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Schemes

1) PM Atmanirbhar Swasth Bharat Yojana

About the Scheme

- In the latest Union Budget, the Government had announced that it will launch a new centrally sponsored scheme called **Pradhan Mantri Atmanirbhar Swasth Bharat Yojana** with an outlay of about Rs 64,180 crore over six years.
- The scheme will be focused at:
 - **developing primary, secondary, and tertiary healthcare systems,**
 - **strengthening existing national institutions, and**
 - **creating new institutions for detection and cure of new diseases.**

Why in News?

- The Central Government has launched the Pradhan Mantri Atmanirbhar Swasth Bharat Yojana (PMASBY). It will be one of the largest pan-India schemes for strengthening healthcare infrastructure across the country.

News in Detail

- The objective of PMASBY is to **fill critical gaps in public health infrastructure, especially in critical care facilities and primary care in both the urban and rural areas.**
- Under the scheme, **critical care services** will be available in all the districts of the country with more than 5 lakh population, through Exclusive Critical Care Hospital Blocks, while the remaining districts will be covered through **referral services.**
- People will have access to a **full range of diagnostic services** in the Public Healthcare system through Network of laboratories across the country. **Integrated Public Health Labs** will be set up in all the districts.
- PMASBY targets to build an **IT enabled disease surveillance system** by developing a network of

surveillance laboratories at block, district, regional and national levels, in Metropolitan areas. **Integrated Health Information Portal** will be expanded to all States/UTs to connect all public health labs.

- PMASBY also aims at Operationalisation of 17 new Public Health Units and strengthening of 33 existing Public Health Units at Points of Entry, for effectively detecting, investigating, preventing, and combating Public Health Emergencies and Disease Outbreaks. It will also work towards building up **trained frontline health workforce** to respond to any public health emergency.

2) AIM: Fostering Innovation

Atal Innovation Mission

- The Atal Innovation Mission (AIM) is a flagship initiative set up by the **NITI Aayog to promote innovation and entrepreneurship** across the length and breadth of the country.
- AIM's objective is to develop new programmes and policies for fostering innovation in different sectors of the economy, provide platform and collaboration opportunities for different stakeholders, create awareness and create an umbrella structure to oversee the innovation ecosystem of the country.

Initiatives under Atal Innovation Mission

Atal Tinkering Labs - at School Level

- AIM has launched the establishment of thousands of Atal Tinkering Labs enabling students from **grade 6 to grade 12** to have access to and tinker with innovative tools and technologies like 3D printers, robotics, miniaturised electronics do-it-yourself kits, thus stimulating a problem solving

innovative mindset to solve problems in the community they are in.

Atal Incubators at Universities, Institutions, Industry Level

- To promote creation of a supporting ecosystem for start-ups and entrepreneurs, AIM has been establishing world-class incubators called Atal Incubation Centres (AICs) in universities, Institutions, corporates, etc. that would foster innovative start-ups and become scalable and sustainable enterprises.

Atal Community Innovation Centres - Serving Unserved and Under-Served Regions of India

- To promote the benefits of technology led innovation to the unserved/underserved regions of India including Tier 2, Tier 3 cities, aspirational districts, tribal, hilly and coastal areas, AIM is setting up Atal Community Innovation Centres (ACICs) with a unique partnership driven model wherein AIM would **grant up to Rs. 2.5 crore** to an ACIC subject to a partner proving equal or greater matching funding.

Atal New India Challenges - Product and Service Innovations with National Impact

- To create product and service innovations having national socio-economic impact, AIM has launched over 24 Atal New India Challenges in partnership with five different ministries and departments of the central government.

Applied Research and Innovation for Small Enterprises (ARISE)

- To promote innovation in a phased manner in the MSME/Start-up sector AIM launched ARISE along with partner Ministries so that great research ideas are converted to viable innovative prototypes followed by product development and commercial deployment.

Mentorship and Partnerships - with Public, Private sector, NGOs, Academia, Institutions

- To enable all the initiatives to succeed, AIM has launched the “**Mentor India – The Mentors of Change**” programme, in collaboration with the public sector, corporates and institutions, to support all the initiatives of the mission.

Why in News?

- NITI Aayog’s Atal Innovation Mission has launched – “**Innovations for You**”, an initiative to showcase the success stories of Atal Innovation Mission’s Startups in different domains.
- These startups have worked to create new, disruptive and innovative products, services, and solutions that can pave a path for a sustainable future.

