

OFFICERS' Pulse

MAY, 2021

- The Hindu
- Indian Express
- PIB
- Yojana
- Kurukshetra
- Rajya Sabha TV
- Down to Earth



CURRENT AFFAIRS Monthly
THE **PULSE** OF UPSC AT YOUR FINGER TIPS.

Contents

Schemes..... 2	5) National Artificial Intelligence Portal.....32
1) Paramparagat Krishi Vikas Yojana..... 2	Reports and Indices..... 33
2) Pradhan Mantri Kisan Maan Dhan Yojana .. 2	1) Global Energy Review 202133
3) Pradhan Mantri Jan Dhan Yojana..... 3	2) Global Report on Internal Displacement 2021.....33
4) Rashtriya Gram Swaraj Abhiyan 4	3) China's coercive population measures serve as warning for India.....35
5) Sovereign Gold Bonds Scheme..... 5	Polity 37
6) YUVA scheme..... 6	1) SC ruling on identifying backward classes 37
Initiatives..... 7	2) The why and how of creating a new district.....39
1) Eklavya Model Residential School..... 7	Economy 40
2) National Financial Reporting Authority..... 7	1) RBI surplus transfer40
Environment..... 9	2) Special Drawing Rights40
1) Global Methane Assessment 9	3) Small Finance Banks.....41
2) What is net-zero, and what are India's objections?10	4) Trends in India's Foreign Direct Investment.....41
3) Cheetah translocation.....12	5) Harmonised System of Nomenclature (HSN) code42
4) Banni grasslands.....13	International Relations 44
5) The many benefits of an eco tax15	1) Intellectual Property Rights waiver44
6) Initiative to conserve sacred groves.....17	2) France's role in the Rwandan genocide46
7) Declining number of pollinators18	3) Israel-Palestine conflict.....47
Agriculture 20	Art and Culture..... 50
1) Illegal cultivation of HTBt cotton20	1) Putola Nach50
Organisations 22	2) Tentative list of UNESCO World Heritage Sites.....50
1) Asian Development Bank22	Defence..... 54
2) UNHCR.....22	1) INS Rajput.....54
3) Arctic Council23	2) Operation Samudra Setu II54
4) Shanghai Cooperation Organisation.....25	3) Iron Dome System54
Science and Technology 27	4) P-8I patrol aircraft to India.....56
1) A shift in Earth's axis.....27	
2) Artemis Accords.....28	
3) 'One Health' approach29	
4) 5G trial in India.....30	

Schemes

1) Paramparagat Krishi Vikas Yojana

About the scheme

- The Paramparagat Krishi Vikas Yojana (PKVY) was launched in **2015** by the **Ministry of Agriculture and Farmers' Welfare**.
- PKVY aims at **supporting and promoting organic farming**, in turn resulting in improvement of soil health.
- **Funding pattern** under the scheme is in the ratio of **60:40** by the Central and State Governments respectively. In case of North Eastern and Himalayan States, Central Assistance is provided in the ratio of **90:10** (Centre: State) and for Union Territories, the assistance is **100%**.

Objective

- The objective of PKVY is to **produce agricultural products free from chemicals and pesticides** residues by adopting eco- friendly, low- cost technologies.
- Key Thrust areas of PKVY in promoting organic farming include the following:
 - ✓ Promote organic farming among rural youth/ farmers/ consumers/ traders
 - ✓ Disseminate latest technologies in organic farming
 - ✓ Utilize the services of experts from public agricultural research system in India
 - ✓ Organize a minimum of one cluster demonstration in a village

Programme implementation

- Under PKVY, farmers are provided **financial assistance of Rs 50,000 per hectare/ 3 years** is given, out of which Rs. 31,000 (61%) is provided directly through Direct Benefit Transfer (DBT) for inputs such as biofertilizers, bio-pesticides, organic manure, compost, vermi-compost, botanical extracts etc.

- The scheme promotes the **Participatory Guarantee System (PGS) For India form of organic certification** that is built on mutual trust, locally relevant and mandates the involvement of producers and consumers in the process of certification.
- PGS gives organic labels to the farms that change from conventional farms to organic farms and also help to market their produce domestically.
 - *Refer Pulse April 2021 edition for more details on PGS India programme.*

Components of the Scheme

- The scheme basically contains two components:
 1. **Modern Organic Cluster Demonstration-** These demonstrations are to promote organic farming. It includes adopting a PGS (Participatory Guarantee System) certification. It will also aid in promoting domestic markets for agriculture produce including the adoption of organic farm practices.
 2. **Model Organic Farm-** These will be the physical farms that will be used for demonstration purposes, thereby spreading technology and practices.

Why in the news?

- The Ministry of Agriculture and Farmers' Welfare conducted an awareness drive to promote the Paramparagat Krishi Vikas Yojana.

2) Pradhan Mantri Kisan Maan Dhan Yojana

About the Scheme

- Pradhan Mantri Kisan Maan Dhan Yojana is a **pension scheme** which offers a **guaranteed income to farmers in their old age**.

- Launched in 2019, it is a **Central Sector Scheme** under the **Ministry of Agriculture and Farmers' Welfare**.
- It is voluntary and contributory in nature and it entitles the beneficiary a **monthly pension of Rs 3,000 on attaining the age of 60 years**.
- **Eligibility:** The scheme is open to small and marginal farmers **owning less than two ha land in the age group of 18-40 years**.
- Farmers will have to make a monthly contribution between **Rs 55 and Rs 200**, depending on the age of entry. **The Centre will contribute the same amount that the farmer pays**.
- The pension fund will be managed by the **Life Insurance Corporation of India**.
- Farmers, who are beneficiaries of the **PM-Kisan Scheme**, will have the option to allow their contribution be debited from the benefit of that Scheme directly.
- **Note:** While PM KISAN scheme, which provides an income support of Rs.6000/- per year, is open to all farmers irrespective of land holdings, PM Kisan Maan Dhan Yojana is for farmers owning less than **two** ha land.

Why in News?

- The Parliamentary Standing Committee for Agriculture flagged the very poor response to the Pradhan Mantri Kisan Maan Dhan Yojana.
- Launched in 2019, only 21 lakh farmers have subscribed to the scheme so far. The panel urged the Agriculture Ministry to identify the reasons for low enrolment and comprehensively modify the scheme if needed.

3) Pradhan Mantri Jan Dhan Yojana

About the Scheme

- In 2014, the government launched Pradhan Mantri Jan Dhan Yojana (PMJDY) to bring about

comprehensive financial inclusion in the country.

- PMJDY envisages universal access to banking facilities with **at least one basic banking account for 'every adult', financial literacy, access to credit, insurance and pension facility**.

Features of PMJDY

- Under the scheme, a **basic savings bank deposit (BSBD) account** can be opened in any bank branch or Business Correspondent (Bank Mitra) outlet, by persons not having any other account.
- There is **no requirement to maintain any minimum balance** in PMJDY accounts.
- **Interest** is earned on the deposit in PMJDY accounts.
- **Rupay Debit card** is provided to PMJDY account holders.
- **Accident Insurance Cover** of Rs.1 lakh (enhanced to **Rs. 2 lakh** to new PMJDY accounts opened after 28.8.2018) is available with RuPay card issued to the PMJDY account holders.
- An **overdraft (OD) facility up to Rs. 10,000** to eligible account holders is available.
- PMJDY accounts are eligible for Direct Benefit Transfer (DBT), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), Atal Pension Yojana (APY), Micro Units Development & Refinance Agency Bank (MUDRA) scheme.
- As per extant RBI guidelines, a PMJDY account is treated as inoperative if there are no customer induced transactions in the account for over a period of two years.

Why in News?

- The Ministry of Finance announced that **about 55% of the total account holders under the Pradhan Mantri Jan Dhan Yojana are women**. Till

now more than 40 crore accounts have been opened under the PMJDY scheme.

- The ministry said the scheme has financially empowered women to lead a better life.

4) Rashtriya Gram Swaraj Abhiyan

Rationale of the Scheme

- **Mahatma Gandhi** envisioned **villages as mini-republics** and advocated that true democracy should begin with participation from the grass-root level by the people of every village.
- The **73rd Constitutional Amendment** mandated the **three tier Panchayati Raj Institutions (PRIs)** to function as units of local self-government and envisioned a people-led development at the grass roots level.
- Panchayati Raj System was mandated with the **twin objectives of ensuring economic development and social justice for the people living in the rural areas.**

About RGSA

- The **Union Budget 2016-17** announced the Rashtriya Gram Swaraj Abhiyan (RGSA) as a **Centrally Sponsored Scheme** for **building capabilities of Panchayati Raj Institutions for achieving Sustainable Development Goals (SDGs).**
- Key local development challenges faced by the country viz. poverty, public health, nutrition, education, gender, sanitation, drinking water, livelihood generation, etc. are in sync with SDGs and fall within the realm of Panchayats.
- The Panchayats have therefore been designated as a key player for implementation of the United Nations SDGs to be achieved by 2030.

- The scheme **extends to all States and UTs including non-Part IX areas** where Panchayats do not exist.

Focus of the scheme

- The scheme has a focus on ensuring **basic orientation training for the Elected Representatives (ERs) of Panchayats**, within six months of their election and **refresher training** within 2 years.
- RGSA will have thrust for **PRI-SHG (Self-Help Group) convergence** to ensure effective community mobilisation and greater public ownership of flagship programs of the government.
- **Use of e-governance and technology driven solutions** at Panchayat level will be increased to attain administrative efficiency, improved service delivery, and greater accountability.
- RGSA also aims at **enhancing capabilities of Panchayats to raise their own sources of revenue.**
- **Strengthening Gram Sabhas** to function effectively as the basic forum of people's participation is also a focus area of RGSA.
- It also aims at **promoting devolution of powers and responsibilities to Panchayats** according to the spirit of the Constitution and Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996.

Components of the scheme

The scheme consists of Central and State Components:

- The Central component comprises
 - National level activities viz. National Plan for Technical Assistance in collaboration with academic institutions/ institutions of excellence for various activities of Capacity Building & Training (CB&T) for PRIs,
 - Mission Mode Project (MMP) on e-Panchayat and
 - Incentivization of Panchayats.

- The State component relates to
 - Activities to be undertaken by State Governments for CB&T
 - Strengthening of Gram Sabhas in PESA areas,
 - Distance Learning Facility,
 - Support for Innovations,
 - Technical support to PRIs,
 - Other activities for strengthening of Panchayats.

Why in News?

- With rising COVID cases, the Union Territory of Jammu and Kashmir has decided to use funds under Rashtriya Gram Swaraj Abhiyan to generate awareness about COVID appropriate behaviour and Standard Operating Procedures in the rural areas.

5) Sovereign Gold Bonds Scheme

About the Scheme

- **Sovereign Gold Bonds (SGBs)** are bonds that are issued by the RBI on behalf of the Government on payment of rupees but **denominated in grams of gold.**
- The **value of these bonds is tied to the value of gold.** On redemption, the investor gets interest income and the prevailing price of gold.
- These bonds are thus different from usual Government securities (G-secs) as the redemption value at the time of maturity is not a fixed sum, but linked to the price of an underlying commodity called gold.
- **It seeks to encourage people to buy gold bonds instead of actual gold.**

Features

- The Bonds will be sold through Scheduled Commercial banks (except Small Finance Banks and Payment Banks), Stock Holding Corporation of India Limited (SHCIL), designated post offices, and recognised stock exchanges viz., National Stock

Exchange of India Limited and Bombay Stock Exchange Limited.

- The Bonds are denominated in **units of one gram of gold and multiples thereof.**
- **Minimum investment in the Bond shall be one gram** with a **maximum limit of subscription of 4 kg for individuals, 4 kg for Hindu Undivided Family (HUF) and 20 kg for trusts** and similar entities notified by the government from time to time per fiscal year.
- The Bonds will be repayable on the **expiration of eight years** from the date of issue.
- **Premature redemption** of the Bond is allowed from the **fifth year** of the date of issue on the interest payment dates.
- The investment in the Bonds will be eligible for **Statutory Liquidity Ratio (SLR)** compliance by banks.
- These bonds can also be used as **collateral** for loans.
- The interest on Gold Bonds shall be **taxable as per the provision of Income Tax Act, 1961.** The **capital gains tax** arising on redemption of SGB to an individual has been **exempted.**

Advantages and disadvantages

To the Investor

- The advantages to the investor in investing in SGB instead of gold are the following:
 - ✓ **Interest earnings** on an otherwise dead asset;
 - ✓ Ease of storage and handling gold, while preserving its advantage of earnings in terms of appreciation of its prices in future;
 - ✓ An **alternate instrument for investment;**
- The only possible disadvantage to the investor is that, while in the event of appreciation of the price of gold, the investor gains, however, in the event of a **fall in gold prices, the loss too will be borne by the investor.**

To the Economy

- The advantages to the Government and the economy are the following:
 - ✓ **Reduction in the cost of Government's borrowings**- the current borrowing cost from the domestic market is around 7-8 per cent. Thus, an interest payment below this level is a yearly saving for the Government on account of its borrowing cost. This difference can be used by the Government to cover the appreciation of gold prices payable to the investors at the time of redemption.
 - ✓ A decrease in the price of the gold will be a gain for the Government.
 - ✓ It will **reduce the demand for physical gold** to some extent and thus helps in **reducing the annual demand for import of gold**.
- The possible disadvantage to the Government will be in the event of a **substantial increase in gold prices**.
- For this, the scheme proposes the creation of a **Gold Reserve Fund** which will absorb the price fluctuations and the fund will be continuously monitored for sustainability. Further, the issuance of the SGBs will be in tranches to enable the Government to maintain its issuance within its yearly borrowing limits.

Why in the news?

- The Government of India, in consultation with the Reserve Bank of India, has decided to issue Sovereign Gold Bonds in six tranches from May 2021 to September 2021.

6) YUVA scheme

What's in the news?

- The **Ministry of Education** has launched '**Young, Upcoming and Versatile Authors**' (YUVA) scheme, a **mentorship programme to train young authors**.
- The scheme is aimed at **training 75 aspiring writers below 30 years**, who are ready to express themselves and project India and its culture and literature globally.
- A **consolidated scholarship of Rs 50,000 per month** for a period of six months per author will be paid under the mentorship scheme.
- Through this scheme, the government aims to bring reading and authorship as a preferred profession at par with other job options.
- It is also expected to impart a positive psychological push to the young minds amidst the impact of the Covid-19 pandemic on the mental health of children.

Initiatives

1) Eklavya Model Residential School

About EMRS

- The scheme of Eklavya Model Residential Schools (EMRSs) was introduced in the year 1997-98 with an objective **to provide quality middle and high-level education to Scheduled Tribe (ST) students in remote areas** in order to enable them to avail of reservation in high and professional educational courses and get jobs in government and public and private sectors.
- The schools focus not only on academic education but on the **all-round development of the students**. Each school has a capacity of 480 students, catering to students from **Class VI to XII**.
- It has been decided that by the year 2022, **every block with more than 50% ST population and at least 20,000 tribal persons**, will have an EMRS.
- EMRS are set up in States/UTs with grants under **Article 275(1)** of the Constitution of India.
- The scheme is being implemented by the **Ministry of Tribal Affairs**.

Why in the news?

- The Ministry of Tribal Affairs recently inked a Memorandum of Understanding (MOU) with Microsoft Corporation to support the digital transformation of Eklavya Model Residential Schools.
- Microsoft will make **Artificial Intelligence (AI) curriculum available to tribal students** in both English and Hindi at all EMRS schools under the Ministry to skill educators and students in next-generation technologies including Artificial Intelligence.

2) National Financial Reporting Authority

About NFRA

- The National Financial Reporting Authority (NFRA) was constituted in 2018 under the **Companies Act, 2013**.
- NFRA is an **independent regulator** overseeing the auditing profession in the country.
- It has taken over all the powers of the Institute of Chartered Accountants of India (ICAI) regarding regulation of auditors.
- NFRA functions under the aegis of the **Ministry of Corporate Affairs**.

