawl (made from Chiru wool) illegal trade and to spread awareness among the weavers and traders engaged in this trade**.
- Operation Birbil to **curb illegal trade in wild cat and wild bird species**.
- "Operation Wildnet", "Operation Wildnet-II", "Operation Wildnet-III" and "Operation Wildnet-IV" to draw the attention of the enforcement agencies within the country **to focus their attention on the ever increasing illegal wildlife trade over internet using social media platforms**.
- "Operation Freelyfly" on **illegal trade of live birds** and "Operation Wetmark" to **ensure prohibition of sale of meat of wild**

animals in wet markets across the country.

About Wildlife Crime Control Bureau (WCCB)

- It has received the **Asia Environmental Enforcement Award-2020** awarded by the United Nations Environment Programme (UNEP).
- It is a statutory body established by the Government of India under the Ministry of Environment, Forest and Climate Change to combat organised wildlife crime.
- Under Section 38 (Z) of the Wild Life (Protection) Act, 1972, it is mandated to
- Collect and collate intelligence related to organized wildlife crime activities** and to disseminate the same to State and other enforcement agencies for immediate action.
- Establish a centralized wildlife crime data bank;**

National Clean Air Programme (NCAP)

Context

- Several states failed to utilise the funds provided by the Centre under the national clean air programme (NCAP) to control air pollution in their respective states.

Key findings

- A total of Rs. 375.44 crore was provided under NCAP to 114 cities from 2018-19 to 2020-21, and Rs. 290 crores to 82 cities for 2021-22.
- Utilisation of the Rs. 375.44 crores given in the past two years has been low by most states, according to the data, with 22 states under NCAP collectively utilising only 33.53% of the amount.
- Bihar and Chandigarh utilised 77% and 82% respectively of the fund, but Punjab and Uttar Pradesh utilised only 17%, Chhattisgarh 21%, Andhra Pradesh 10%, Assam 4%, Himachal Pradesh 2%, and Jammu & Kashmir 1%. The utilisation by Uttarakhand and West Bengal was 53% and 58% respectively.

Why NCAP fund are unutilized?

- It **does not have a legal mandate** but aims to achieve a 20% to 30% reduction in PM 2.5 (respirable pollution particles) concentrations over 2017 levels in over 100 cities by 2024.

About National Clean Air Programme

- It was launched to **reduce particulate matter (PM) pollution by 20-30%** in at least 102 cities by 2024.
- It is envisaged as a scheme to **provide the States and the Centre with a framework to combat air pollution**.
- 102 cities from 23 States and UTs have been chosen as non-attainment cities. With the exception of Delhi, Mumbai, Kolkata and Bengaluru, most of those chosen are tier two cities.
- Apart from experts from the industry and academia, the programme is expected to be a collaboration between the Ministry of Road Transport and Highways, Ministry of Petroleum and Natural Gas, Ministry of New and Renewable Energy, Ministry of Heavy Industry, Ministry of Housing and Urban Affairs, Ministry of Agriculture, Ministry of Health, NITI Aayog, and Central Pollution Control Board.

BY 2024, POLLUTION CUT BY 30%	
NATIONAL CLEAN AIR PROGRAMME (NCAP) Cities to be covered: 102 GOAL: To meet annual average ambient air quality standards MID-TERM (5 YEARS) TARGET: Reducing air pollution by 20-30% by 2024, taking 2017 as base year HOW: Through city-specific air pollution abatement action plan	BUILD CAPACITY BY SETTING UP: <ol style="list-style-type: none"> 1 National emission inventory 2 Air Information Centre for data analysis 3 Source apportionment studies 4 Guidelines for indoor air pollution 5 Rural monitoring stations
INTERNATIONAL SUPPORT AGENCIES: World Bank, German development agency (GIZ), AFD (French funding agency), Swiss Development Corporation, Bloomberg Philanthropies	

Gharials

Story so far

- The gharial reintroduced in the **Beas Conservation Reserve** are expected to start breeding in the new few years as the released gharials are healthy.
- The reptiles were commonly sighted in the Beas River till the 1960s but later became extinct.
- The gharial can be found in **north Indian rivers like the Ganga, Yamuna, Chambal and their tributaries**.