3) Atal Mission for Rejuvenation and Urban Transformation 2.0

About AMRUT

- To recast the urban landscape of the country, to make urban areas more livable and inclusive besides driving economic growth, the Prime Minister launched a **centrally sponsored scheme** namely Atal Mission for Rejuvenation and Urban Transformation (AMRUT) in 2015.
- It is implemented under the **Ministry of Housing & Urban Affairs**.
- AMRUT seeks to lay a foundation to **enable cities and towns to eventually grow into smart cities**.
- The purpose of AMRUT is to
 - Ensure that every household has access to a tap with the assured supply of water and a sewerage connection.
 - Increase the amenity value of cities by developing greenery and well maintained open spaces (e.g. parks) and
 - Reduce pollution by switching to public transport or constructing facilities for non-motorized

transport (e.g. walking and cycling). All these outcomes are valued by citizens, particularly women, and indicators and standards have been prescribed by the Ministry of Housing and Urban Affairs (MoHUA) in the form of Service Level Benchmarks (SLBs).

- The Priority zone of the Mission is water supply followed by sewerage.

Components

- The components of the AMRUT consist of capacity building, reform implementation, water supply, sewerage and septage management, storm water drainage, urban transport and development of green spaces and parks.

Coverage

- **Five hundred cities** have been selected under AMRUT.

Approach

- Implementation of this Mission will be **linked to promotion of urban reforms** such as
 - e-governance,
 - constitution of professional municipal cadre,
 - devolving funds and functions to urban local bodies,
 - review of Building bye-laws,
 - improvement in assessment and collection of municipal taxes,
 - credit rating of urban local bodies,
 - energy and water audit and
 - citizen-centric urban planning.

Funding

- Central assistance will be to the **extent of 50 percent of project cost** for cities and towns with a **population of up to 10 lakh** and **one-third** of the project cost for those with a **population of above 10 lakh**.
- Central assistance will be released in **three installments in the ratio of 20:40:40** based on achievement of milestones indicated in **State Annual Action Plans**.

Why in News?

- The Union Cabinet has approved the Atal Mission for Rejuvenation and Urban Transformation 2.0 (AMRUT 2.0) till 2025-26.
- AMRUT 2.0 aims to provide **100% coverage of water supply to all households** in around 4,700 urban local bodies by providing about 2.68 crore tap connections and **100% coverage of sewerage and septage** in 500 AMRUT cities by providing around 2.64 crore sewer/ septage connections.
- The scheme will adopt the **principles of circular economy** and promote conservation and rejuvenation of surface and groundwater bodies.
 - *A circular economy is an economic model designed to minimize resource input, as well as waste and emission production.*
 - *Circular economy aims to reach the maximum efficiency in the use of finite resources, the gradual transition to renewable resources, and recovery of the materials and products at the end of their useful life. Essentially, a circular economy describes a regenerative economic system.*

4) 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 has decided to issue four tranches of Sovereign Gold Bonds from October 2021 to March 2022.

5) Pradhan Mantri Bhartiya Janaushadhi Pariyojana

About PMBJP

- Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) is a campaign launched by the **Department of Pharmaceuticals** to **provide quality medicines at affordable prices to the masses**.
- PMBJP stores have been set up to provide **generic drugs**, which are available at lesser prices but are equivalent in quality and efficacy as expensive branded drugs.
- **Pharmaceuticals & Medical Devices Bureau of India (PMBI)** is the implementing agency of PMBJP.

Objectives of PMBJP

- Making quality medicines available at affordable prices for all, particularly the poor and disadvantaged, through exclusive outlets "**Jan Aushadhi Kendras**", to reduce out of pocket expenses in healthcare.
- Create awareness among the public regarding generic medicines.
- Create demand for generic medicines through medical practitioners.
- Create awareness through education and awareness programs that high price need not be synonymous with high quality.

Who can open a Jan Aushadhi Kendras?

- State Governments or any organization / reputed NGOs / Trusts / Private hospitals / Charitable institutions / Doctors / Unemployed pharmacists/ individual entrepreneurs are eligible to apply for new Jan Aushadhi stores.
- The applicants shall have to employ one B Pharma / D Pharma degree holder as Pharmacist in their proposed store.
- They can be set up at any suitable place within Government hospital or Private hospital premises or anywhere outside the premises.

Why in News?

- The Pharmaceuticals and Medical Devices Bureau of India has completed the target of opening 8,300 Pradhan Mantri Bhartiya Jan Aushadhi Kendras for the Financial Year 2021-22. All the districts of the country have been covered under Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana.
- With a vision to provide quality medicines at an affordable rate to the common man especially the poor, the Government has set a target to increase the number of Pradhan Mantri Bhartiya Janaushadhi Kendras to **10000 by March 2024**. These kendras will ensure easy access of affordable medicine to the people in every nook and corner of the country.