Functions and powers of NFRA

- Recommend **accounting and auditing policies and standards** to be adopted by companies;
- **Monitor and enforce compliance** with accounting standards and auditing standards.
- NFRA has also been given powers to **investigate professional misconduct** committed by members of the ICAI for prescribed class of body corporate or persons.
- NFRA is empowered to oversee the quality of audit service and undertake investigation of **companies whose securities are listed on any stock exchange in India or abroad**.
- It can probe **unlisted public companies** having paid-up capital of no less than Rs 500 crore or annual turnover of no less than Rs 1,000 crore.

Why in the news?

- The National Financial Reporting Authority has prepared a provisional database of companies and auditors that come under its regulatory ambit to promote transparency.
- This includes approx. 6,500 companies, comprising listed

companies (around 5,300), unlisted
companies (around 1,000), and

Insurance and Banking Companies.

Environment

1) Global Methane Assessment

About Methane

- Methane (CH₄) is the simplest hydrocarbon, consisting of one carbon atom and four hydrogen atoms.
- It is produced by **both natural processes and human activities**. Major natural sources of methane include **emissions from wetlands and oceans, and from the digestive processes of termites**.
- Methane is emitted during the **production and transport of coal, natural gas, and oil**. Methane emissions also result from **livestock and other agricultural practices, land use and by the decay of organic waste in municipal solid waste landfills**.
- Globally, 50-65 percent of total CH₄ emissions come from **human activities**.
- Although the **concentration of methane in Earth's atmosphere is small** (around 1.8 parts per million), it is an **important greenhouse gas** because it is such a **potent heat absorber**.
- Methane's lifetime in the atmosphere is **much shorter** than carbon dioxide (CO₂), but CH₄ is **more efficient at trapping radiation** than CO₂ (almost 25 times more potent than CO₂).
- Methane contributes to the formation of **ground-level ozone**, a dangerous air pollutant.

Why in the news?

- The **Climate & Clean Air Coalition (CCAC)** together with the **United Nations Environment Programme** have released a report, titled "**Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions**".

Key points of the report

Rising methane emissions

- Human-caused methane emissions are increasing faster currently than at any other time since record keeping began in the 1980s.
- Carbon dioxide levels have dropped during the novel coronavirus disease (COVID-19) pandemic. However, methane in the atmosphere reached record levels last year.
- The report said this was a cause of concern as methane was an **extremely powerful greenhouse gas**. It was **responsible for about 30 per cent of warming since pre-industrial times**.
- However, cutting methane emissions can rapidly reduce the rate of warming in the near-term as the **gas breaks down quickly**.

Steps to be taken

- More than half of global methane emissions stem from human activities in three sectors: **fossil fuels** (35 percent of human-caused emissions), **landfills and wastewater** (20 percent) and **agriculture** (40 per cent). Within the agricultural sector, livestock emissions from manure and enteric fermentation constituted for roughly 32 per cent and rice cultivation 8 per cent of emissions.
- The report has asked the countries to **reduce human-caused methane emissions by 45% by 2030**. This is a cost-effective step required to achieve the **United Nations Framework Convention on Climate Change (UNFCCC) 1.5° C target**.
- It would also prevent 260,000 premature deaths, 775,000 asthma-related hospital visits annually, as well as 25 million tonnes of crop losses.

Different targets and areas for different countries

- The assessment found that the **mitigation potential varied between countries and regions**. Europe had

the greatest potential to curb methane emissions from farming, fossil fuel operations and waste management. **China's** mitigation potential was best in coal production and livestock, while **Africa's** was in livestock, followed by oil and gas.

- **India** had the greatest potential to reduce methane emissions in the **waste sector**. The waste sector could cut its methane emissions by **improving the disposal of sewage**.
- The report said the **fossil fuel industry had the greatest potential** for low-cost methane cuts. Up to 80 per cent of measures in the oil and gas industry could be implemented at negative or low cost.

Behavioural changes

- Three behavioural changes — **reducing food waste and loss, improving livestock management and adopting healthy diets** (vegetarian or with a lower meat and dairy content) — could reduce methane emissions by 65–80 million tonnes per year over the next few decades.

Related Information

About CCAC

- The Climate and Clean Air Coalition is a **voluntary global partnership** of more than 60 countries, 17 intergovernmental organizations, and 56 businesses, scientific institutions and civil society organizations **committed to catalyzing concrete, substantial action to reduce Short-Lived Climate Pollutants**, including methane, black carbon and many hydrofluorocarbons.
- **India** formally joined the Coalition in 2019.

About UNEP

- The United Nations Environment Programme (UNEP) is the leading environmental authority in the United Nations system. It promotes the coherent implementation of the

environmental dimension of sustainable development within the United Nations system.

- Headquartered in Nairobi, Kenya, it was founded as a result of the UN Conference on the Human Environment (also known as the **Stockholm Conference**) in 1972.

2) What is net-zero, and what are India's objections?

Context

- In 2021, all countries are expected to pledge extended targets under the **Paris Agreement** (*Refer Pulse January 2021 edition*). Several countries have already pledged a particular year when they will achieve net-zero emissions.

What is net-zero?

- Net-zero, which is also referred to as **carbon-neutrality**, does not mean that a country would bring down its emissions to zero. Rather, net-zero is a state in which a **country's emissions are compensated by absorption and removal of greenhouse gases from the atmosphere**.
- Absorption of the emissions can be increased by **creating more carbon sinks** such as forests, while removal of gases from the atmosphere requires **futuristic technologies** such as carbon capture and storage.
- This way, it is even possible for a country to have **negative emissions**, if the absorption and removal exceed the actual emissions. A good example is **Bhutan** which is often described as carbon-negative because it absorbs more than it emits.

Rationale for push towards global carbon neutrality

- It is being argued that **global carbon neutrality by 2050 is the only way to achieve the Paris Agreement target** of keeping the planet's temperature from rising beyond 2°C compared to pre-industrial times.

- Theoretically, a country can become carbon-neutral at its current level of emissions, or even by increasing its emissions, if it is able to absorb or remove more. From the perspective of the developed world, it is a big relief, because now the burden is shared by everyone, and does not fall only on them.

India's objections

- India is opposing the argument that all countries should adopt a net-zero target by 2050 because it is likely to be the most impacted by it. India's position is unique. Over the next two to three decades, India's emissions are likely to grow at the fastest pace in the world, as it **presses for higher growth to pull hundreds of millions of people out of poverty.**
- No amount of afforestation or reforestation would be able to compensate for the increased emissions. Most of the carbon removal technologies right now are either **unreliable or very expensive.**
- The **net-zero goal does not figure in the 2015 Paris Agreement**, the new global architecture to fight climate change. The Paris Agreement only requires every signatory to take the best climate action it can. Countries need to set **five- or ten-year climate targets** for themselves, and demonstrably show they have achieved them.
- Implementation of the Paris Agreement has begun only this year. Most of the countries have submitted targets for the 2025 or 2030 period.
- India has been arguing that instead of opening up a parallel discussion on net-zero targets outside of the Paris Agreement framework, **countries must focus on delivering on what they have already promised.** New Delhi is hoping to lead by example. It is well on its way to achieving its targets

under the Paris Agreement, and looks likely to overachieve them.

- Several studies have shown that **India is the only G-20 country** whose climate actions are compliant to the Paris Agreement goal of keeping global temperatures from rising beyond 2°C. India also announced a target of achieving 175 GW of renewable energy capacity by 2022, which was subsequently enhanced to **450 GW by 2030.**
- New Delhi also repeatedly points to the fact that the **developed nations have never delivered on their past promises and commitments.** No major country achieved the emission-cut targets assigned to them under the **Kyoto Protocol**, the climate regime preceding the Paris Agreement.
- India has been arguing that the 2050 carbon-neutrality promise might meet a similar fate, although some countries are now binding themselves in law. It has been insisting that the developed countries should, instead, take more ambitious climate actions now, to compensate for the unfulfilled earlier promises.
- At the same time, India has been saying that it does not rule out the possibility of achieving carbon-neutrality by 2050 or 2060. Just that, it does not want to make an international commitment so much in advance.

Accelerating India's efforts

- However, one must recognise that **India is one of the most vulnerable countries to the impacts of climate change** — with its vast population that is dependent on climate-sensitive sectors for livelihood.
- There are several studies that have enumerated low carbon development pathways in multiple sectors for India. The **power sector's transformation towards a renewable energy future and aggressive efficiency improvements** across the energy

demand and supply sides need to be further accelerated to meet the ambitious targets.

- In the **transport sector**, the focus is on electrification and enhanced use of biofuels. More efforts are required to **create carbon sinks** through additional forest and tree cover, with greater involvement of multiple stakeholders and the citizens.
- **Greater uptake of nature-based solutions** can provide a range of environmental, social and economic benefits and stem the accelerating biodiversity loss besides contributing to climate change mitigation and adaptation.
- Additionally, **further research and development and innovations** in battery storage, hydrogen technology, cooling technology, second and third-generation biofuels, among others, are likely to shape the slope of the decarbonisation roadmap, not only in India but other countries as well.

Way Forward

- While India has already initiated low carbon actions in various sectors, the decarbonisation plans need to be continuously improved and made more ambitious in the coming years while keeping a close tab on the implementation aspects.
- However, the **developed nations** have to play their role in providing the requisite financial and technical support to India and other developing counterparts. They also have to **lead by example and those having the means should strive for an accelerated target for net zero instead of looking for a common mid-century timeline for all.**
- **International cooperation in letter and spirit** is the only way to achieve the goals envisaged under the Paris Agreement.

3) Cheetah translocation

Asiatic Cheetah

- Asiatic cheetah is classified as a **“critically endangered”** species by the IUCN Red List, and is believed to survive only in **Iran**.
- Asiatic cheetahs were once widespread across India but were eradicated in the country as they were hunted for sport.
- In 1952, Asiatic cheetah was **declared extinct** from India, after decades of human intervention, hunting and habitat degradation.
- Asiatic cheetahs are almost identical in appearance to their better known African cousins. However, there are subtle differences.
- The Asiatic cheetah is slightly smaller and paler than its African cousin.



African cheetah

Asiatic cheetah

African Cheetah

- The African cheetah is spread out across Africa from Northwest Africa, East Africa, and Southern Africa. With a bigger territory, the African cheetahs have higher populations compared to Asiatic cheetahs.
- They are categorised as **Vulnerable** in the IUCN Red List.

Why in News?

- Madhya Pradesh's Kuno National Park is all set to receive 8-10 African Cheetahs as part of India's first inter-country big cat relocation project. The cheetahs will be donated by Endangered Wildlife Trust (EWT) of South Africa.

- The translocation of African Cheetah is a part of Government of India to reintroduce the **fastest land animal** in India after extinction of the Asiatic cheetah in the 1950s.
- The cheetahs will be introduced in November 2021.

Why do conservationists want to reintroduce cheetahs?

- A section of conservationists has long advocated the reintroduction of the species in the country.
- They argue that introductions of large carnivores have increasingly been recognised as a **strategy to conserve threatened species and restore ecosystem functions**.
- The cheetah is the only large carnivore that has been extirpated, mainly by over-hunting in India in historical times. India now has the **economic ability** to consider restoring its lost natural heritage for ethical as well as ecological reasons.

About Kuno National Park

- It is located in **Madhya Pradesh**. Earlier it was a wildlife sanctuary but in 2018 it was given national park status.
- The **Kuno River** flows through the national park.
- Bio-Geographically this area falls under the **Kathiawar-Gir dry deciduous forest ecoregion** and the forest types found in this area include the Northern tropical dry deciduous forest, Southern tropical dry deciduous forest, Dry Savannah forest & grassland and Tropical riverine forest.
- The main predators in the protected area are Indian leopard, jungle cat, sloth bear, dhole, Indian wolf, golden jackal, striped hyena and Bengal fox.
- In the 1990s, it was selected as a possible site to implement the **Asiatic Lion Reintroduction Project**, which aimed at establishing a second lion population in India, apart from **Gir National Park in Gujarat**.

4) Banni grasslands

About Banni Grasslands

- Banni region comprises around 3000 sq.km area of Kutch district of **Gujarat**. It accounts for almost 45 per cent of the pastures in Gujarat.
- It is home to one of the prominent pastoralist communities, the **Maldharis**.
- The Banni region emerged from the sea as a result of tectonic activities, received soils from the rivers flown from Bhuj mainland and ended in Greater Rann of Kutch.
- Soils deposited by the rivers and the wind, made the land of Banni richer enough that it could generate diverse grass species, mostly palatable with saline grass species.
- Two ecosystems, **wetlands and grasslands**, are juxtaposed in Banni. The area is rich in flora and fauna, with 192 species of plants, 262 species of birds, several species of mammals, reptiles and amphibians.
- There have been numerous natural wetlands in Banni and the larger one is known as **Chhari – Dhandh**, a saucer shaped wetland which was recently declared as Conservation Reserve.

Why in the news?

- The **National Green Tribunal (NGT)** ordered all encroachments to be removed from Gujarat's Banni grasslands within six months.
- The NGT's order has brought relief to the Maldharis nomadic pastoralist community, which depends on the Banni grassland to graze their livestock. Maldharis breed **Banni Buffaloes**, a species endemic to the region. The buffaloes are adaptive to Kutch's hot weather conditions and survive by feeding on the grassland.
- The court also said the **Maldharis will continue to hold the right to conserve the community forests in the area**, granted to them as per the

provisions in Section 3 of **Forest Rights Act, 2006**.

- NGT highlighted that the lack of coordination between the forest department and the revenue department led to the problem of encroachment.

Related Information

About NGT

- It is a **statutory body** established in 2010 under the National Green Tribunal Act 2010.
- It is a specialized body equipped with the necessary expertise to **handle environmental disputes** involving multi-disciplinary issues.
- The Tribunal shall not be bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be **guided by principles of natural justice**.
- The Tribunal is vested with the **powers of a civil court** under the Code of Civil Procedure for discharging its functions but it can make its own rules.
- It provides speedy environmental justice and helps reduce the burden of litigation in the higher courts.

What is the Tribunal's composition?

- The Tribunal has a presence in **five zones**- North, Central, East, South and West. The Principal Bench is situated in the North Zone, headquartered in **Delhi**.
- The Central zone bench is situated in Bhopal, East zone in Kolkata, South zone in Chennai and West zone in Pune.
- The Tribunal is headed by the **Chairperson** who sits in the Principal Bench and has **at least ten but not more than twenty judicial members** and **at least ten but not more than twenty expert members**.

Tribunal's Jurisdiction

- The NGT deals with civil cases under the seven laws related to the environment, these include

1. The Water (Prevention and Control of Pollution) Act, 1974
2. The Water (Prevention and Control of Pollution) Cess Act, 1977
3. The Forest (Conservation) Act, 1980
4. The Air (Prevention and Control of Pollution) Act, 1981
5. The Environment (Protection) Act, 1986
6. The Public Liability Insurance Act, 1991 and
7. The Biological Diversity Act, 2002

- Two important acts - **Wildlife (Protection) Act, 1972** and **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006** have been kept out of NGT's jurisdiction.
- The Tribunal has jurisdiction **over all civil cases involving a substantial question relating to the environment**. Additionally, any person aggrieved by an order/direction of any of the Appellate Authorities under the legislations mentioned above can also challenge them before the National Green Tribunal.

Are decisions of the Court binding?

- **Yes**, decisions of the Tribunal are binding. The Tribunal's orders are enforceable as the powers vested are the same as in a civil court under the Code of Civil Procedure, 1908.

Are decisions of the Tribunal final?

- The Tribunal has powers to review its own decisions. If this fails, the decision can be challenged before the **Supreme Court within ninety days**.

About Forest Rights Act

- The **Scheduled Tribes and Other Forest Dwellers (Recognition of Forest Rights) Act, 2006** is a people-centric law for forests, which **recognises the rights of forest-**

dwelling communities to use and manage forest resources.