About gharials

- Gharials are the **topmost predators in a river**.
- They (gharial) **balance the riverine food chain**. They **keep in check their prey** (i.e. fish), which keep in check their prey and so on.
- Indicator species:** The presence of gharials indicates a **healthy riverine ecosystem**.
- The male gharial has a distinctive boss at the end of the snout, which resembles an earthenware pot known in Hindias. Hence,



the name.

Conservation Status

- **Critically Endangered** – IUCN Red List.
- It is a **Schedule 1 species** under Indian wildlife act, 1972

Habitat

- Foremost flowing rivers with high sand banks that they use for basking and building nests
- Gharials once inhabited all the major river systems of the Indian Subcontinent, from the Irrawaddy River in the east to the Indus River in the west.
- Their distribution is now limited to only 2% of their former range
- They are found in **Girwa River, Chambal River, Ken River, Son River, Mahanadi River, Ramganga River**

Threats

- Hunting for **skins, trophies and indigenous medicine** and their eggs collected for consumption.
- Decrease of riverine habitat as dams, barrages, irrigation canals and artificial embankments were built; siltation and sand-mining changed river courses

Conservation efforts in India

- **Project Crocodile** for **intensive captive breeding and rearing program** began in 1975 (Government of India + **United Nations Development Fund + Food and Agriculture Organization**)

Protected areas for gharial in India

- National Chambal Sanctuary- Madhya Pradesh
- Katarniaghat Wildlife Sanctuary- Uttar Pradesh

Indian Desert Cat

Context

- An Indian Desert Cat has been spotted for the first time in Madhya Pradesh's Panna Tiger Reserve (PTR)

About Indian Desert Cat

- This cat is found in deserts and **can survive without water**.
- The toes of the species have cushion like hair which **help it balance the fluctuating desert temperatures**.
- The species is **highly adaptable** and can be found in **forests as well as arid and semi-arid regions**.
- It **preys on small rodents and reptiles** and is mostly a nocturnal creature.
- The species has a sandy-brown fur and small, round spots covering the upper part of its body.
- The cat has a long, slender and tapering tail with a black tip and spots at its base.
- The animal is in the '**Least Concern**' category of the International Union for Conservation of Nature Red List of Threatened Species.
- *Felis silvestris* (Indian desert cat) has pug marks similar to that of wild cats.



About Panna Tiger Reserve

- Situated in the **Vindhyan mountain range** in the northern part of **Madhya Pradesh**.
- Flowing from the south to the north through the reserve is the **River Ken**. It is the lifeline of this reserve and is the least polluted of Yamuna's tributaries.
- These forests along with **Ken Gharial Sanctuary** form a significant part of the catchment area of this river.
- The reserve is also dotted with **two thousand year-old rock paintings**.
- Panna Tiger Reserve (PTR) in Madhya Pradesh (MP) included in the **global network of biosphere reserves by the United Nations Educational, Scientific and Cultural Organisation (UNESCO)** as a critical tiger habitat.

Olive Ridley

- **Protection status:**
 - **Vulnerable under the International Union for Conservation of Nature's Red list.**
 - All five species of sea turtles found in India are included in **Schedule I of the Indian Wildlife Protection Act, 1972**
 - **Appendix I of the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES)**, which prohibits trade in turtle products by signatory countries.



Threats to Olive Ridley turtles

- Three main factors that damage Olive Ridley turtles and their eggs –
 - **heavy predation of eggs by dogs and wild animals**
 - **indiscriminate fishing with trawlers and gill nets, and**
 - **beach soil erosion.**
- **Dense fishing activity** along the coasts of Andhra Pradesh, Odisha and West Bengal, especially ocean-going trawlers, **mechanised fishing boats and gill-netters** pose a severe threat to turtles.