Related Information

What are generic drugs?

- When a company develops a new drug — often after years of research — it applies for a **patent**, which **prohibits anyone else from making the drug for a fixed period**.
- To recover the cost of research and development, companies usually price their brand- name drugs on the higher side.
- Once the patent expires, other manufacturers duplicate and market their own versions of the drug.

Cost-effectiveness of generic medicines

- Since the manufacture of these generic drugs does not involve a repeat of the extensive clinical trials to prove their safety and efficacy, it **costs less to develop them**. Generic drugs are, therefore, **cheaper**.
- However, because the compounds in the generic versions have the same molecular structure as the brand-name version, they provide the **same clinical benefits** as its brand-name version. The generic drug has the **same "active ingredient"** as the brand-name drug. This ingredient is the one that cures the patient; and other, "inert ingredients", which give

the drug its colour, shape or taste, vary from the brand-name drug to the generics.

- In addition, multiple applications for generic drugs are often approved to market a single product; this creates

competition in the marketplace, typically resulting in lower prices. **Typically results in prices about 85% less than the brand-name.**

Initiatives

1) Jal Jeevan Mission

About Jal Jeevan Mission

- Launched in 2019, the chief objective of the Mission is to provide **Functional Household Tap Connection (FHTC) to every rural household by 2024** and thereby ensuring potable water supply in adequate quantity i.e. @ **55 lpcd** (Litres per capita per day) of prescribed quality on a long-term and regular basis.
- This Mission is under the **Department of Drinking Water and Sanitation, Ministry of Jal Shakti**.
- It focuses on **integrated demand and supply-side management** of water at the local level.
- The programme also implements **source sustainability measures** as mandatory elements, such as recharge and reuse through greywater management, water conservation and rainwater harvesting.
- The Jal Jeevan Mission is based on a **community approach** to water and includes **extensive Information, Education and Communication (IEC)** as a key component of the mission.
- JJM looks to create a **Jan Andolan** (People's Movement) for water, thereby making it everyone's priority.
- The fund sharing pattern is 90:10 for Himalayan and North-Eastern States; 50:50 for other States and 100% for UTs.

Why in News?

- Five crore households have been provided with water connections since the launch of the Jal Jeevan Mission in 2019. Tap water is now reaching every household in about 1.25 lakh villages.
- The vision of the Jal Jeevan Mission was a **village-driven and women-driven movement**, and its main base was mass movement and public participation.

Related Information

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Jal Jeevan Mission (Urban)

- In the Union Budget 2021-22, the Government announced that Jal Jeevan Mission (Urban) will be launched to provide **universal coverage of water supply to all households through functional taps in all 4,378 statutory towns** in accordance with **SDG Goal-6** ("clean water and sanitation for all").

Key Highlights

- The project will focus on **rejuvenation of water bodies** to augment sustainable fresh water supply and creating **green spaces and sponge cities** to reduce floods and **enhance amenity value** through an Urban Aquifer Management plan.
- JJM(U) will promote **circular economy of water** through development of a city water balance plan for each city focusing on recycle/reuse of treated sewage, rejuvenation of water bodies and water conservation. **20% of water demand** to be met by reused water with development of institutional mechanisms.
- **Information, Education and Communication (IEC) campaign** is proposed to spread awareness among masses about conservation of water.
- Mission will be monitored through a **technology-based platform** on which beneficiary response will be monitored along with progress and output-outcome.

2) PM MITRA Parks

What's in the news?

- To create a world-class infrastructure for the integration of different processes involved in the textile industry, the Union Cabinet has approved the establishment of **seven Prime Minister Mega Integrated Textile Region and Apparel (PM MITRA) parks**.

- The parks will be developed with a total spending of ₹4,445 crore over five years.
- PM MITRA parks were announced in the Union Budget for 2021-22.