- With more than 150 million forest dwellers, the scope of FRA is immense to protect their livelihoods, and engage them in sustainable forest management.

Rights under FRA

- **Title rights** – Ownership to land that is being farmed by tribals or forest dwellers subject to a maximum of **4 hectares**; ownership is only for land that is actually being cultivated by the concerned family, meaning that no new lands are granted.
- **Use rights** – to minor forest produce (also including ownership), to grazing areas, to pastoralist routes, etc.
- **Relief and development rights** – to rehabilitation in case of illegal eviction or forced displacement; and basic amenities, subject to restrictions for forest protection.
- **Forest management rights** – to protect forests and wildlife.

Eligibility

- To qualify as **Other Traditional Forest Dweller (OTFD)** and be eligible for recognition of rights under FRA, two conditions need to be fulfilled:
 - Primarily resided in forest or forests land for three generations (75 years) prior to 13-12-2005, and
 - Depend on the forest or forests land for bonafide livelihood needs.
- To qualify as a **Forest Dwelling Scheduled Tribe (FDST)** and be eligible for recognition of rights under FRA, three conditions must be satisfied by the applicant/s, who could be **“members or community”**:
 - Must be a Scheduled Tribe in the area where the right is claimed; and
 - Primarily resided in forest or forests land prior to 13-12-2005; and

➤ Depend on the forest or forests land for bonafide livelihood needs.

- The FRA provides that a forest right conferred under the Act shall be **heritable but not alienable or transferable**, and shall be registered jointly in the name of both the spouses in case of married persons and in the name of the single head in the case of a household headed by a single person.

Process of recognition of rights

- The Act provides that the **gram sabha**, or village assembly, will initially pass a resolution recommending whose rights to which resources should be recognised.
- This resolution is then screened and approved at the **level of the sub-division** (or taluka) and subsequently at the **district level**.
- The **screening committees** consist of three government officials (Forest, Revenue and Tribal Welfare departments) and three elected members of the local body at that level. These committees also hear appeals.

5) The many benefits of an eco tax

CONTEXT

- In present times the COVID-19 pandemic has forced countries all over the world to rethink climate change and the need for preservation of the environment.
- The government have been forced to bear dual burden due to pandemic:
 - **Increased fiscal deficit**, due to large decline in tax revenue
 - **Increased expenditure**, to sustain health financing amidst this health crisis

NEED FOR ALTERNATE SOURCE OF HEALTH FINANCING

- According to the World Health Organization (WHO) data on the percentage of the total population:

- **17.33% of the population in India** made out-of-pocket payments on health **exceeding 10% of the total household expenditure or income in 2011**. This percentage was higher in rural areas compared to urban areas.
- The **global average was 12.67%**. This means that **12.67% of the population spent more than 10% of their income (out of their pocket) on health**.
- Similarly, **3.9% of the population in India made** more than 25% of out-of-pocket payments on health, with 4.34% in the rural areas.
- According to the **Economic Survey of India 2020-21, India has one of the highest levels of Out-of-pocket (OOP) expenditures in the world** contributing directly to the high incidence of catastrophic expenditures and poverty.
- The Survey recommended that an **increase in public spending from 1 per cent to 2.5-3 per cent of GDP** – envisaged in the **National Health Policy 2017** – can **decrease the OOP expenditures from 65 per cent currently to 30 per cent** of overall healthcare spend.
- Hence, this is where the importance of alternate sources of health financing in India needs to be stressed.

FIXING THE ECO RATE CAN BE AN OPTION

- Environment regulation, may take several forms:

Command and control approach

- This is an approach wherein the government places strict regulations on pollutant emissions and there are fines on non-compliance.

Economic planning/urban planning approach

- This approach involves inculcating sustainable management practices in policy making.

Environmental tax (eco tax)/subsidies approach

- This approach involves taxing the polluters to disincentivize the use of high carbon footprint processes or products and also providing subsidies to encourage the adoption of green technology.

Cap and trade approach

- This approach involves the government setting limits for emissions and the establishment of carbon trade markets.
- India currently focuses majorly on the command-and-control approach in tackling pollution.

ECO TAX

- Ideally, the eco tax rate ought to be **equal to the marginal social cost arising from the negative externalities associated with the production, consumption or disposal of goods and services**.
 - *Externalities refers to situations when the effect of production or consumption of goods and services imposes costs or benefits on others which are not reflected in the prices charged for the goods and services being provided.*
- This requires an evaluation of the damage to the environment based on scientific assessments, which would include the adverse impacts on the health of people, climate change, etc.
- Environmental tax reforms generally **involve three complementary activities**:
 - ✓ Eliminating existing subsidies and taxes that have a harmful impact on the environment;
 - ✓ Restructuring existing taxes in an environmentally supportive manner; and
 - ✓ Initiating new environmental taxes.

SCOPE OF ECO TAX IN INDIA

- In India, **eco taxes can target three main areas**:

1. **one, differential taxation on vehicles** in the transport sector purely oriented towards fuel efficiency and GPS-based congestion charges;
 2. **two, in the energy sector** by taxing fuels which feed into energy generation;
 3. **three, waste generation** and use of natural resources.
- Thus, tax revenues can be generated through eco taxes and can be used to a greater extent for the provision of environmental public goods and addressing environmental health issues.

BENEFITS OF ECO TAX

- The implementation of an environmental tax in India will have three broad benefits: **fiscal, environmental and poverty reduction.**
- Environmental tax reforms can **mobilise revenues to finance basic public services** when raising revenue through other sources proves to be difficult or burdensome.
- Revenue from environmental tax reforms can also be used to **reduce other distorting taxes.**
- Further, it can help **internalise the externalities**, and the said revenue can finance research and the development of new technologies.

NEGLECTIBLE IMPACT ON THE GDP

- Environmental regulations may have significant costs on the private sector in the form of slow productivity growth and high cost of compliance.
- This can result in the possible increase in the prices of goods and services.
- However, the European experience shows that most of the taxes also generate substantial revenue and there is **no evidence on green taxes with sustainable development goals leading to a 'no growth' economy.**

- Instead, **most countries' experiences suggest a negligible impact on the GDP.**
- Hence, this is the right time for India to adopt environmental fiscal reforms as they will reduce environmental pollution and generate resources for financing the health sector.

Way Forward

- It is the right time for India to **adopt environmental fiscal reforms** as it will not only help reduce environmental pollution but also generate resources for financing the health sector.
- The architecture of the **eco tax framework should be credible, transparent and predictable.**
- The eco tax rate should be **commensurate with the marginal social cost arising from the negative externalities** associated with the production, consumption or disposal of goods and services. This should consider both short and long term impacts both on humans and other living beings.
- The environmental taxes must be integrated with the Goods and Services Tax framework.

6) Initiative to conserve sacred groves

What are sacred groves?

- Sacred groves comprise patches of forests or natural vegetation – from a few trees to forests of several acres – that are **usually dedicated to local folk deities.**
- These spaces are **protected by local communities** because of their religious beliefs and traditional rituals that run through several generations.
- A strong concentration of these groves is found in **Himachal Pradesh and Kerala.**

Significance

- **Conservation of Biodiversity:** The sacred groves are important repositories of floral and faunal diversity that have been conserved by local communities in a sustainable manner. They are often the last refuge of endemic species in the geographical region.
- **Recharge of aquifers:** The groves are often associated with ponds, streams or springs, which help meet the water requirements of the local people. The vegetative cover also helps in recharging the aquifers.
- **Soil conservation:** The vegetation cover of the sacred groves improves the soil stability of the area and also prevents soil erosion.
- **Source of local medicine:** The local tribal population rely upon some plants in the sacred groves to heal themselves.
- **Carbon sink:** The groves act as an effective carbon sink and are also a self-sustainable ecosystem, which reinforce scientific reasons for conservation.

Threats

- Increasingly, the sacred groves are facing threats from the biotic pressure due to **weakening of traditional taboos and belief systems and invasion of exotic weeds.**
- **Indiscriminate grazing** in the last few decades, **uncontrolled felling of trees** for firewood and **urbanization** have also contributed to the dwindling of groves.

Why in the news?

- A Puducherry based non-profit, Indigenous Biodiversity Conservation has started an initiative called 'Uyir Moochu' towards eco-restoration of the sacred grooves around Puducherry.
- As a part of the initiative, the organisation is collecting the seeds of the vulnerable plants of sacred groves and raising them in the nursery.

- The local communities are made aware about the sacred groves and their importance, further the nursery grown plants are distributed among the communities. Their main objective is to strengthen the bond that the local communities shared with the sacred groves.

7) Declining number of pollinators

About Pollination

- Pollination is the **act of transferring pollens** from the male sex organ of the flower, the anther, to the female organ, the stigma.
- Plants can be:
 - **Self-pollinating** - the plant can fertilize itself; or,
 - **Cross-pollinating** - the plant needs a vector (a pollinator or the wind) to get the pollen to another flower of the same species.
- The **vectors that help transfer** of pollen like insects, birds, animals, and in some cases, even wind and water are the **pollinators or pollinating agents. They are of two types**
 - **Invertebrate pollinators:** Include bees, moths, flies, wasps, beetles and butterflies.
 - **Vertebrate pollinators:** Include monkeys, rodents, lemurs, tree squirrels and birds.
- There are an estimated 120,000-200,000 invertebrate and vertebrate species that act as pollinators.

Significance of Pollinators

- More than 180,000 plant species, including 1,200 crop varieties, across the world depend on pollinators to reproduce.
- They are crucial for maintaining **plant biodiversity and boosting crop production.**

- Pollinators consequently play a key role in regulating ecosystem services supporting food production, habitats and natural resources.

Why in the news?

- Around 40% of invertebrate pollinator species, particularly bees and butterflies, face extinction across the world according to the **Food and Agriculture Organisation (FAO)**.
- In India, wild honeybees of the genus *Apis*, including the Asian bee and the little bee, have declined steadily for the past 30 years.
- Around 16.5% of vertebrate pollinators are threatened with extinction.
- Of these, 45 species of bats, 36 species of non-flying mammals, 26 species of hummingbirds, seven species of sunbirds and 70 species of passerine birds face extinction.

Causes for decline

- There are several causes for the decline in the number of pollinators. Most of them are the result of an increase in human activities:
 - Land-use change and fragmentation
 - Changes in agricultural practices including use of chemical pesticides, fungicides and insecticides
 - Change in the cropping pattern and crops like the cultivation of Genetically Modified Organisms (GMOs) and mono-cropping

- High environmental pollution from heavy metals and nitrogen
- Growth of invasive alien species.

Way forward

- **Strong conservation measures for endangered pollinators** have to be taken to arrest pollinator decline.
- Conservation measures for bees, for instance, have to be **implemented as widely as possible** and there is a need to protect the pollinators by **enacting laws** that forbid all activities that might affect them.
 - Eg: Poland has enacted a law in 1990 protecting some 443 species of insects including the native bees.
- Conservation moves should also include **careful studies of the effects of pesticides** on pollinators and on their habitat and those that are found dangerous for pollinators.
- **Migratory routes and nectar corridors** of the pollinators should be protected.
- Authorities should carefully assess the threat from any development project that has been sanctioned.
- **Nature reserves designed specially with plant-pollinator relationships** in mind can be an important step towards arresting pollinator decline.
- More **research on pollinators** and the decline in their populations should be encouraged by governments worldwide.

Agriculture

1) Illegal cultivation of HTBt cotton

What are GM crops?

- A genetically modified organism (GMO) or living modified organism (LMO) is any organism **whose genetic material has been modified** using laboratory-based transfer of genetic material from another organism.
- Development of **GM crops** starts with the **identification of genes** of interest and isolating it from the host organism. The **gene is incorporated into the DNA of crop plants** using laboratory based gene gun or agrobacterium approaches.
- GM technology **involves direct manipulation of DNA** instead of using controlled pollination to alter the desired characteristics. Genetic modification is one the approaches to crop improvement, all of which aim at adding desirable genes and removing undesirable ones to produce better varieties.

Benefits of GM crops

- Better Pest and Disease Resistance;
- Greater tolerance of stress, e.g. drought, low temperatures, salinity etc;
- High yield and faster growth, so that harvesting can be done with shorter growing seasons;
- Can be made more nutritious;
- Can be made resistant to specific herbicides.

Drawbacks with GM crops

- Unpredictable side effects;
- May cause ecological damage;
- Poor farmers may not be able buy them;
- Intellectual property rights issues.

GM Crops regulation

- GM crops are permitted for environmental release and cultivation only after undergoing elaborate food

and environmental safety assessment under the **Environment Protection Act, 1986**.

- In India, GM seeds require approval of the **Genetic Engineering Approval Committee (GEAC)**, a **statutory body** under the Ministry of Environment, Forest and Climate Change (**MoEFCC**).
- GEAC approval does not mean commercial cultivation, the final decision to allow commercial cultivation is taken by the **MoEFCC**.
- So far, **commercial release is granted only for Bt cotton. GM Mustard and Bt Brinjal have been recommended by GEAC** for consideration for environmental release and cultivation. But the commercial release has been **stalled by the MoEFCC** because of concerns related to effects of GM foods.

What is Bt cotton?

- Bt cotton, a non-food crop, is the **only transgenic crop** (a transgenic crop is a genetically modified organism) that has been **approved by the Centre for commercial cultivation in India**. Now it's being grown by Indian farmers on around **11 million hectares**.
- The **first two generations of Bt** have seen the introduction of 'Cry1Ab' and 'Cry2Bc' genes from the soil bacterium, **Bacillus thuringiensis (Bt)**, into the cotton seed. This makes the crop resistant to the **attack of pink bollworm**.

Why in the News?

- The illegal cultivation of herbicide tolerant (HT) Bt cotton has seen a huge jump this year.
- Farmers are opting for HTBt cotton since there is a shortage of the labour needed to do at least two rounds of weeding for Bt cotton. With HTBt, farmers can simply do one round of glyphosate spraying with no need for

weeding. It also saves ₹7,000 to ₹8,000 per acre for farmers.

- However, farmers are at risk with such illegal cotton seed sale as there is no accountability of the quality of seed, it pollutes the environment, the industry is losing legitimate seed sale and the government also loses revenue in terms of tax collection.

How is HtBt different from Bt cotton?

- The **third generation**, i.e. **herbicide tolerant Bt (HTBt)** cotton variety saw the addition of 'Cp4-Epsps' gene from another soil bacterium, **Agrobacterium tumefaciens**, which produces a modified protein that **allows the plant to withstand herbicide glyphosate**.
- The HTBt cotton variant adds another layer of modification, making the plant resistant to the herbicide glyphosate, **but has not been approved by regulators**.

Problems with HTBt Cotton

- **Fears** include glyphosate having a **carcinogenic effect**, as well as the unchecked spread of herbicide resistance to nearby plants through pollination, creating a variety of **superweeds**.
- **Herbicide-resistant weeds** often referred to as "**superweeds**" are nuisance plants that have developed **resistance** to one or more herbicides.

What law says about unapproved GM crops?

- Legally, sale, storage, transportation and usage of unapproved GM seeds are a punishable offence under the Rules of **Environmental Protection Act 1989**.
- Also, sale of unapproved seeds can attract action under the **Seed Act of 1966** and the **Cotton Act of 1957**.
- The Environmental Protection Act provides for a jail term of five years and a fine of Rs 1 lakh for violation of its provisions, and cases can be filed under the other two Acts.

Organisations

1) Asian Development Bank

About ADB

- The Asian Development Bank (ADB) was founded in 1966 with the primary mission of fostering growth and cooperation among countries in the Asia-Pacific Region.
- It is headquartered in **Manila**, Philippines.
- At present, ADB comprises 68 members (including **India**)- of which 49 are from within Asia and the Pacific and 19 outside.
- The ADB was **modeled closely on the World Bank**, and has a similar weighted voting system where votes are distributed in proportion with members' capital subscriptions.
- The two largest shareholders of the ADB are the **US and Japan**.
- ADB is an official United Nations Observer.