Nesting habits

- The Olive Ridley has one of the most extraordinary nesting habits in the natural world, including **mass nesting called arribadas**.
- The 480-km-long Odisha coast has three **arribada beaches at Gahirmatha, the mouth of the Devi river, and in Rushikulya**, where about 1 lakh nests are found annually.
- More recently, a new mass nesting site has been discovered in the **Andaman and Nicobar Islands**, with more than 5,000 nests reported in a season.

The M S Swaminathan Rose

Context

- A new rose variety has been named after the eminent agriculture scientist M.S. Swaminathan.

About "The M S Swaminathan Rose"

- This rose wearing a magenta purple is **highly disease resistant**.
- This variety of rose plant, is results from a series of crosses between "new" variety of rose and other purple roses,

Other new variety of rose

- Jewel of Monkomp, Floribunda rose.



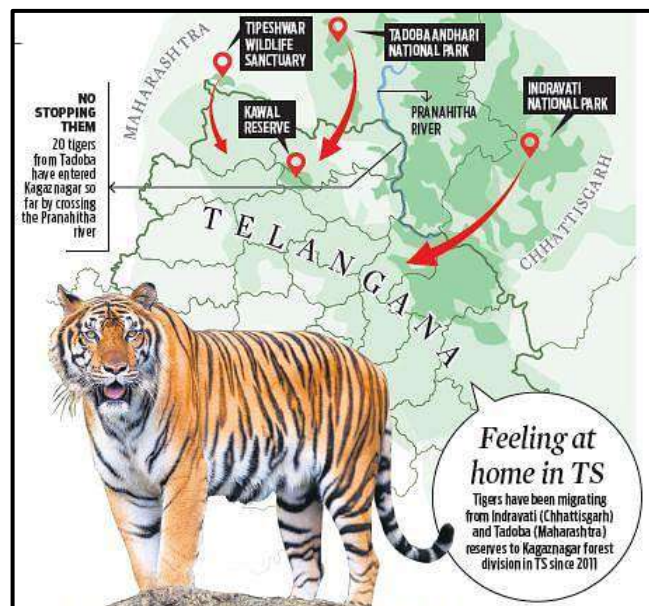
Indravati Tiger Reserve

Context

- At Indravati Tiger Reserve, where a tiger census is underway.
- The tiger census work will cover 400 square kilometres in Indravati Tiger Reserve in Chhattisgarh's Bijapur district.
- This is the first time tiger counting will be carried in such a large area of the reserve, which is a Maoist-affected area.
- The **connectivity between Tadoba Tiger Reserve and Indravati Tiger Reserve** makes the latter an important tiger habitat in central India.

About Indravati Tiger Reserve

- Located in: **Bijapur district of Chhattisgarh state in India.**
- Derives its name from the **Indravati River, which flows from east to west and forms the northern boundary of the reserve with the Indian state of Maharashtra.**
- One of three Project Tiger sites in Chhattisgarh, along with **Udanti-sitanadi**, and is home to one of the last remaining populations of the endangered wild water buffalo.



Chilika Lake

Context

- Lakhs of migratory birds fly down from other parts of the globe to Odisha's Chilika lake, the largest wintering ground for birds in the Indian subcontinent.
- In 2020, for the third successive year, the Chilika lake hosted over a million birds, and the area around it recorded more than 12 lakh mostly migratory birds.
- The lake hosts birds migrating from thousands miles away, including from the Caspian Sea, Lake Baikal, the Aral Sea, remote parts of Russia, the Kirghiz steppes of Mongolia, Central and Southeast Asia, and Ladakh and the Himalayas.

About Chilika lake

- It is a **brackish water lagoon**, spread over the Puri, Khurda and Ganjam districts of **Odisha** state on the east coast of India, at the mouth of the **Daya River**, flowing into the Bay of Bengal.
- In 1981, Chilika Lake was designated the **first Indian wetland of international importance under the Ramsar Convention**.
- It has been listed as a tentative UNESCO World Heritage site.
- It is the **largest salt water lake** in India.
- The lagoon is also home to **rare and endangered Irrawaddy dolphins**.

MCQs

1. Consider the following statements regarding Cost Push inflation:

1. Cost-push inflation is determined by supply-side factors.
2. It occurs when Aggregate Demand exceeds Aggregate Supply at Full employment level.
3. Cost-push inflation can only occur when demand is relatively inelastic.

Which of the above statements is / are correct?

- a) 1 and 3 only b) 1 only
c) 2 and 3 only d) None of the above

2. Consider the following statements regarding 'Capital Adequacy Ratio':

1. It is the percentage of total capital to the total risk-weighted assets.
2. It is the same for banks across India.
3. NBFCs are exempted from it.

Which of the above statements is / are correct?

- a) 1 only b) 2 only
c) 1, 2 and 3 d) 2 and 3 only

3. Consider the following statements regarding Open Skies Treaty:

1. It allows unlimited number of commercial flights between 2 countries.
2. It aims at building confidence among members through mutual openness

Which of the above statements is / are correct?

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

4. With reference to International Monetary and Financial Committee (IMFC), consider the following statements:

1. IMFC discusses matters of concern affecting the global economy, and advises the International Monetary Fund (IMF) on the direction of its work.
2. The World Bank participates as observer in IMFC's meetings.

Which of the above statements is/are correct?

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

5. Regarding Hindustan Republican Association, consider the following

1. It was established by Chandra Shekhar Azad.
2. The book Bandi Jiwan served as source of inspiration for the members of this association.
3. The members of this organisation aimed to establish Federal Republic of United States of India with basic principle of adult franchise.
4. The Meerut Conspiracy Case was lodged against the members of this Association.

Which of the statements given above is/are correct?

- a) 1 and 4 only b) 2 and 3 only
c) 1, 2 and 3 only d) 4 only

6. Consider the following statements:

1. Ajivikas were fatalists who believed that everything was predetermined.
2. Makkhali Gosala was an Ajivika teacher and Ajita Kesakambalin was a lokayata teacher.

Which of the statements given above is/are correct?

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

7. Consider the following statements regarding Ain-i Akbari:

1. It was part of Akbarnama commissioned by Akbar.
2. It gives detailed accounts of the organization of the court, administration and army.

Which of the statements given above is/are correct?

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

8. With regard to the Strategic Partnership Policy, consider the following statements:

1. It intends to promote Indian private sector participation in defence manufacturing.
2. It was first suggested by the Urjit Patel committee Committee.

Which of the statements given above is/are correct?

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

9. Which of the following sites are identified as a Neolithic Sites?

1. Daojali Hading
2. Paiyampalli
3. Kurnool caves
4. Inamgaon

Select the correct answer using the code given below.

- a) 1 and 2 only b) 2, 3 and 4 only
c) 3 and 4 only d) 1, 2, 3 and 4

10. With reference to the Zero Defect Zero Effect Scheme, consider the following statements:

1. It aims to enhance global competitiveness of MSMEs by providing them financial support in assessment and rating its manufacturing processes on quality and environment aspects.
2. The ZED certification are issued by the Quality Council of India.
3. It is mandatory for all MSMEs that are looking up for global market.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only

c) 1 and 3 only d) 1, 2 and 3

11. In context of the India Young Water Professional Programme, which of the following statement is/are correct?

1. It aims to provide a structured platform for capacity building with strategic and long-term investment to support the water management reforms in India.
2. It will be implemented by NITI Aayog.
3. It focuses on gender equality and diversity.

Select the correct answer using the code given below:

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

12. Consider the following statements about the Ramappa Temple:

1. It is dedicated to the lord Sun.
2. Marco Polo, called this temple as "the brightest star in the galaxy of temples".

Which of the statements given above is/are correct?