Objectives

- ADB envisions a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty in the region. Despite the region's many successes, it remains home to a large share of the world's poor: 263 million living on less than \$1.90 a day and 1.1 billion on less than \$3.20 a day.
- ADB assists its members, and partners, by providing loans, technical assistance, grants, and equity investments to promote social and economic development.

Why in News?

- The Asian Development Bank's total annual funding to India stood at \$4.27 billion last year spurred by Covid-19 support. This was the **highest annual lending commitment** to the country since the bank's lending operations began in 1986.
- The total amount included \$3.92 billion in sovereign loans for 13

projects, including \$1.8 billion as pandemic-related support, and a \$356 million commitment through its non-sovereign operations.

- As part of its pandemic support to India, ADB provided emergency assistance to contain the virus and establish social protection measures for relief to poor and vulnerable groups.
- Apart from Covid-19 support the multilateral lender also expanded its funding of India's infrastructure development through assistance to energy, transport, urban development, and public sector management.

2) UNHCR

About

- The Office of the United Nations High Commissioner for Refugees (UNHCR) was established in **1950** by the **United Nations General Assembly**.
- The agency is mandated to lead and coordinate international action to protect refugees and resolve refugee problems worldwide. Its primary purpose is to **safeguard the rights and well-being of refugees**.
- It strives to ensure that everyone can exercise the right to seek asylum and find safe refuge in another State, with the option to return home voluntarily, integrate locally or to resettle in a third country. It also has a mandate to help stateless people.

Legal Provisions

- The **1951 Convention relating to the Status of Refugees** (commonly known as the **Refugee Convention**) and its **1967 Protocol** are the key legal documents that form the basis of UNHCR's work.
- With **149 State parties** to either or both, they define the term 'refugee' and outline the rights of refugees, as well as

the legal obligations of States to protect them.

- The core principle is **non-refoulement**, which asserts that a refugee should not be returned to a country where they face serious threats to their life or freedom. This is now considered a rule of customary international law.
- **UNHCR serves as the 'guardian' of the 1951 Convention and its 1967 Protocol.**
- **India** has not been a signatory of the 1951 Refugee Convention or the 1967 Protocol.

Why in News?

- The High Court of Manipur has allowed seven Myanmar nationals, who entered India secretly following the February military coup, to travel to New Delhi to seek protection from the United Nations High Commissioner for Refugees.
- Though **India is not a party to the UN Refugee Conventions**, the court observed that the country is a party to the **Universal Declaration of Human Rights of 1948** and the **International Covenant on Civil and Political Rights of 1966**.
- The court also noted that the far-reaching and myriad protection afforded by **Article 21** of our Constitution, as interpreted and adumbrated by our Supreme Court time and again, would indubitably encompass the **right of non-refoulement**.

Universal Declaration of Human Rights, 1948

- The Universal Declaration of Human Rights is a historic document which outlined the rights and freedoms everyone is entitled to. It was the **first international agreement** on the basic principles of human rights.
- The Declaration was proclaimed by the **United Nations General Assembly** in Paris in 1948 as a common standard of

achievement for all people and all nations.

- It sets out fundamental human rights to be universally protected. The UDHR is widely recognized as having inspired, and paved the way for, the adoption of more than seventy human rights treaties, applied today on a permanent basis at global and regional levels.
- Nearly every state in the world has accepted the Declaration (including **India**).

About ICCPR

- The International Covenant on Civil and Political Rights (ICCPR) is a multilateral treaty adopted by the **United Nations General Assembly** in 1966, and it came into force in 1976.
- The ICCPR, together with the Universal Declaration of Human Rights and the International Covenant on Economic Social and Cultural Rights, are considered the **International Bill of Human Rights**.
- ICCPR commits its parties to respect the civil and political rights of individuals, including the right to life, freedom of religion, freedom of speech, freedom of assembly, electoral rights and rights to due process and a fair trial.
- At present, the Covenant has 173 parties (including **India**).

3) Arctic Council

About the Council

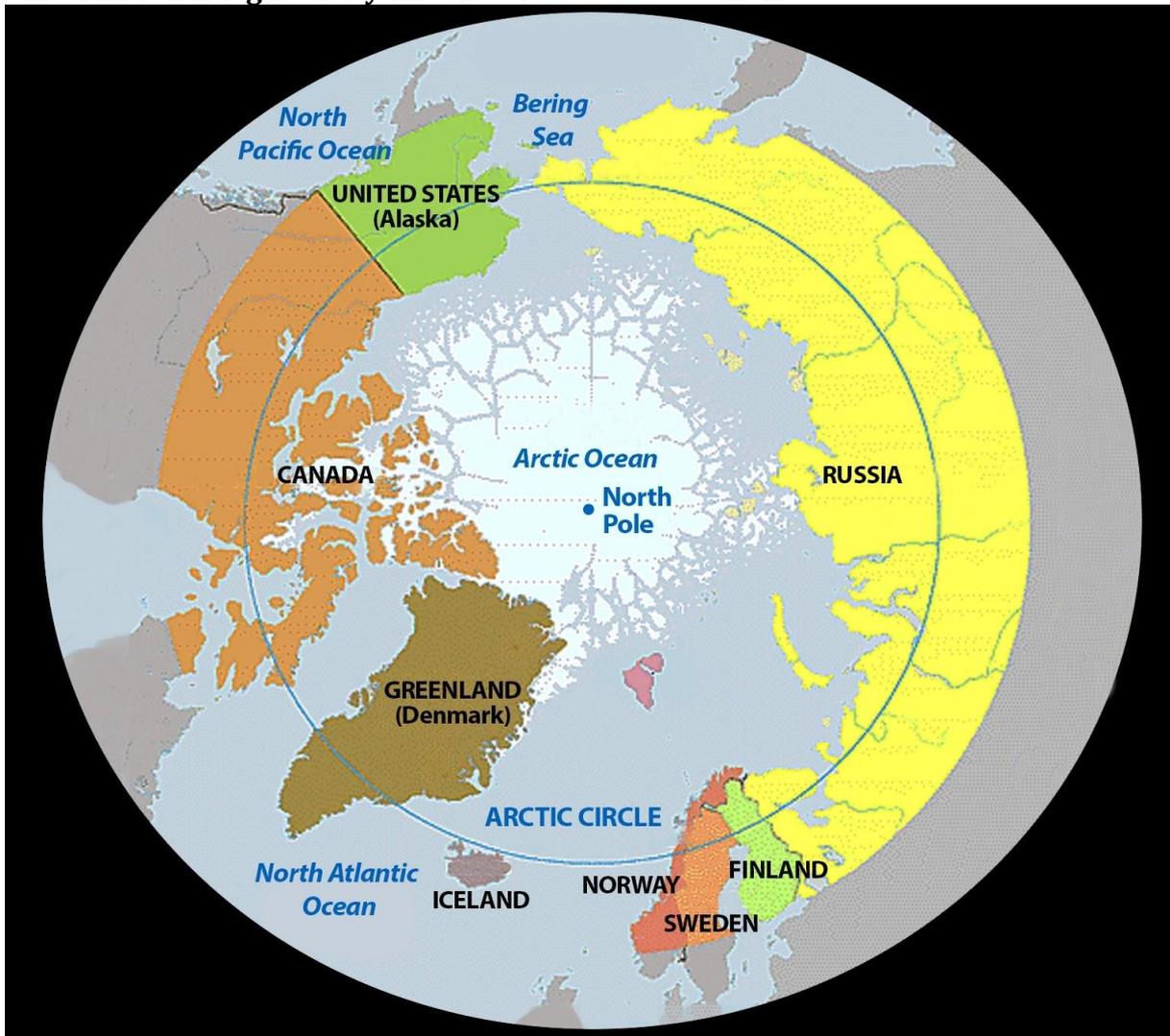
- The Arctic Council is the **leading intergovernmental forum** promoting cooperation, coordination and interaction among the Arctic States, Arctic Indigenous peoples and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic. It was formally established in **1996**.
- The Council was established by the **eight Arctic States** — the countries

whose territories fall in the Arctic region — through the **Ottawa Declaration** of 1996. The eight Arctic States — **Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States** — are the only members of the Arctic Council.

- Besides them, **six organisations** representing the indigenous people of the Arctic region have been granted the **status of permanent participants**. All decision-making happens through **consensus** between the eight members, and in **consultation** with the permanent participants.
- The Council is **not a treaty-based international legal entity** like the UN

bodies or trade, military or regional groupings like WTO, NATO or ASEAN. It is only an **intergovernmental 'forum'** to promote cooperation in regulating the activities in the Arctic region. It is much more informal grouping.

- Through six working groups, each dealing with a specific subject, the Arctic Council seeks to evolve a consensus on the activities that can be carried out in the Arctic region in keeping with the overall objective of conserving the pristine environment, biodiversity, and the interests and well-being of the local populations.
- **India** is an **observer** of the Arctic Council.



India's involvement in the Arctic

- India is one of the very few countries to set up a **permanent station** in the

Arctic for the purposes of scientific research. The polar regions offer some unique opportunities to carry out research related to atmospheric and climate sciences that cannot be done anywhere else.

- The **Himadri research station**, located in Ny Alesund, Svalbard in Norway, about 1200 km south of the North Pole, was started in 2008. The Goa-based **National Centre for Antarctic and Ocean Research (NCOAR)** is the nodal organisation coordinating the research activities at this station.
- The station has been used to carry out a variety of biological, glaciological and atmospheric and climate sciences research projects in the last one decade, with over 200 scientists from a number of institutions, universities and laboratories having accessed the facilities at the station.
- Himadri came on the back of India's three-decade experience of carrying out scientific research in the polar regions of Antarctica which began in 1981. India's first permanent station in Antarctica (**Dakshin Gangotri**) was set up way back in 1983. In 2010, Indian scientists undertook a scientific expedition to the South Pole as well. India is now among the very few countries which have multiple research stations in the Antarctic.

Commercial and strategic interests

- The Arctic region is **very rich in some minerals, and oil and gas**. With some parts of the Arctic melting due to global warming, the region also opens up the **possibility of new shipping routes** that can reduce existing distances. Countries which already have ongoing activities in the Arctic hope to have a stake in the **commercial exploitation of natural resources** present in the region.
- The Arctic Council **does not prohibit the commercial exploitation of**

resources in the Arctic. It only seeks to **ensure that it is done in a sustainable manner** without harming the interests of local populations and in conformity with the local environment.

Why in News?

- The Russian Federation has assumed the rotating chairmanship of the Arctic Council recently.
- The Chairmanship of the Arctic Council rotates every two years among the Arctic States. The Russian Federation chairs from 2021 to 2023.

4) Shanghai Cooperation Organisation

About SCO

- Shanghai Cooperation Organisation (SCO) is a permanent intergovernmental international organisation established in 2001.
- It's a Eurasian **political, economic and military** organisation aiming to maintain peace, security and stability in the region.
- Prior to the creation of SCO in 2001, **Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan** were members of the **Shanghai Five**.
- Following the accession of **Uzbekistan** to the organisation in 2001, the Shanghai Five was renamed the SCO.
- There are **eight member states** in the SCO at present. **India and Pakistan** became members in 2017.
- The **SCO Secretariat**, based in Beijing, is the main permanent executive body of the SCO.
- The organisation has **two permanent bodies** —
 - the **SCO Secretariat** based in Beijing and
 - the Executive Committee of the **Regional Anti-Terrorist Structure (RATS)** based in Tashkent.

RATS serves to promote cooperation of member states against the three evils of terrorism, separatism and extremism.

Objectives of the SCO

- To strengthen mutual trust among the neighbouring member states.
- To promote effective cooperation in various fields like economy, trade, politics, culture and research and technology.
- To ensure peace, prosperity, security and stability in the region, and
- To establish a democratic, fair and rational international eco-political order.

Why in the news?

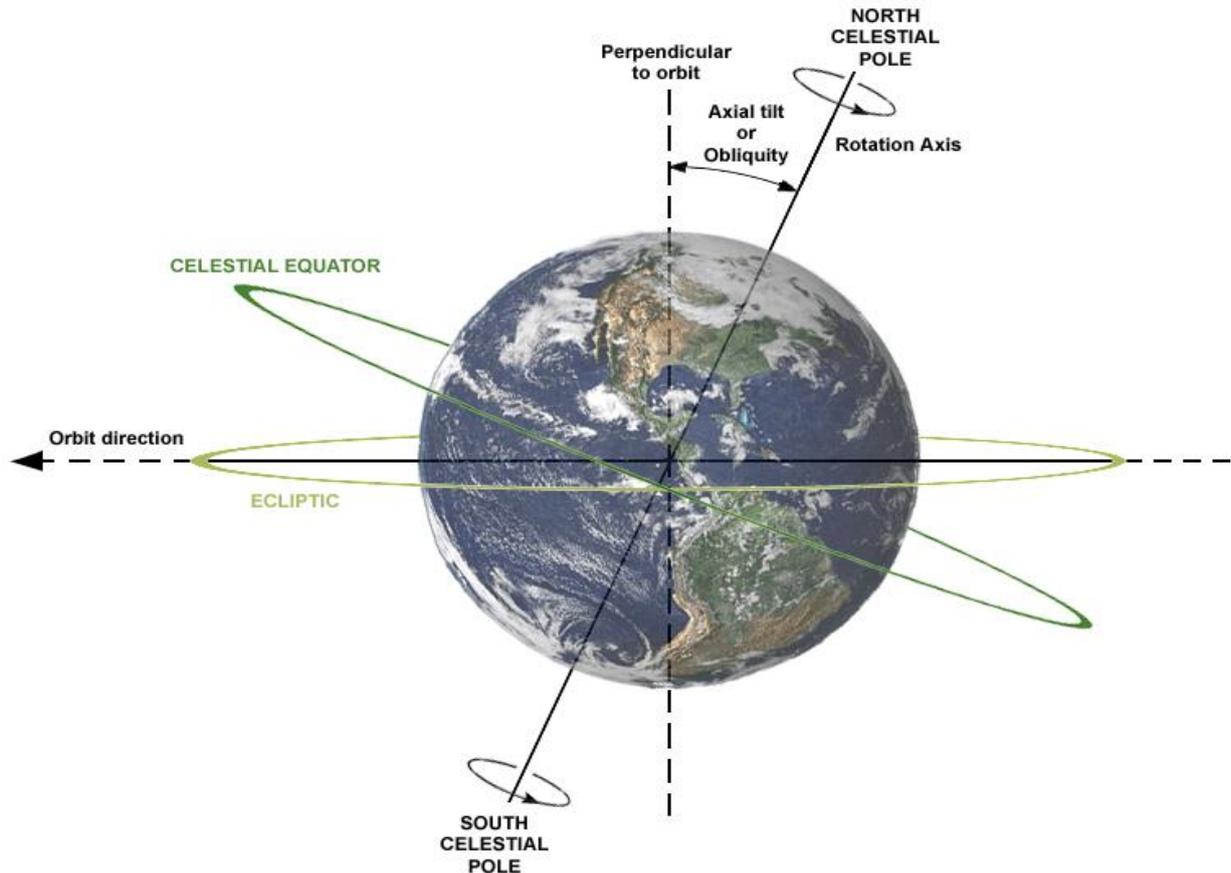
- The Union Cabinet, chaired by Prime Minister Narendra Modi, gave its ex-post facto approval for the signing and ratification of an **agreement on**

“Cooperation in the field of Mass Media” between all the Member States of Shanghai Cooperation Organisation.

- The agreement, which was signed in June 2019, **promotes equal and mutually beneficial cooperation** among associations in the field of Mass Media.
- The main areas of cooperation in the agreement are creation of favorable conditions for wide and mutual distribution of information through mass media in order to further **deepen the knowledge about the lives of the peoples** of their states.
- It will assist in **broadcasting of television and radio programmes** and those, distributed legally within the territory of the state.

Science and Technology

1) A shift in Earth's axis



Earth's Axis

- Earth's Axis is the **line along which it spins around itself** as it revolves around the Sun.
- Earth's axial **tilt** (also known as the **obliquity of the ecliptic**) is about **23.5 degrees**.
- **Due to this axial tilt**, the sun shines on different latitudes at different angles throughout the year. And this is why we have **different seasons**. The points on which the axis intersects the planet's surface are the geographical north and south poles.

Are these poles fixed?

- The axis moves due to changes in how the Earth's mass is distributed around the planet and hence the location of poles is not fixed. Thus, the poles move when the axis moves, and this movement is called "polar motion".

Why in News?

- A recent study has noted that due to the **significant melting of glaciers** because of global temperature rise, our planet's axis of rotation has been moving more than usual since the 1990s.

Cause for this shift

- According to NASA, data from the 20th century shows that the **spin axis drifted about 10 centimetres per year**. Meaning over a century, polar motion exceeds 10 metres.
- Generally, polar motion is caused by **changes in the hydrosphere, atmosphere, oceans, or solid Earth**. But now, **climate change** is adding to the degree with which the poles wander.
- While **ice melting** is the major factor behind increased polar motion, **groundwater depletion** also adds to the phenomenon. As millions of tonnes

of water from below the land is pumped out every year for drinking, industries or agriculture, most of it eventually joins the sea, thus redistributing the planet's mass.

What the new study says?

- As per the study, the **north pole has shifted in a new eastward direction since the 1990s**, because of changes in the hydrosphere (meaning the way in which water is stored on Earth). From 1995 to 2020, the **average speed of drift was 17 times faster** than from 1981 to 1995. Also, in the last four decades, the **poles moved by about 4 metres in distance**.
- The calculations were based on satellite data from **NASA's Gravity Recovery and Climate Experiment (GRACE) mission** as well as estimates of glacier loss and groundwater pumping going back to the 1980s.
- The faster ice melting under global warming was the most likely cause of the directional change of the polar drift in the 1990s.

What is the effect of this shift?

- While this change is not expected to affect daily life, it **can change the length of the day** by a few milliseconds.

2) Artemis Accords

What is it?

- "Artemis Accords", an initiative of **NASA**, is a series of principles and processes whereby America and other countries would agree to a common set of principles covering **how the Moon is to be explored and its resources utilized**.
- The accord is named after **NASA's Artemis programme**. Via the Artemis program, NASA will land the first woman and the next man on the Moon by 2024.

About the Accord

- The accord promotes **transparency and communication between**

nations, requiring signatories to share their lunar plans, register any spacecraft sent to or around the moon and **release scientific data to the public**.

- Under the Accord, nations will be able to set **"safety zones"** to protect their activities on the moon, they will have to work to mitigate the effects of debris in orbit around the moon and they will agree to provide emergency assistance to any astronauts in distress.
- NASA thinks international partnerships will play a key role in achieving a sustainable presence on the Moon.

Principles of the Artemis Accords

- **Peaceful Exploration:** All activities conducted under the Artemis program must be for peaceful purposes.
- **Transparency:** Artemis Accords signatories will conduct their activities in a transparent fashion to avoid confusion and conflicts.
- **Interoperability:** Nations participating in the Artemis program will strive to support interoperable systems to enhance safety and sustainability.
- **Emergency Assistance:** Artemis Accords signatories commit to rendering assistance to personnel in distress.
- **Release of Scientific Data:** Artemis Accords signatories commit to the public release of scientific information.
- **Preserving Heritage:** Artemis Accords signatories commit to preserving outer space heritage.
- **Deconfliction of Activities:** The Artemis Accords nations commit to preventing harmful interference and supporting the principle of due regard.
- **Orbital Debris:** Artemis Accords countries commit to planning for the safe disposal of debris.

Why in News?

- New Zealand and Brazil became signatories to the Artemis Accords.

- As of June 2021, **12 countries** have embraced the Artemis Accords: Australia, Brazil, Canada, Italy, Japan, Luxembourg, New Zealand, the Republic of Korea, Ukraine, the United Arab Emirates, the United Kingdom and the United States.

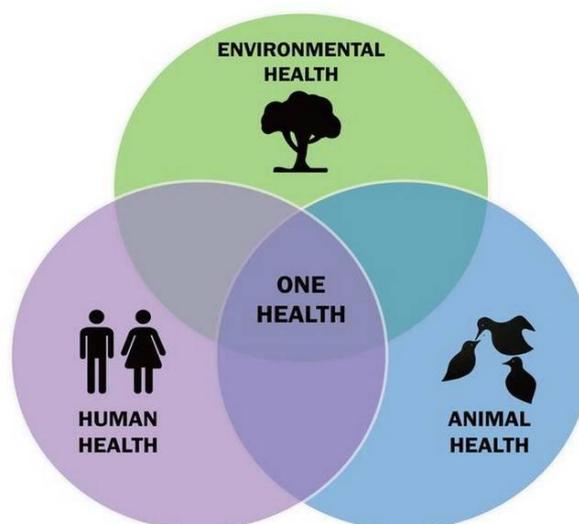
3) 'One Health' approach

NEWS

- The battle against COVID-19 should also be used as an opportunity to meet India's 'One Health' targets.

CONTEXT

- In 1856, the father of modern pathology, **Rudolf Virchow**, emphasised that **there are essentially no dividing lines between animal and human medicine**.
- In the present times, when the world is grappling with the COVID-19 pandemic, this concept has become ever more salient.
- Hence, it is crucial to acknowledge the **interconnectedness of animals, humans, and the environment, an approach referred to as "One Health"**.
- One Health is a collaborative, multisectoral, and transdisciplinary approach—working at the local, regional, national, and global levels—with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.



ACROSS THE SPECIAL BARRIER

- One Health is not new, but it has become more important in recent years. This is because **many factors have changed interactions between people, animals, plants, and our environment**.
 - Human populations are growing and expanding into new geographic areas.** As a result, more people live in close contact with wild and domestic animals, both livestock and pets. Close contact with animals and their environments provides more opportunities for diseases to pass between animals and people.
 - The earth has experienced **changes in climate and land use**, such as deforestation and intensive farming practices. Disruptions in environmental conditions and habitats can provide new opportunities for diseases to pass to animals.
- These changes have led to the spread of existing or known (endemic) and new or emerging zoonotic diseases. Studies indicate that more than **two-thirds of existing and emerging infectious diseases are zoonotic, or can be transferred between animals and humans, and vice versa**.

INDIA'S FRAMEWORK

- India's 'One Health' vision derives its blueprint from the agreement between the **tripartite-plus alliance**

comprising the Food and Agriculture Organization of the United Nations (FAO), the World Organisation for Animal Health (OIE), the World Health Organization (WHO) and the United Nations Environment Programme (UNEP) — a global initiative supported by the United Nations Children’s Fund (UNICEF) and the World Bank under the overarching goal of contributing to ‘One World, One Health’.

- With long-term objectives, India established a **National Standing Committee on Zoonoses** as far back as the 1980s.
- This year, funds were sanctioned for setting up a ‘**Centre for One Health**’ at Nagpur.
- Further, the **Department of Animal Husbandry and Dairying (DAHD)** has launched several schemes to mitigate the prevalence of animal diseases since 2015. In addition, it will soon establish a ‘**One Health**’ unit within the Ministry of Animal Husbandry, Dairying and Fisheries.
- Also, under the **National Animal Disease Control Programme**, ₹13,343 crore have been sanctioned for **Foot and Mouth disease and Brucellosis control**.
- The government is working to revamp programmes that focus on capacity building for veterinarians and upgrading the animal health diagnostic system such as **Assistance to States for Control of Animal Diseases (ASCAD)**.

NEED FOR COORDINATION

- Scientists have observed that there are **more than 1.7 million viruses circulating in wildlife, and many of them are likely to be zoonotic**.
- This implies that unless there is timely detection, India risks facing many more pandemics in times to come.
- To achieve targets under the ‘One Health’ vision, there is a **need to address challenges** related such as:

- Veterinary manpower shortages,
- The lack of information sharing between human and animal health institutions,
- Inadequate coordination on food safety at slaughter, distribution, and retail facilities.

WAY FORWARD

- There is a **need for consolidating existing animal health and disease surveillance systems** such as the Information Network for Animal Productivity and Health and the National Animal Disease Reporting System.
- **Best-practice guidelines** for informal market and slaughterhouse operation and creating mechanisms to operationalise ‘One Health’ at every stage down to the village level must be developed.
- **Awareness generation and increased investments** toward meeting ‘One Health’ targets is the need of the hour.

4) 5G trial in India

Importance of 5G Technology

- 5G or fifth generation is the latest upgrade in the long-term evolution (LTE) mobile broadband networks.
- 5G uses a new digital technology called **Massive MIMO**, which stands for **multiple input multiple output**, that uses multiple targeted beams to spotlight and follow users around a cell site, improving coverage, speed and capacity.
- The three major benefits offered by 5G are **higher speeds, higher bandwidth and lower latency**.

Speed

- Speed is one of the most highly anticipated elements of the 5G network which is **expected to be nearly 100 times faster than 4G**.
- Such high speeds are possible because most 5G networks are to be built on

super-high-frequency airwaves, also known as **high-band spectrum**.

- The **higher frequencies can transmit much more data**, much faster than on 4G.

Capacity

- The 5G network is expected to have significantly more capacity than 4G.
- This is because 5G will have **greater bandwidth**, meaning it **can handle many more connected devices** than previous networks.
- It will bring in an **"internet of things"** era, filled with connected toothbrushes, kitchen appliances, street lamps and more.

Latency

- Latency is the time it takes for devices to communicate with each other or with the server that's sending them information.
- Latency is already low with 4G, but 5G will make it **virtually zero**.
- It will be essential for technologies such as **self-driving cars** which require instant communication of huge data to ensure safety of its passengers.

How is latency different from speed?

- A small but significant difference exists between speed and latency.
- Speed is the amount of time it takes to download the contents of a webpage.
- Latency is the time between when a text is sent to another phone and when that receiver's phone registers that it has received a new message.

Are there any drawbacks?

- The **high-band network signals don't travel very far** and struggle to move through hard surfaces.
- In order to compensate for those challenges, wireless carriers building high-band 5G networks are installing tons of small cell sites (about the size of pizza boxes) to light poles, walls or towers, often in relatively small proximity to one another. For that reason, most carriers are deploying 5G city by city.

- **Significant adoption of 5G is going to take years** — industry trade group GSMA estimates that by 2025, around half of mobile connections will be 5G (the rest will be older tech, like 4G and 3G).
- There are also concerns among regulators and others about the **security of 5G**, especially since crucial technologies such as self-driving cars and healthcare systems will be built on top of the network.

		3G	4G	5G
	Deployment	2004-05	2006-10	2020
	Bandwidth	2mbps	200mbps	>1gbps
	Latency	100-500 milliseconds	20-30 milliseconds	<10 milliseconds
	Average Speed	144 kbps	25 mbps	200-400 mbps

Why in the News?

- The Department of Telecommunications has allowed private telcos Bharti Airtel, Reliance Jio Infocomm and Vi (formerly Vodafone Idea) and well as state-run telco Mahanagar Telephone Nigam Limited (MTNL) to start trials for 5G technology as well as its applications in various sectors.

Why are the trials for 5G technology important for telcos?

- 5G mainly works in **3 bands**, namely **low, mid and high-frequency spectrum** — all of which have their uses and limitations.
- In order to increase their average revenue per user, it is pertinent for telcos to start offering the new 5G technology as soon as possible.

What will 5G trials in India entail for now?

- For the six months period, the telcos will be provided with experimental spectrum in various bands, such as the mid-band of 3.2 GHz to 3.67 GHz, the millimeter wave band of 24.25 GHz to 28.5 GHz, and others.
- While the **low band spectrum** has shown great promise in terms of coverage and speed of internet and data exchange, the maximum speed is limited to 100 Mbps (Megabits per second).
- The **mid-band spectrum**, on the other hand, offers higher speeds compared to the low band, but has limitations in terms of coverage area and penetration of signals.
- The **high-band spectrum** offers the highest speed of all the three bands, but has extremely limited coverage and signal penetration strength. Internet speeds in the high-band spectrum of 5G have been tested to be as high as 20 Gbps (gigabits per second), while, in most cases, the maximum internet data speed in 4G has been recorded at 1 Gbps.
- The **'National AI Portal (<https://indiaai.gov.in>)'** was launched by the **Ministry for Electronics and Information Technology** on May 30, 2020.
- The portal has been jointly developed by the Ministry of Electronics and Information Technology and IT industry.
- **National e-Governance Division** of the Ministry of Electronics and Information Technology and **National Association of Software and Services Companies (NASSCOM)** jointly run this portal.
 - *NASSCOM is the premier trade body and chamber of commerce of the Tech industry in India.*
- The portal works as a **one stop digital platform for sharing of resources** such as articles, startups, investment funds in AI, resources, companies and educational institutions related to AI in India.
- It serves as a central hub for AI related news, learning, articles, events and activities etc., in India and beyond.
- It also has a section about learning and new job roles related to AI.

Why in News?

- The National AI Portal has completed its first year of successful rollout.

5) National Artificial Intelligence Portal

About the Portal

Reports and Indices

1) Global Energy Review 2021

What's in the news?

- The **International Energy Agency (IEA)** has released its Global Energy Review report 2021.
- This year's report assesses the direction energy demand and carbon dioxide emissions are taking in 2021.

Highlights of the Report

- **Global CO2 emissions are estimated to increase by almost 5 per cent** this year to 33 billion tonnes. The **key driver is coal demand** which is set to grow by 4.5 per cent, surpassing its 2019 level and approaching its all-time peak from 2014, with the electricity sector accounting for three-quarters of this increase.
- **Global energy demand is set to increase by 4.6% in 2021**, more than offsetting the 4% contraction in 2020 and pushing demand 0.5% above 2019 levels.
- **Almost 70% of the projected increase** in global energy demand is in **emerging markets and developing economies**. Energy use in **advanced economies** is on course to be **3% below pre-Covid levels**.
- **Demand for all fossil fuels is set to grow significantly in 2021**. Despite an expected annual increase of 6.2% in 2021, **global oil demand is set to remain around 3% below 2019 levels**. A full return to pre-crisis oil demand levels would have pushed up CO2 emissions a further 1.5%, putting them well above 2019 levels.
- **Coal demand is on course to rise 4.5% in 2021, with more than 80% of the growth concentrated in Asia**. **China** alone is projected to account for over 50% of global growth. Coal demand in the United States and the European Union is also rebounding,

but is still set to remain well below pre-crisis levels.

- **Natural gas demand is set to grow by 3.2% in 2021**, propelled by increasing demand in Asia, the Middle East and the Russian Federation. In the **United States – the world's largest natural gas market** – the annual increase in demand is set to amount to less than 20% of the 20 billion cubic meters (bcm) decline in 2020.

Related Information About IEA

- The IEA is an autonomous body **within the Organization for Economic Co-operation and Development (OECD) framework**.
- Created in 1974, the IEA works to ensure reliable, affordable and clean energy for its member countries and beyond. Its main areas of focus are energy security, economic development, environmental awareness and engagement worldwide.
- The IEA is made up of **30 member countries**. Before becoming a member country of the IEA, a candidate country must meet several criteria.
 - For eg: It must have **crude oil or product reserves equivalent to 90 days** of the previous year's net imports.
 - It must have in place a **demand restraint program to reduce national oil consumption** by up to 10 per cent.
- **India** is an associate member of IEA.
- IEA is headquartered in Paris, France.

2) Global Report on Internal Displacement 2021

What's in the news?

- The Internal Displacement Monitoring Centre (IDMC) has released its 'Global

Report on Internal Displacement 2021'.