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

13. With reference to Shankaradeva, consider the following statements

1. Shankaradeva was a medieval Bhakti Saint belonging to present day state of Andhra Pradesh.
2. He established institutional centres or Satras associated with Eksarana tradition of Vaishnavism.
3. His teachings are known as Bhagavati Dharma which emphasizes on complete surrender to God.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

14. With reference to Magnetosphere, consider the following

1. Magnetosphere is generated by the convective motion of charged molten iron situated below the surface in the earth's outer Core.
2. No other planet in the solar system except the earth has a Magnetosphere around it

Which of the statements given above is/are correct?

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

15. With reference to Golden langurs, consider the following

1. The Geographic range of Golden langurs is limited to Arunachal Pradesh in India and neighbouring Nepal.
2. The main reason for decreasing number of these Endangered species is due to their localised habitat and rapid loss of habitat due to deforestation
3. Chakrashila Wildlife Sanctuary is India's first wildlife sanctuary with golden langur as the primary species.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only

c) 1 and 3 only d) 1, 2 and 3

16. In context of the Langas and Manganiyars, consider the following statements:

1. They are the groups of hereditary professional musicians, whose music has been supported by wealthy landlords and aristocrats for generations.
2. It forms a vital part of Manipur's cultural landscape.

Which of the statements given above are correct?

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

17. With reference to the Technology Development Fund (TDF) scheme, consider the following statements:

1. It has been established to promote self-reliance in space Technology as a part of the 'Make in India' initiative.
2. It is a programme of Ministry of Science and Technology executed by ISRO.
3. It encourages participation of public/private industries especially MSMEs to create an eco-system for enhancing cutting edge technology capability.

Which of the statements given above are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 3 only d) 1, 2 and 3

18. Consider the following statements with regarding to the Harappan Cities:

1. Copper and bronze were used to make tools, weapons, ornaments and vessels.
2. The unicorn is the most common motif on the Harappan seals made out of stone.

Which of the statements given above is/are correct?

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

19. With reference to Constitution of India, consider the following

1. The ideals of social and economic justice have been borrowed from the Soviet Constitution
2. The concepts of liberty and equality in the Preamble have been taken from the French Revolution
3. The legislative procedure enshrined in the Indian Constitution have been borrowed from the Government of India Act 1935.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

20. Consider the following

1. The first English factory in India was set up at Masulipatam.
2. The Farrukhsiyar Farman provided the English with the right to collect revenue from the villages of Sutanuti, Kalikata and Gobindapur in Bengal.

Which of the statements given above is/are correct?

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

21. Consider the following

1. In western India, Tropic of Cancer passes through the state of Gujarat only.
2. Champai in Manipur is the city nearest to the Tropic of Cancer in Northeast India.
3. Mahi is the only river in India that cuts the Tropic of Cancer twice.

Which of the statements given above is/are correct?

- a) 1 only b) 2 and 3 only
c) 3 only d) 1, 2 and 3

22. With reference to Proton therapy, consider the following

1. It is a type of external beam Radiation therapy that can be used to treat both cancerous and benign tumors
2. This therapy can be combined with both X-ray radiation therapy and chemotherapy.

Which of the statements given above is/are correct?

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

23. Regarding Styrene, consider the following

1. It is a poisonous and inflammable organic compound.
2. It is also known as PVC gas as it is used in production of polyvinyl chloride.

Which of the statements given above is/are correct?

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

24. Consider the following

1. Parliamentary privileges do not extend to the president of India.
2. No meeting can be held in either House of the Parliament until there is a quorum in the House.

Which of the statements given above is/are correct?

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

25. With reference to the Dhawan-1, consider the following statements:

1. It is India's first privately developed fully cryogenic rocket engine running on liquid natural gas and liquid oxygen.
2. It is developed using 3D printing with a super alloy.

Which of the statements given above is/are correct?