- *Based in Geneva, Switzerland, IMDC is the world's authoritative source of data and analysis on internal displacement.*
- *It was established in 1998 as a part of the Norwegian Refugee Council (NRC), a non-governmental organisation.*

Highlights of the Report

Global Scenario

- **Globally, conflict and disasters triggered 40.5 million new internal displacements** across 149 countries and territories last year.
 - *Internal displacement refers to the forced movement of people within the country they live in.*
- **Disasters triggered more than three-quarters of the new displacements** recorded worldwide last year, accounting for 30.7 million. **Over 98 percent were the result of weather-related hazards** such as storms and floods.
- Some of the world's fastest-growing **conflict displacement** crises are in Ethiopia, Mozambique and Burkina Faso, where violence has escalated and extremist groups have expanded.
- Long-running conflicts also caused people to flee their homes, including in the Democratic Republic of Congo, Syria and Afghanistan.
- **At least seven million people internally displaced** by disasters across 104 countries and territories as of 31 December last year were **still living in displacements**.
- Internal displacement costs both individuals and countries. The report estimates loss of income, and support for housing, education, health and security for internally displaced people in 2020 came to almost \$20.5 billion.

Global figures at a glance

New displacements in 2020

40.5m new displacements,
the highest figure in a decade

9.8m
by conflict and violence

30.7m
by disasters



Figure 1: New displacements by conflict, violence and disasters per region

South Asia

- **South Asia** accounted for almost a third of the world's new disaster displacements in 2020.
- **Cyclone Amphan** triggered nearly five million evacuations across Bangladesh, India, Myanmar and Bhutan in May, making it the **largest disaster displacement event of the year globally**. Monsoon rains and floods affected the whole region from June onwards and particularly Bangladesh.
- It also caused **around \$14 billion in reported economic losses for India**, with the UN describing it as the **costliest tropical cyclone** on record for the North Indian Ocean.
- Besides, more than 4 lakh new displacements due to conflict were recorded in **Afghanistan** despite ceasefires and ongoing peace negotiations, and the country was home to more than 3.5 million internally displaced persons last year.

- **Conflict displacement** was also registered in **India** and to a lesser extent in **Bangladesh and Pakistan**.

Climate Change and Displacement

- As the world continues to warm, scientists say **climate change and other factors in combination are likely to fuel future displacement**.
- If the world's population were to remain at its current level, the **risk of flood-related displacement would increase by more than 50% relative to 2000 levels for each degree of global warming**.
- The report noted that slow-onset effects of climate change, such as desertification, land degradation, loss of biodiversity, ocean acidification, sea level rise will trigger displacement through loss of land, livelihoods, food or water – and these are hard to monitor.
- The report mentions the **scarcity of data** on how long people remain displaced makes it difficult to fully understand the scale and nature of protracted displacement triggered by disasters and climate change impacts.

3) China's coercive population measures serve as warning for India

What's in the news?

- China's decision to relax its two-child norm and allow couples to have three children must serve as a warning for India that **coercive population strategies can be counter-productive**, say experts.

News in detail

- After enforcing one-child and two-child policies to control its population over the past four decades, China recently announced that it will allow couples to have a third child.
- The announcement came after recently published census data reported a dramatic decline in births and

recording the sharpest slowing down of population in decades. The strict birth limits have **created a rapidly aging population and shrinking workforce that is straining the country's economy**.

- India, on the other hand, has been toying with the **idea of population control measures through a two-child norm**, which found a mention in Prime Minister Narendra Modi's Independence Day speech two years ago.
- Experts argue that India and its states must learn from China's failed experience with enforcing coercive population policies. Stringent population control measures have created a population crisis for China.

Misplaced Focus

- India has long been concerned about curbing population 'explosion', but **needs to focus its attention on population stabilisation instead**. India has done very well with its family planning measures and now we are at **replacement level fertility of 2.1**, which is desirable.
- At present, we need to sustain population stabilisation because in some States like Sikkim, Andhra Pradesh, Delhi, Kerala and Karnataka where the **total fertility rate (TFR) is way below replacement level**, which means we will experience in 30-40 years what China is experiencing now.
 - *TFR indicates the average number of children expected to be born per woman during her entire span of reproductive period.*
 - *Replacement level fertility is the level of fertility at which a population exactly replaces itself from one generation to the next. A rate of less than 2.1 leads to each new generation being less populous than the older, previous one.*

- In India, according to the **United Nations Population Fund's (UNFPA) India Ageing Report 2017**, the share of population over the age of 60 is projected to increase from 8% in 2015 to 19% in 2050. By the end of the century, the elderly will constitute nearly 34% of the population.
 - The annual growth rate of the elderly will be over 3% till the middle of this century indicating a faster pace of growth than other age categories. On the contrary, the growth rate of younger age groups is already negative.
- Empowerment for women**
- The proven ways to lower the fertility rate are to **give women the control over their fertility and ensure their greater empowerment** through increased access to education, economic opportunities and healthcare.
- China's fertility reduction is only partly attributable to coercive policies, and is largely because of the sustained investments the country had made in **education, health and job opportunities for women**. These are the three essential things India needs to do for its population to stabilize.
 - With China's fertility rates expected to drop in the coming years, demographers have predicted that **India may overtake China as the most populous country by 2023 or 2024**.
 - However, experts argue that this should not be a cause for worry and should be turned into an opportunity by focusing on improving employability of youth to improve productivity to fuel economic growth.

Polity

1) SC ruling on identifying backward classes

What's in the news?

- A five-judge constitution bench of the Supreme Court **struck down the Maharashtra State Reservation for Socially and Educationally Backward Classes (SEBC) Act, 2018** which extended reservation to the Maratha community in public education and employment in excess of the ceiling limit of 50% fixed by the Supreme Court earlier.
- In the **Indra Sawhney v Union of India judgement (1992)**, the nine-judge bench had ruled that **only extraordinary circumstances would justify grant of reservation in excess of the 50% ceiling**.
- In Indra Sawhney, the bench noted that **Dr B.R. Ambedkar**, chairman of the Constituent Assembly's Drafting Committee, himself contemplated reservation being **"confined to a minority of seats"**. No other member of the Constituent Assembly suggested otherwise.
- The five-judge bench found **no extraordinary circumstances** to grant reservation to the Maratha community over and above the 50% ceiling.
- The bench also found that the **M.G. Gaikwad Commission** too did not articulate any exceptional circumstances to justify the excess quota. The commission's report, which was submitted in 2018 to the state government, found that Marathas are socially, educationally and economically backward and eligible to be included as a backward class.
- On the basis of the Gaikwad Commission report, the state legislature passed a Bill giving 16% reservation in government jobs and

education to the Marathas over and above the ceiling limit fixed by the Supreme Court in Indra Sawhney.

Ruling on identifying backward classes

- In the judgment that declared the Maratha reservation unconstitutional, the Constitution Bench of the Supreme Court dealt with another issue.
- By a 3:2 majority, it ruled that **after the passage of the 102nd Constitution Amendment Act in 2018, the States do not have any power to identify 'socially and educationally backward' (SEBC) classes**.
- The Union government argued that it was never its intention to deprive State governments of their power to identify SEBCs, but the Court interpreted the bare text of the Amendment to the effect that **only the President can publish a list of backward classes** in relation to each State and that **only Parliament can make inclusions or exclusions in it**.

What does the 102nd Amendment say?

- The Amendment established a **National Commission for Backward Classes, a constitutional body**, by adding **Article 338B** to the Constitution.
- The **five-member Commission** was tasked with monitoring safeguards provided for socially and educationally backward classes, giving advice on their socio-economic development, inquiring into complaints and making recommendations, among other functions.
- Significantly, it was laid down that the **Centre and the States shall consult the Commission on all policy matters concerning the SEBCs**.
- The Amendment also added **Article 342A**, under which the **President shall notify a list of SEBCs** in relation to each State and Union Territory, **in**

consultation with Governors of the respective States.

- Once this '**Central List**' is notified, only **Parliament** could make inclusions or exclusions in the list by law. This provision is drafted in exactly the same word as the one concerning the lists of Scheduled Castes and Scheduled Tribes.
- Further, a **definition of 'SEBCs'** was added to the Constitution — 'SEBC' means "such backward classes as are so deemed under Article 342A for the purposes of this Constitution".

Why did this Amendment come up for judicial interpretation?

- The reservation for the Maratha community was challenged in the Bombay High Court on various grounds. One of the grounds was that the Act creating the Maratha quota through a new category called 'SEBC' was **unconstitutional** because after the introduction of the 102nd Amendment, the **State legislature had no power to identify any new backward class.**
- Separately, a writ petition was also filed in the Supreme Court questioning the validity of the Amendment as it **violated the federal structure and deprived the States of their powers.** In this context, the court had to examine the validity of the Amendment.

What were the rival contentions?

- The crux of the issue was whether the State government's role in identifying backward classes had been denuded by the Amendment. The Union government said **Parliament's intent was only to create a Central List that would be applied only in the Central government and its institutions.** It had nothing to do with the State Lists of backward classes or the State governments' powers to declare a community backward.

- Those who questioned it contended that the effect of the Amendment was that only the President, or the Union government, was authorised to make a list in relation to each State, and thereafter, any change in it would be made only by Parliament.

How did the Supreme Court reach these conclusions?

- The apex court adopted a literal interpretation of the 102nd Amendment, holding that there was **no ambiguity in its drafting that warranted a "purposive interpretation"**. It cited three main reasons.
 - One, the **text was clear** that the President alone could notify the list, and subsequent changes could be made only by Parliament by law.
 - Two, the **text was identical** to the provisions governing the National Commission for Scheduled Castes and the procedure to identify SCs was exactly the same, which led to the conclusion that Parliament intended to "replicate" the same process for backward classes, too.
 - Third, a **definition clause** was added to the effect that only a class found in the list notified by the President under Article 342A was an SEBC. Further, the definition was for "the purposes of the Constitution", which meant that it was to **apply to the Constitution as a whole**, including Article 15(4) and Article 16(4), which enable special provisions for backward classes, including reservation in public services, and are also implemented by the States.
- The Supreme Court's judgment also drew on deliberations before a Rajya Sabha Select Committee that showed that the Centre had rejected suggestions from members who demanded that a specific clause be added saying that States would

continue to have the power to identify SEBCs.

What next?

- The Supreme Court has **directed the Centre to notify the list of SEBCs for each State and Union territory, and until it is done, the present State Lists may continue to be in use.**
- The Centre may either comply with this or seek to further amend the Constitution to clarify the position that the 102nd Amendment was not intended to denude the States of their power to identify SEBCs.

2) The why and how of creating a new district

What's in the news?

- Recently, Punjab Chief Minister Captain Amarinder Singh declared Malerkotla the 23rd district of the State.

How are new districts carved?

- **The power to create new districts or alter or abolish existing districts rests with the State governments.** This can either be done through an **executive order or by passing a law in the State Assembly.**
- Many States prefer the executive route by simply issuing a notification in the official gazette.

How does it help?

- States argue that smaller districts lead to **better administration and governance.** For example, in 2016, the Assam government issued a

notification to upgrade the Majuli sub-division to Majuli district for "administrative expediency".

Does the Central government have a role to play here?

- **The Centre has no role to play** in the alteration of districts or creation of new ones. States are free to decide. The **Home Ministry** comes into the picture when a State wants to **change the name of a district or a railway station.**
- The State government's request is sent to other departments and agencies such as the Ministry of Earth Sciences, Intelligence Bureau, Department of Posts, Geographical Survey of India Sciences and the Railway Ministry seeking clearance.
- A **no-objection certificate** may be issued after examining their replies.

What has been the trend?

- According to the **2011 Census**, there were **593 districts** in the country. The Census results showed that between 2001-2011, as many as 46 districts were created by States.
- Though the 2021 Census is yet to happen, Know India, a website run by the Government of India, says currently there are **718 districts** in the country. The surge in number is also due to bifurcation of Andhra Pradesh into A.P and Telangana in 2014. Telangana at present has 33 districts and A.P has 13 districts.

Economy

1) RBI surplus transfer

Background

- According to **Section 47 of the RBI Act, 1934**, the central bank pays dividends to the government every year from the surplus it generates from market operations, investments and printing of currency.
- However, before transferring, some amount of the profit is kept aside for maintaining reserves of the RBI.

What constitutes RBI's reserves?

- RBI's reserves fall under four main heads: **the Contingency Fund (CF), the Currency and Gold Revaluation Account (CGRA), the Asset Development Fund (ADF) and the Investment Revaluation Account (IRA)**.
- CF is the corpus created to take care of unexpected and unforeseen contingencies, including depreciation in the value of securities held, systemic risks and risks arising out of monetary and exchange rate policy operations.
- The ADF corpus is meant to be drawn upon for investments in subsidiaries and to meet internal capital expenditure etc.
- Of these, the CGRA and the IRA are 'notional' in the sense that they are there to reflect the movements in the market prices of the asset classes (mainly gold, foreign currency and investments) to which they relate. No cash flow is involved in their case and the net credit balance in the CGRA account only indicates the unrealised or potential gain from the disposal by sale of those assets today.

Why in News?

- The Reserve Bank of India has **approved the transfer of ₹99,122 crore** as surplus to the Central government, while deciding to maintain the **contingency Fund at**

5.5% as recommended by the **Bimal Jalan committee**.

- The Bimal Jalan Committee on Economic Capital Framework was set up in 2018 to assess the adequate size of capital reserves that the RBI should hold.
- The committee, in its final report submitted in 2019, recommended that the RBI should maintain a **Contingent Fund between 5.5-6.5% of the RBI's total assets**.
- The recent transfer is 73.50 per cent higher vis-a-vis the ₹57,128 crore transfer approved in the accounting year 2019-20.
- This transfer of higher surplus comes in the backdrop of the government stepping up spending for healthcare and social sector schemes in the wake of the Covid-19 pandemic. This will boost its capacity to spend.
- RBI recently switched to an April-March fiscal from July-to-June, and the payment this time around is for a nine-month period (July 2020-March 2021).

2) Special Drawing Rights

About Special Drawing Rights (SDRs)

- Special Drawing Rights is an international reserve asset, created by the **International Monetary Fund (IMF)** in 1969 to supplement its member countries' official reserves.
- SDRs are allocated to each of the countries that are IMF members. The amount of SDRs that are **allocated to each country is based on their individual IMF quotas**. IMF quotas are based broadly on the relative economic position of the country in the world economy. The quota is essentially a **country's financial commitment to the IMF and its voting power**.
- The value of the SDR is based on a basket of **five currencies—the U.S.**

dollar, the euro, the Chinese renminbi, the Japanese yen, and the British pound sterling.

- The SDR basket is **reviewed every five years**, or earlier if warranted, to ensure that the basket reflects the relative importance of currencies in the world's trading and financial systems.
- SDR (also called "*paper gold*") is **neither a currency nor a claim on the IMF**. It is a **potential claim of IMF members on freely usable currencies**.
- SDRs can be traded for freely usable currencies between IMF members through voluntary trading agreements. These agreements are facilitated by the IMF and can be done to adjust reserves or meet balance of payments needs.
- The SDR also serves as the **unit of account** of the IMF and some other international organizations, and financial obligations may also be denominated in SDR.

Why in News?

- The IMF is set to issue a new \$650bn allocation of SDRs which would give a cash injection to poorer countries. It is expected to free up resources for member countries to help fight the pandemic.

3) Small Finance Banks

About Small Finance Banks

- The small finance bank (SFB) primarily undertakes basic banking activities of acceptance of deposits and lending to **unserved and underserved sections** including small business units, small and marginal farmers, micro and small industries and unorganised sector entities.

Objectives

- The objectives of setting up of small finance banks will be to further financial inclusion by
 - ✓ Provision of savings vehicles, and

- ✓ Supply of credit to small business units; small and marginal farmers; micro and small industries; and other unorganised sector entities, through high technology-low cost operations.

Features

- There are **no restrictions in the area of operations** of small finance banks.
- The small finance banks are **subject to all prudential norms and regulations of RBI** as applicable to existing commercial banks including requirement of maintenance of Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR).
- The small finance banks will be required to extend **75 per cent of its Adjusted Net Bank Credit (ANBC) to the sectors eligible for classification as priority sector lending (PSL)** by the Reserve Bank.
- At least 50 per cent of its loan portfolio should constitute loans and advances of upto Rs. 25 lakh.
- The **minimum paid-up equity capital** for small finance banks shall be **Rs. 100 crore**.
- They are eligible to provide **credit card and debit card facilities and associational services**.

Why in News?

- The RBI has decided to grant "in-principle" approval to Centrum Financial Services Limited to set up a small finance bank.

4) Trends in India's Foreign Direct Investment

What is Foreign Direct Investment (FDI)?

- It is the **investment made by a person or a company in one country into businesses located in another country**.
- Generally, FDI takes place when an investor establishes foreign business operations or acquires foreign business assets.

Automatic & Approval Routes:

- The entry of Foreign Direct Investment by non-residents into India is regulated through two routes - **automatic route and approval route**.
- Under the **Automatic** Route, the foreign investor **does not require any approval** from the Reserve Bank or Government of India for the investment.
- Under the **approval** route, the foreign investor should obtain **prior approval** of the Government of India agencies or bodies specified.

Why in News?

- The Ministry of Commerce & Industry reported that India has attracted the **highest ever total FDI inflow of US\$ 81.72 billion** during the financial year 2020-21. It is 10% higher as compared to the last financial year 2019-20 (US\$ 74.39 billion).
- The Ministry said that measures taken by the Government on the fronts of **Foreign Direct Investment policy reforms, investment facilitation and ease of doing business** have resulted in increased FDI inflows into the country.

Trends in India's Foreign Direct Investment

- **FDI equity inflow grew by 19%** in the F.Y. 2020-21 (US\$ 59.64 billion) compared to the previous year F.Y. 2019-20 (US\$ 49.98 billion).
- In terms of top investor countries, **'Singapore'** is at the apex with 29%, followed by the **U.S.A** (23%) and **Mauritius** (9%) for the F.Y. 2020-21.
- **'Computer Software & Hardware'** has emerged as the top sector during F.Y. 2020-21 with around 44% share of the total FDI Equity inflow followed by **Construction** (Infrastructure) Activities (13%) and **Services Sector** (8%) respectively.
- **Gujarat is the top recipient state** during the F.Y. 2020-21 with 37%

share of the total FDI Equity inflows followed by **Maharashtra (27%) and Karnataka (13%)**.

- The major sectors, namely Construction (Infrastructure) Activities, Computer Software & Hardware, Rubber Goods, Retail Trading, Drugs & Pharmaceuticals and Electrical Equipment, have recorded more than 100% jump in equity during the F.Y. 2020-21 as compared to the previous year.
- **Saudi Arabia is the top investor in terms of percentage increase** during F.Y. 2020-21. It invested US\$ 2816.08 million in comparison to US\$ 89.93 million reported in the previous financial year.

5) Harmonised System of Nomenclature (HSN) code

About HSN Code

- The Harmonized Commodity Description and Coding System generally referred to as "Harmonized System" or simply "HS" is a **multipurpose international product nomenclature** developed by the **World Customs Organization** in 1988.
- It is a **six-digit code** that classifies more than 5000 products, arranged in a legal and logical structure. To achieve uniform classification, the HSN is supported by well-defined rules and is accepted worldwide.
- HSN code is used by customs authorities, statistical agencies, and other government regulatory bodies, to **monitor and control the import and export of commodities**.
 - **India** has been using HSN codes since 1986 to classify commodities for Customs and Central Excise.
- HSN classification is **widely used for taxation purposes** by helping to identify the rate of tax applicable to a specific product in a country that is

under review. It can also be used in calculations that involve claiming benefits.

Significance of HSN

- It acts as a universal economic language and code for goods and an indispensable tool for international trade.
- The system helps in harmonising customs and trade procedures thus **reducing costs in international trade.**
- HSN code removes the need to upload details about the goods which **makes filing of GST returns easier in India.**

Why in the news?

- India's Ministry of Finance has announced that businesses with turnover of Rs 5 crore and above will have to furnish six-digit HSN code on the invoices issued for supplies of taxable goods and services.
- Those with turnover of up to Rs 5 crore in the preceding financial year would be required to mandatorily furnish four-digit HSN code. Earlier,

the requirement was four-digits and two-digits respectively.

Related Information

Services Accounting Code

- Services Accounting Code (SAC) is issued by India's **Central Board of Indirect Taxes and Customs (CBIC)** to classify each service under GST.
- Every service has a unique SAC Code which can be used in invoices for the services delivered.
- These codes are used to **identify services and GST Rates to compute tax liability.**

World Customs Organization

- The World Customs Organization (WCO), established in 1952 as the Customs Co-operation Council (CCC), is an independent intergovernmental body whose mission is to **enhance the effectiveness and efficiency of Customs administrations.**
- Currently, the WCO represents **183 Customs administrations** (including **India**) across the globe that collectively process approximately 98% of world trade.

International Relations

1) Intellectual Property Rights waiver

About TRIPS

- The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is an international legal agreement between all the member nations of the **World Trade Organization (WTO)**.
- The Agreement, which came into effect on **1 January 1995**, is a comprehensive multilateral agreement on intellectual property.
- The TRIPS Agreement is often described as **one of the three “pillars” of the WTO**, the other two being trade in goods and trade in services.
- To facilitate the implementation of the TRIPS Agreement, the Council for TRIPS concluded with the World Intellectual Property Organization (WIPO) an **agreement on cooperation between WIPO and the WTO**, which came into force on 1 January 1996.

Mandates

- As per the TRIPS provisions, the member countries are required to adopt TRIPS provisions in their domestic intellectual property legislations like Patent Act, Copyright Act etc. TRIPS agreement is an effort to bring national legislations under common international rules.
- The areas of intellectual property that TRIPS covers are: **copyright and related rights; trademarks; geographical indications; industrial designs; patents; the layout-designs of integrated circuits; and undisclosed information including trade secrets and test data.**
- In India, the government has made a major amendment to the 1970 Patent Act in 2005 to accommodate the TRIPS

provisions. In 2010, the Copyright Act was amended and enforced from 2012. Other legislations with respect to Industrial designs also have been made.

Why in News?

- Breaking with a long-held position, the U.S. Trade Representative has announced that the Biden administration would support waiving TRIPS for the production of COVID-19 vaccines.
- The news was welcomed by some global leaders, given that the United States was until now a major WTO member blocking such a proposal, **framed by India and South Africa.**
- The proposal, if passed by the WTO with the support of the European Union (EU), could dramatically alter how pharmaceutical companies worldwide access proprietary trade know-how for the production of leading vaccines.
- However, questions remain regarding whether the easing of TRIPS rules for COVID-19 vaccines will lead to a greater supply of efficacious vaccines in countries where they are the most needed, or if less circuitous options to boost supply are more relevant in the present scenario.

What was the earlier proposal from India and South Africa?

- In October 2020, India and South Africa had asked the WTO to waive certain conditions of the TRIPS Agreement that could impede timely access to affordable medical products to combat Covid-19.
- The countries had asked the TRIPS Council to recommend, as early as possible, a waiver on the implementation, application and enforcement of four sections in the second part of the agreement.

- These sections — 1, 4, 5, and 7 — pertain to **copyright and related rights, industrial designs, patents, and the protection of undisclosed information.**

What are patents and IP rights?

- A patent represents a powerful intellectual property right, and is an **exclusive monopoly** granted by a government to an inventor for a limited, pre-specified time. It provides an enforceable legal right to prevent others from copying the invention. Patents can be either **process patents or product patents.**
 - A product patent ensures that the rights to the final product is protected, and anyone other than the patent holder can be restrained from manufacturing it during a specified period, even if they were to use a different process. A process patent enables any person other than the patent holder to manufacture the patented product by modifying certain processes in the manufacturing exercise.
 - **India moved from product patenting to process patenting** in the 1970s, which enabled India to become a **significant producer of generic drugs** at global scale, and allowed companies like Cipla to provide Africa with anti-HIV drugs in the 1990s. But due to obligations arising out of the TRIPS Agreement, India had to **amend the Patents Act in 2005**, and switch to a **product patents** regime across the pharma, chemicals, and biotech sectors.

What is the argument in favour of relaxing TRIPS rules?

- The broader context for emergency action **aimed at rapidly increasing vaccine availability** across the world is the sharp surge in COVID-19 cases in India and Brazil.

- In this context, a fierce debate has been underway, pitting global-vaccine-access advocates against vaccine developers and pharmaceutical firms that rely on patented technology, usually of a highly specialised nature, to produce vaccines.

Besides patents, what are the other roadblocks to scaling up production?

- The International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) has pointed to other “real challenges” in scaling up production and distribution of Covid-19 vaccines. These include **trade barriers, bottlenecks in supply chains, scarcity of raw materials and ingredients in the supply chain, and the unwillingness of rich countries to share doses with poorer nations.**
- Also, there may be **serious issues associated with manufacturing vaccines** if there is just an easing of the associated intellectual property rights rules but **no further support to generic pharmaceutical firms** in countries such as India and South Africa. This is because a “**tech transfer**” is also needed for the latter to actually commence production, especially for mRNA vaccines, including the ones produced by Moderna and Pfizer along with BioNTech.
- There is also a strong likelihood that it will take a **considerable amount of time**, even several years, for generic producers’ plants to become operational at optimal capacity.
- Finally, there is the classic counter-argument to calls for patent relaxations, that such policies could **discourage pharmaceutical companies from investing in producing next-generation vaccines.**

Way Forward

- Though many, including Mr. Biden, have argued that humanitarian need trumps the profit motive during a pandemic, the decision to waive all TRIPS rules should be preceded by a rigorous analysis of the effects such a policy would have on the biotechnology sector and global supply chains for its products.

2) France's role in the Rwandan genocide

What's in the news?

- French President Emmanuel Macron said he recognised his country's role in the Rwandan genocide and hoped for forgiveness, seeking to reset relations after years of Rwandan accusations that France was complicit in the 1994 genocide in which about 800,000 people, mostly ethnic Tutsis, were killed.
- France, which enjoyed **close ties with Rwanda's Hutu-led government of President Juvénal Habyarimana**, has long been criticised for its role in the **killings of the Tutsi minorities** in the months of April to June 1994.



The Rwandan genocide

- The Rwandan genocide of 1994 was the culmination of **long-running ethnic tensions between the minority Tutsi community**, who had controlled power since colonial rule by Germany and Belgium, and the **majority Hutu**. They had a troubled relationship in Rwanda that goes back to the **German and Belgian colonial period**.
- Colonialists ruled Rwanda through the **Tutsi monarchy**. Tutsis were

appointed as local administrative chiefs and the ethnic minority enjoyed relatively better educational and employment opportunities, which led to widespread resentment among the majority Hutus.

- In **1959**, amid growing violence, the **Belgian authorities handed over power to the Hutu elite**. King Kigeli V fled the country.
- In the 1960 elections, organised by the Belgians, Hutu parties gained control of nearly all local communes. Since

then, Rwanda had been controlled by Hutus, until their genocidal regime was toppled by the **Tutsi-led Rwandan Patriotic Front (RPF)** in 1994.

What led to the genocide?

- The crisis escalated in the 1990s when the RPF, led by **Paul Kagame**, the current President, grew in strength and posed a serious challenge to the regime of **President Habyarimana**, who was backed by France and had defence ties with Israel.
- In 1993, Habyarimana, who rose to power in 1973, was forced to sign a peace agreement (**Arusha Accords**) with the RPF. This led to resentment among Hutu militias, backed by the government, towards local Tutsi population, who were accused of collaborators of the RPF.
- On April 6, 1994, a jet carrying Habyarimana and his Burundi counterpart Cyprien Ntaryamira was shot down near Kigali International Airport. The Hutu-led government blamed the RPF for the attack on the presidential jet. The military and Hutu militias unleashed violence against Tutsis and moderate Hutus.
- Over the course of 100 days, the tragedy took the lives of over 8 lakh people, estimated to amount up to 20% of Rwanda's population.
- The conflict ended when the **Rwandan Patriotic Front seized control of the country in July**. The RPF initially went about establishing a multi-ethnic government with Pasteur Bizimungu, a Hutu, being the President. Mr. Kagame, a Tutsi, was his deputy. In 2000, Mr. Kagame assumed the Presidency and continues to be in power till today.
- Kagame has been credited for bringing stability and development to the mineral-rich nation, but blamed for cultivating an environment of fear for his political opponents both at home and abroad.

What role did France play during these events?

- During the genocide, Western powers including the United States were blamed for their inaction which abetted the atrocities. France, which was then led by Socialist President François Mitterrand, gained notoriety after being accused of acting as a staunch ally of the Hutu-led government that ordered the killings.
- In June 1994, France deployed a much-delayed UN-backed military force in southwest Rwanda called **Operation Turquoise**– which was able to save some people, but was accused of sheltering some of the genocide's perpetrators. Kagame's RPF opposed the French mission.

3) Israel-Palestine conflict

What's in the news?

- Israel and Hamas (the militant Islamist group that rules the Gaza Strip) called a truce and agreed to a ceasefire, halting 11-days of hostilities that brought about widespread destruction in the Gaza Strip and left over 200 people dead.
- The latest violence followed a month of rising tensions in Jerusalem. But the fighting has gone on for decades.

Background

- **Britain** took control of the area known as **Palestine** after the ruler of that part of the Middle East, the **Ottoman Empire**, was defeated in World War 1.
- The land was inhabited by a **Jewish minority and Arab majority**.
- Tensions between the two peoples grew when the international community gave **Britain the task of establishing a "national home" in Palestine for Jewish people**.
- For Jews, it was their ancestral home, but Palestinian Arabs also claimed the land and opposed the move.
- Between the 1920s and 40s, the number of Jews arriving there grew,

with many fleeing from persecution in Europe and seeking a homeland after the **Holocaust of WWII**. Violence between Jews and Arabs, and against British rule, also grew.

- In **1947**, the UN voted for **Palestine to be split into separate Jewish and Arab states, with Jerusalem becoming an international city**.
- That plan was accepted by Jewish leaders but rejected by the Arab side and never implemented.

The creation of Israel and the 'Catastrophe'

- In 1948, unable to solve the problem, **British rulers left and Jewish leaders declared the creation of the state of Israel**.
- Many Palestinians objected and a war followed. Troops from neighbouring

Israel's boundaries today



- In another war in **1967**, **Israel occupied East Jerusalem and the West Bank, as well as most of the Syrian Golan Heights, and Gaza and the Egyptian Sinai peninsula**.
- Most Palestinian refugees and their descendants live in Gaza and the West

Arab countries invaded. Hundreds of thousands of Palestinians fled or were forced out of their homes in what they call **Al Nakba, or the "Catastrophe"**.

- By the time the fighting ended in a ceasefire the following year, **Israel controlled most of the territory. Jordan occupied land which became known as the West Bank, and Egypt occupied Gaza**.
- **Jerusalem** was divided between Israeli forces in the West, and Jordanian forces in the East.
- Because there was never a peace agreement - each side blamed the other - there were more wars and fighting in the decades which followed.

The map today

Bank, as well as in neighbouring Jordan, Syria and Lebanon.

- Neither they nor their descendants have been allowed by Israel to return to their homes - Israel says this would overwhelm the country and threaten its existence as a Jewish state.

- Israel still occupies the West Bank, and although it pulled out of Gaza the UN still regards that piece of land as part of occupied territory.
- **Israel claims the whole of Jerusalem as its capital, while the Palestinians claim East Jerusalem as the capital of a future Palestinian state.** The US is one of only a handful of countries to recognise Israel's claim to the whole of the city.
- In the past 50 years Israel has built settlements in these areas, where more than 600,000 Jews now live.
- Palestinians say these are illegal under international law and are obstacles to peace, but Israel denies this.