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

26. With reference to the disinvestment, consider the following statements:

1. The proceeds of disinvestment are treated as non-debt creating capital receipts.
2. Strategic Disinvestment is the sale of 50 percent or higher portion of government shareholding in a PSU along with the transfer of management control.
3. Through CPSE Exchange Traded Fund route, government can divest its stake in various PSUs across

diverse sectors through a single offering

Which of the statements given above are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

27. In context of the Atal Mission for Rejuvenation and Urban Transformation 2.0 (AMRUT 2.0), consider the following statements:

1. It aims to make cities water secure and self-sustainable through circular economy of water.
2. The funds for the projects undertaken under this mission will be shared by Centre, State and ULBs.

Which of the statements given above are correct?

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

28. In context of the Conference on Interaction and Confidence-Building Measures in Asia (CICA), consider the following statements:

1. It is an inter-governmental forum for enhancing cooperation towards promoting peace, security and stability in Asia.
2. The idea of convening the CICA was first proposed at the 47th Session of the ASEAN.
3. India is a founding member of CICA.

Which of the statements given above are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

29. Consider the following statements:

1. Shield volcanoes are mostly made up of basalt and are of low-explosivity.
2. The Deccan Traps in India is example of composite volcano.
3. The Hawaiian volcanoes are examples of mid-oceanic ridge volcanoes.

Which of the statements given above is/are not correct?

- a) 1 and 2 only b) 2 and 3 only
c) 3 only d) 1, 2 and 3

30. With reference to the Project RE-HAB, consider the following statements:

1. It is an initiative of Ministry of Tribal Affairs in collaboration with Ministry of Environment and Forest.
2. It aims to rehabilitate the indigenous people that faced displacement due to developmental projects.

Which of the statements given above is/are correct?

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

31. Consider the following statements about the lesser florican:

1. This bustard species is endemic to India.
2. It is protected under Schedule 1 of the Indian Wildlife Act.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only

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

32. Consider the following statements:

1. Milkiyat lands were cultivated for the private use of zamindars.
2. The buying and selling of zamindaris accelerated the process of monetization in the countryside.
3. Most zamindars had armed contingent comprising units of cavalry, artillery and infantry.

Which of the statement given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

33. With regard to the Genetic Engineering Appraisal Committee (GEAC), consider the following statements:

1. It is chaired by the Union Minister for Science & Technology.
2. It is responsible for appraisal of activities involving large scale use of hazardous\ microorganisms.

Which of the statements given above is/are correct?

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

34. With regard to the Ecologically Sensitive Areas (ESA), consider the following statements:

1. They are notified under the Environment Protection Act, 1986.
2. They are located around Protected Areas, National Parks and Wildlife Sanctuaries.

Which of the statements given above is/are correct?

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

35. Consider the following statements about the isothermal forging technology?

1. Recently, ISRO in collaboration with Hindustan Aeronautics Limited has developed this technology.
2. This crucial technology can help in establishing self-reliance in aero engine technology.

Choose the correct answer using the code given below:

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

36. With reference to Jyotirao Phule, consider the following

1. He was a social reformer whose activities included eradication of caste system, untouchability and women education.
2. He founded the Satyashodhak Samaj which aimed to spread rational thinking among the people.
3. Phule was given the title of 'Mahatma' by Bal Gangadhar Tilak in recognition of his selfless service to humanity.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

37. Which of the following statements are correct?

1. The Hindu Kush Himalaya (HKH) Assessment Report is released by the World Meteorological Organization (WMO).
2. The Tibetan Plateau, the Central Himalayan Range and Karakoram are warmer than the HKH.
3. Bangladesh and Myanmar are not covered under the HKH region.

Select the correct answer using the code given below:

- a) 1 and 2 only b) 2 only
c) 1 and 3 only d) 3 only

38. In context of the Pusa Basmati 1979 and Pusa Basmati 1985, consider the following statements:

1. It is India's first-ever genetically modified herbicide-tolerant rice varieties developed by Indian Agricultural Research Institute (IARI).
2. It can be directly seeded like wheat.