What's happening now?

- **Gaza** is ruled by the Palestinian militant group **Hamas**, which has fought Israel many times. Israel and Egypt tightly control Gaza's borders to stop weapons getting to Hamas.
- Palestinians in Gaza and the West Bank say they're suffering because of Israeli actions and restrictions. Israel says it is only acting to protect itself from Palestinian violence.
- Things have escalated since the start of the holy Muslim month of Ramadan in mid-April 2021, with nightly clashes between police and Palestinians.
- The threatened eviction of some Palestinian families in East Jerusalem has also caused rising anger.

What are the main problems?

- There are a number of issues which Israel and the Palestinians cannot agree on.

- These include what should happen to Palestinian refugees, whether Jewish settlements in the occupied West Bank should stay or be removed, whether the two sides should share Jerusalem, and - perhaps most tricky of all - whether a Palestinian state should be created alongside Israel.
- Peace talks have been taking place on and off for more than 25 years, but so far have not solved the conflict.

What does the future hold?

- The UN and majority of the countries are pushing for the **"two-state solution"** to the Israeli-Palestinian conflict. Its basis is two separate states, Israel and Palestine, living peacefully side by side on the land between the western bank of the Jordan river and the Mediterranean Sea.
- This territory would be divided broadly along the **pre-1967 armistice line or "green line"**. **Jerusalem**, which both sides want as their capital, would be shared.
- Past negotiations have failed to make progress and there are currently no fresh talks in prospect.
- The most recent peace plan, prepared by the United States, when Donald Trump was President - called **"the deal of the century"** by Israeli PM Benjamin Netanyahu - has been dismissed by the Palestinians as one-sided and never got off the ground.
- Any future peace deal will need both sides to agree to resolve complex issues.

Art and Culture

1) Putola Nach

Puppetry in India

- Puppetry is a form of theatre or performance that involves the manipulation of puppets – inanimate objects, often resembling some type of human or animal figure that are animated or manipulated by a human called a puppeteer.
- Oldest written reference to puppetry in India has been found at **Tamil classic Silappadikaaram** written around 1st and 2nd Century BC by Jain-poet, **Ilango Adigal**.
- The excavation sites at **Harappa and Mohenjodaro** have yielded puppets with sockets attached to them which suggest the presence of puppetry as an art form.

Types of Puppetry in India

Glove Puppets

- The puppets are worn on the hand of the puppeteers like gloves.
- Pavakkoothu – Kerala

String Puppets

- Strings are attached to small holes in the hands, head and back of the body which are then controlled by the puppeteer.
 1. Gopalila Kundhei – Orissa
 2. Bommalattam – Tamil Nadu
 3. Kalasutri Bahulya – Maharashtra
 4. Putola Nach – Assam
 5. Kathputli – Rajasthan
 6. Gombeyatta – Karnataka

Shadow Puppets

- Puppets are placed on a white screen with light falling from behind to create a shadow effect on the screen.
 1. Thol Bommalattam – Tamil Nadu
 2. Togalu Gombeyata – Karnataka
 3. Chamadyache Bahulya – Maharashtra
 4. Tholpavakoothu – Kerala
 5. Ravanachhaya – Orissa
 6. Tholu Bommalata – Andhra Pradesh

Rod Puppets

- A rod puppet is a figure operated from beneath by means of wooden or metal rods.
 1. Kathi Kandhe – Orissa
 2. Putul Nach – West Bengal
 3. Yampuri – Bihar

Why in News?

- In collaboration with UNICEF-Assam, an educational and charitable nonprofit organization has produced three short videos using Putola Nach string puppetry for creating mass awareness on COVID appropriate behaviour. A fourth video is on the issue of school dropouts.

About Putola Nach



- Usually, Putola Nach is used to perform scenes from the epics such as Ramayana or Mahabharatha. It is a traditional string puppet theatre from **Assam**.
- Dolls are about 1.5 metres tall and are made of hollow wood or bamboo. The heads are made of terracotta.
- Musical Instruments are used in performing the art.

2) Tentative list of UNESCO World Heritage Sites

About UNESCO

- UNESCO was constituted as a **specialized agency** of the United Nations that was outlined in a constitution signed November 16, 1945. The constitution entered into force in 1946.

- Its purpose is to contribute to peace and security by promoting international collaboration through education, science, culture and communication.
- UNESCO has 193 member countries (including **India**) and it pursues its objectives through **five major programs**: education, natural sciences, social and human sciences, culture, and communication and information.
- The agency's permanent headquarters are in **Paris, France**.

UNESCO's World Heritage Convention, 1972

- The Convention Concerning the Protection of the World Cultural and Natural Heritage is an international agreement that was adopted by the General Conference of UNESCO in 1972.
- It is based on the premise that certain places on Earth are of **outstanding universal value** and should therefore form part of the common heritage of humankind.
- It basically defines the kind of **natural or cultural sites** which can be considered for inscription on the World Heritage List.
 - **Cultural sites** include monuments, such as architectural structures, art and science pieces, while **natural sites** include formations that are of outstanding universal value from the aesthetic or scientific point of view.
 - In addition to these, UNESCO designates some sites as **Mixed heritage sites** which contain elements of both natural and cultural significance.
- The Convention sets out the duties of **State Parties** in **identifying potential sites and their role in protecting and preserving them**.
- By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its

territory, but also to **protect its national heritage**.

- It explains how the **World Heritage Fund** is to be used and managed and under what conditions **international financial assistance** may be provided.

UNESCO sites in India

Cultural sites (30)

- Agra Fort
- Ajanta Caves
- Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar
- Buddhist Monuments at Sanchi
- Champaner-Pavagadh Archaeological Park
- Chhatrapati Shivaji Terminus (formerly Victoria Terminus)
- Churches and Convents of Goa
- Elephanta Caves
- Ellora Caves
- Fatehpur Sikri
- Great Living Chola Temples
- Group of Monuments at Hampi
- Group of Monuments at Mahabalipuram
- Group of Monuments at Pattadakal
- Hill Forts of Rajasthan
- Historic City of Ahmedabad
- Humayun's Tomb, Delhi
- Jaipur City, Rajasthan
- Khajuraho Group of Monuments
- Mahabodhi Temple Complex at Bodh Gaya
- Mountain Railways of India
- Qutb Minar and its Monuments, Delhi
- Rani-ki-Vav (the Queen's Stepwell) at Patan, Gujarat
- Red Fort Complex
- Rock Shelters of Bhimbetka
- Sun Temple, Konârk
- Taj Mahal
- The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement
- The Jantar Mantar, Jaipur
- Victorian Gothic and Art Deco Ensembles of Mumbai

Natural sites (7)

- Great Himalayan National Park Conservation Area
- Kaziranga National Park
- Keoladeo National Park
- Manas Wildlife Sanctuary
- Nanda Devi and Valley of Flowers National Parks
- Sundarbans National Park
- Western Ghats

Mixed site (1)

- Khangchendzonga National Park

Why in News?

- The Ministry of Culture has announced that **six Indian sites have been added to the tentative list of UNESCO's world heritage sites.**
- With the addition of these six sites, UNESCO has 48 proposals in the tentative list of India.

Criteria for selection

- According to the World Heritage Convention's operational guidelines, a tentative list is an "inventory" of properties a country believes deserves to be a World Heritage Site.
- After UNESCO includes a property in the Tentative List, that country has to prepare a nomination document that will be considered by the **UNESCO World Heritage Committee.**

About the new sites

Satpura Tiger Reserve

- Located in **Madhya Pradesh**, the Satpura National Park is home to 52 species of Mammals, 31 of Reptiles and 300 species of birds, out of which 14 are endangered. STR is also a habitat of arboreal mammals like Flying Squirrel, Indian Giant Squirrel and Leaf nosed bats.
- The place has more than **50 rock shelters with paintings** that are 1500 to 10,000 years old.

Ghats of Varanasi

- The **Ganges riverfront of Varanasi, Uttar Pradesh**, consists of groups of separate or connected buildings and because of their architecture, their homogeneity or their place in the

landscape are of outstanding universal value from the point of view of history, art or science.

- It retains an **active social role in contemporary society** closely associated with the traditional way of life, and in which the evolutionary process is still in progress and an associative cultural landscape by virtue of powerful religious, artistic, cultural associations of the natural element.

Megalithic site of Hire Benkal

- The 2,800-years-old **megalithic site of Hire Benkal in Karnataka** has made it to the tentative list owing to the fact that it is **one of the largest prehistoric megalithic settlements** where some funerary monuments are still intact.
- The **granite structures are burial monuments** that may also have served many ritual purposes. Due to the extremely valuable collection of Neolithic monuments, the site was proposed for recognition.

Maratha Military Architecture in Maharashtra

- These are **14 forts in Maharashtra** dating back to the era of the 17th-century Maratha king Chhatrapati Shivaji. The 14 sites listed by Maharashtra includes Raigad Fort, Shivneri Fort, Rajgad Fort, Torna Fort, Salher Fort, Lohagad, Rangana Fort, Mulher Fort, Ankai Tankai Forts, Sindhudurg Fort, Kasa Fort, Alibag Fort, Suvarnadurg and Khanderi Fort.
- Notably, all these forts have historical significance of either the Peshwa rule or battle between the Marathas and Mughals. Some of them also served as army or naval bases for the Maratha fighters.
- The theme for the serial nomination of these forts is 'Maratha Military Architecture in Maharashtra and Guerrilla Warfare'.

Bhedaghat-Lametaghat in Narmada Valley-Jabalpur

- Bhedaghat, referred to as the **Grand Canyon of India**, is a town in the Jabalpur district, **Madhya Pradesh**.
- It is known for its marble rocks and their various morphological forms on either side of the Narmada river which flows through the gorge.
- Several dinosaur fossils have been found in the Narmada valley, particularly in the Bhedaghat-Lameta Ghat area of Jabalpur.
- **River Narmada** narrows down on its way through marble rocks and plunges

in a waterfall giving out the appearance of a smoke cascade.

Temples of Kanchipuram

- The temple town of Kanchipuram in **Tamil Nadu**, is situated on the banks of **River Vegavathi**. This historical city once had 1,000 temples, of which only 126 (108 Shaiva and 18 Vaishnava) now remain.
- Its rich legacy has been the endowment of the **Pallava dynasty**, which made the region its capital between the 6th and 7th centuries and lavished upon its architectural gems that are a fine example of **Dravidian styles**.

Defence

1) INS Rajput

What's in the news?

- After 41 years of service, the first destroyer of the Indian Navy, INS Rajput, was decommissioned recently.
- In naval terminology, a destroyer is a fast, maneuverable, long-endurance warship intended to escort larger vessels in a fleet, convoy or battle group and defend them against powerful short range attackers.



About INS Rajput

- **INS Rajput**, the lead ship of the **Kashin-class destroyers built by the erstwhile USSR**, was commissioned in 1980.
- The ship has participated in several operations, as part of national security. Some of these include **Operation Aman** off Sri Lanka to assist Indian Peace Keeping Force (IPKF), **Operation Pawan** for patrolling duties off the coast of Sri Lanka, **Operation Cactus** to resolve hostage situation off the Maldives, and **Operation Crowsnest** off Lakshadweep.
- In addition, the ship participated in numerous bilateral and multinational exercises. The ship was also the first Indian Naval Ship to be affiliated with an Indian Army regiment, the Rajput Regiment.
- INS Rajput was also the first ship in the Navy to get the first version of the

BrahMos anti-ship supersonic cruise missile in 2005.

2) Operation Samudra Setu II

Why in News?

- The Indian Navy has launched 'Operation Samudra Setu-II' to **meet the country's oxygen requirement** amid the surge in Covid-19 cases in the second wave and the acute shortage of liquid medical oxygen (LMO).
- As a part of the operation, the Navy has deployed INS (Indian Navy Ships) Kolkata, Kochi, Talwar, Tabar, Trikand, Jalashwa and Airavat for shipment of oxygen-filled cryogenic containers and associated medical equipment from various countries.
- Operation Samudra Setu was launched last year by the Navy to **rescue Indian citizens stranded in neighbouring countries amid the Covid-19 outbreak, along with the Vande Bharat Mission.**
- Indian Navy's previous such evacuation operations were **Operation Sukoon in 2006 (Beirut)** and **Operation Rahat in 2015 (Yemen).**

3) Iron Dome System

What is the Iron Dome System?

- Iron Dome is a short-range, ground-to-air, air defence system of **Israel** which is capable of countering rockets, artillery & mortars (C-RAM) as well as aircraft, helicopters and unmanned aerial vehicles over short **ranges of up to 70 km.**
- Considered among the most advanced defence systems in the world, the Iron Dome uses radar to identify and destroy incoming threats before they can cause damage.
- It was developed by **Israeli firms Rafael Advanced Defense Systems**

and Israel Aerospace Industries and was deployed in 2011.

- It is an all-weather system and can engage multiple targets simultaneously and be deployed over land and sea.

Advantages

- One of the system's important advantages is its **ability to identify the anticipated point** of impact of the threatening rocket, to calculate whether it will fall in a built-up area or not, and to decide on this basis whether or not to engage it.
- This **prevents unnecessary interception** of rockets that will fall in open areas and thus not cause damage.

Why in News?

- The Iron Dome aerial defence system of Israel intercepted a barrage of rockets fired by Hamas and other Palestinian militants from Gaza in the latest escalation.



Missile Defence Systems of India

Ballistic Missile Defence programme

- India's Ballistic Missile Defence (BMD) programme was launched in **1999** after Pakistan's maiden nuclear test in 1998 and China's leaps in this sphere.
- It is spearheaded by the **Defence Research and Development Organisation (DRDO)**.
- The BMD works on two levels — **endo-atmospheric** (within Earth's atmosphere) and **exo-atmospheric** (the space stretching beyond Earth's atmosphere). The two-tier system is intended to destroy an incoming missile, at a higher altitude, in the exo-atmosphere and if that miscarries, an

endo-atmospheric interception will take place.

- India's BMD arsenal consists of a **Prithvi Air Defence (PAD) missile** to intercept incoming missiles at a **range of about 80 km in altitude** and an **Advanced Air Defence (AAD) missile** for **altitudes of 15-25 km**.
- The Indian Air Force (IAF) and DRDO **completed the BMD programme in January 2020** and the missile shield will be installed in Delhi upon receiving approval from the Indian Ministry of Defence.
- The BMD, along with the **Russian S-400 Triumph air defence system**, aims to secure the country from all kinds of incoming missiles, including nuclear, and flying objects.

S-400 air defence missile system

- India has signed a \$5 billion contract with **Russia** for the procurement of **S-400 air defence systems**. India is set to get the consignment of the S-400 air defence system soon.
- The S-400 Triumph, (NATO calls it SA-21 Growler), is a mobile, **surface-to-air missile system (SAM) designed by Russia**.
- The system can engage all types of aerial targets including aircraft, unmanned aerial vehicles (UAV) and ballistic and cruise missiles within the **range of 400km, at an altitude of up to 30km**.
- The S-400's mission set and capabilities are roughly comparable to the famed **US Patriot system**.
- The S-400 can also be integrated into the existing and future air defence units of the Air Force, Army, and the Navy.



Why in News?

- The U.S. State Department approved the proposed sale of six P-8I patrol aircraft and related equipment to India for an estimated cost of \$2.42 billion.
- India's potential purchase of P-8I aircraft would help expand its maritime surveillance capabilities.
- India's first purchase of P-8I aircraft was in **2009**.

4) P-8I patrol aircraft to India

About



- P-8I is a **long-range, multimission maritime patrol aircraft** offered by Boeing, an American multinational corporation.
- The P-8I is designed to conduct long-range anti-submarine warfare, anti-surface warfare, and intelligence, surveillance, maritime patrol and reconnaissance missions.
- It has a bomb bay that can drop sonobuoys and torpedoes, as well as hard points on its wings for anti-ship missiles.