Which of the statements give above are correct?

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

39. Consider the following statements:

1. India has become the first country in the world to start commercial production of Nano Urea.
2. Urea is the only fertilizer at present with pricing and distribution being controlled statutorily by the Government.

Which of the statements given above are correct?

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

40. In context of the political parties in India, consider the following statements:

1. Political parties in India are extra-constitutional organizations.
2. A party should win 2% of seats in the Lok Sabha from at least three different states to get recognized as a national party.
3. Election Commission resolves the disputes relating to splits/mergers of recognized political parties.

Which of the statements given above are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

41. Which of the following statement is/are correct?

1. The admissibility of questions in Rajya Sabha is governed by the Rules of Procedure and Conduct of Business in the Council of States.
2. In both Houses, the first hour of every sitting is usually devoted to asking and answering of questions.
3. The Rajya Sabha Chairman or the Lok Sabha Speaker has the authority to disallow any question or a part under the norms of the House.

Select the correct answer using the code given below:

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

42. Consider the following statements regarding 'Himalayan Economy':

1. Ladakh possesses borax and sulfur deposits.
2. Cardamom are to be found in Sikkim and the Darjiling Hills.
3. Transhumance is widely practiced in the Himalayan pastures.

Which of the above given statements is/are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

43. With reference to the Narcotic Drugs and Psychotropic Substances (NDPS) Act, consider the following statements:

1. It prohibits tranship of any narcotic drug substance, except for medical or scientific purposes and requires a licence by the concerned authorities.
2. Under this act, Narcotics Control Bureau was set up.
3. Under this act, central government has power to add to or omit from the list of psychotropic substances.

Which of the statements give above are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 3 only d) 1, 2 and 3

44. In context of the Public Interest Litigation, consider the following statements:

1. The concept of "Public Interest Litigation" has been borrowed from Japan.
2. It was introduced by Justice P. N. Bhagwati as a relaxation to the traditional rule of locus standi.

Which of the statements give above are correct?

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

45. With reference to the Nata sankirtana, consider the following statements:

1. It is a hymn of lord Shiva that synthesizes several indigenous rhythms.
2. It follows a strict code in its performance with rhythms pattern and costumes that are determined by specific rules & regulation.
3. Manipur's Nata Sankirtana is inscribed in the UNESCO's Intangible Cultural Heritages list.

Which of the statements given above are correct?

- a) 1 only b) 2 and 3 only
c) 3 only d) 1, 2 and 3

46. Consider the following statements:

1. Western disturbances are also known as the primary monsoon of Tamil Nadu.
2. October rains in India are mainly caused due to western disturbance and withdrawal of southwest monsoon.

Which of the statements given above is/are correct?

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

47. Consider the following statements about the Section

144 of the Criminal Procedure Code (CrPC):

1. It empowers the magistrate of any union territory or state to pass an order to prohibit the gathering of 4 or more than 4 people in a particular area.
2. It empowers the authorities to curb internet access in the particular region.
3. It can force people to stay indoors for a specific period of time.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

48. In context of the Glasgow Leaders' Declaration on Forests and Land Use, consider the following statements:

1. It is initiated by the Brazil to halt deforestation and land degradation by 2030.
2. India did not sign this declaration.
3. This declaration interlinked trade to climate change and forest issues.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

49. Consider the following statements about the Essential Commodities (Amendment) Act, 2020:

1. It enables the state governments to impose stock limits and restrict movement of essential commodities.
2. As per this act, central government can regulate the supply of food stuff only under extraordinary circumstances such as war, famine, exceptional price rise and grave natural calamities.

Which of the statements given above is/are correct?

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

50. Consider the following statements about the INSPIRE Scheme:

1. It is sponsored and managed by the Department of Science & Technology for attraction of talent to Science.
2. It includes Scheme for Early Attraction of Talents for Science, Scholarship for Higher Education and Assured Opportunity for Research Careers.
3. A striking feature of this programme is that it conducts competitive exams for identification of talent at all level.

Choose the correct answer using the code given below:

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

51. With reference to the Northeast Green Summit, Which of the following statements is/are correct?

1. This Sustainable Development Initiative was initiated in 1992.
2. It has been organized by The Energy and Resources Institute (TERI) with World Bank support.

Select the correct answer using the code given below:

- a) 1 only b) 2 only

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

52. Consider the following statements:

1. Western disturbances are also known as the primary monsoon of Tamil Nadu.
2. October rains in India are mainly caused due to western disturbance and withdrawal of southwest monsoon.

Which of the statements given above is/are correct?

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

53. Consider the following statements about the Section 144 of the Criminal Procedure Code (CrPC):

1. It empowers the magistrate of any union territory or state to pass an order to prohibit the gathering of 4 or more than 4 people in a particular area.
2. It empowers the authorities to curb internet access in the particular region.
3. It can force people to stay indoors for a specific period of time.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

54. In context of the Glasgow Leaders' Declaration on Forests and Land Use, consider the following statements:

1. It is initiated by the Brazil to halt deforestation and land degradation by 2030.
2. India did not sign this declaration.
3. This declaration interlinked trade to climate change and forest issues.

Which of the statements given above is/are correct?

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

55. Consider the following statements about the Essential Commodities (Amendment) Act, 2020:

1. It enables the state governments to impose stock limits and restrict movement of essential commodities.
2. As per this act, central government can regulate the supply of food stuff only under extraordinary circumstances such as war, famine, exceptional price rise and grave natural calamities.

Which of the statements given above is/are correct?

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

56. Consider the following statements about the INSPIRE Scheme:

1. It is sponsored and managed by the Department of Science & Technology for attraction of talent to Science.
2. It includes Scheme for Early Attraction of Talents for Science, Scholarship for Higher Education and Assured Opportunity for Research Careers.
3. A striking feature of this programme is that it conducts competitive exams for identification of talent at all level.

Choose the correct answer using the code given below:

- a) 1 and 2 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

57. With reference to the Northeast Green Summit, Which of the following statements is/are correct?

1. This Sustainable Development Initiative was initiated in 1992.
2. It has been organized by The Energy and Resources Institute (TERI) with World Bank support.

Select the correct answer using the code given below:

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

58. Consider the following statements:

1. Wholesale Price Index (WPI) measures the changes in the prices of goods and services sold and traded in bulk by wholesale businesses.
2. WPI include taxes in order to measure the impact of fiscal policy.
3. The Reserve Bank of India is now using WPI as the as the benchmark for its monetary policy tools like Repo Rate, Reverse Repo Rate.

Which of the statements given above are incorrect?

- a) 1 only b) 2 and 3 only
c) 1 and 3 only d) 1, 2 and 3

59. In context of the MIKE programme, consider the following statements:

1. It was established by CITES through adoption of a resolution at the tenth Conference of the Parties in 1997.
2. Project Elephant has been formally implementing MIKE programme in India.

Which of the statements given above are correct?

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

60. In context of the POCSO Act, consider the following statements:

1. This gender neutral act defines a child as someone under the age of 16.
2. It defines different forms of sexual abuse, sexual harassment and pornography.

Which of the statements given above are correct?

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

ANSWERS

1. a	16. a	31. c	46. b
2. a	17. c	32. d	47. a
3. b	18. c	33. b	48. c
4. c	19. a	34. c	49. b
5. b	20. a	35. b	50. a
6. c	21. c	36. a	51. d
7. c	22. c	37. b	52. b
8. a	23. c	38. b	53. a
9. a	24. c	39. c	54. c
10. a	25. c	40. d	55. b
11. c	26. d	41. d	56. a
12. b	27. c	42. d	57. d
13. b	28. c	43. d	58. d
14. a	29. c	44. b	59. c
15. b	30. d	45. b	60. b