News in Detail

- PM MITRA would provide an opportunity to develop an integrated textiles value chain at one place, starting with spinning, weaving, processing/dyeing, printing, and garment manufacture.
- The core infrastructure of PM MITRA parks will include, among other things, an incubation centre and plug-and-play facility, developed factory sites, roads, power, water, and waste-water systems, a typical processing house, a common effluent treatment plant (CETP), and other related facilities such as a design centre and testing centres. Workers' hostels and accommodation, a logistics park, warehousing, medical, training, and skill development facilities will also be available.
- The parks would be developed by a **Special Purpose Vehicle (SPV)** owned by the Central and State governments and would get **two kinds of support**.
 - **Development Capital Support**, aimed at helping develop infrastructure, would fund 30% of the project cost with a cap of ₹500 crore for **greenfield projects** and ₹200 crore for **brownfield projects**.
 - A separate **Competitiveness Incentive Support** would be limited to ₹300 crore per park.
 - **Note:** *With greenfield investing, a company will build its own, brand new facilities from the ground up. Brownfield investment happens when a company purchases or leases an existing facility.*

- The parks are expected to generate 7 lakh direct jobs and provide indirect jobs to almost 14 lakh people.

3) 'GOAL' Programme for Tribal Youth

About the Programme

- In 2020, the GOAL (Going Online As Leaders) programme was launched by the **Ministry of Tribal Affairs (MoTA) in partnership with Facebook**.
- The programme is designed to **mentorship tribal youth through digital mode**.

Objectives of the programme

- The programme intends to **upskill and empower 5,000 tribal youths** in the current phase to harness the full potential of digital platforms and tools to learn new ways of doing business, explore and connect with domestic and international markets.

Programme implementation

- In this program, 5000 scheduled tribe youth (to be called '**Mentees**') will get an opportunity to get training by experts from different disciplines and fields (to be called '**Mentors**').
- The mentees and mentors will be selected based on their inputs in such a way that it represents tribal youth from varied professions and has representation from urban and rural areas across India.
- The program will focus on three core areas - **Digital Literacy, Life Skills and Leadership and Entrepreneurship**, and on sectors such as Agriculture, Art & Culture, Handicrafts & Textiles, Health, Nutrition, among others.

Why in News?

- The Government organised Inspiration Masterclasses under the GOAL Program through which inspiring personalities shared their experiences.

4) Unique Identification Authority of India

About UIDAI

- The Unique Identification Authority of India (UIDAI) is a **statutory authority** established under the provisions of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016 (“Aadhaar Act 2016”) in 2016 under the **Ministry of Electronics and Information Technology (MeitY)**.
- UIDAI was created to issue **Unique Identification numbers (UID)**, named as “**Aadhaar**”, to all residents of India. The UID had to be (a) robust enough to eliminate duplicate and fake identities, and (b) verifiable and authenticable in an easy, cost-effective way.
- As on 31 March 21, the Authority has issued 128.99 crore Aadhaar numbers to the **residents of India**.
 - *As per the Aadhaar Act, every individual who qualifies as a resident Indian under the Aadhaar Act is eligible to get an Aadhaar card. Resident is a person, **including Non-resident Indian (NRI) or Foreign nationals**, who has been living in India for a period of 182 days or more in the preceding 12 months.*
- UIDAI is responsible for Aadhaar enrolment and authentication, including operation and management of all stages of Aadhaar life cycle, developing the policy, procedure, and system for issuing Aadhaar numbers to individuals and perform authentication and the security of identity information and authentication records of individuals.

Why in News?

- UIDAI hosted “Aadhaar Hackathon 2021” to find innovative solutions to enhance the experience of the residents and the way they interface with enrollment and authentication software platforms.

5) National Pharmaceutical Pricing Authority

About NPPA

- The National Pharmaceutical Pricing Authority was established in 1997 as an independent body of experts to regulate the pricing of drugs.
- It has been constituted as an attached office of the **Department of Pharmaceuticals (DoP), Ministry of Chemicals & Fertilizers**.
- The Authority has been entrusted with the task of
 - Fixation/revision of prices of pharmaceutical products (bulk drugs and formulations),
 - Enforcement of provisions of the Drugs (Prices Control) Order (DPCO).
 - Monitoring of the prices of controlled and decontrolled drugs in the country.
- The NPPA currently fixes prices of drugs placed in the **National List of Essential Medicines (NLEM) under Schedule-I of the DPCO**.
- Non-scheduled drugs are allowed an increase of up to **10 per cent in prices every year**, which is monitored by the NPPA.
- NPPA can **also fix the price for non-scheduled drugs** by invoking extraordinary powers in public interest, under the Drugs (Prices Control) Order, 2013.

Why in News?

- Drug price regulator National Pharmaceutical Pricing Authority has fixed the ceiling prices for 12 anti-diabetic generic medicines, including glimepiride tablets, glucose injection and intermediate acting insulin solution.

6) PM GatiShakti

What's in the news?

- Recently, Prime Minister Narendra Modi **launched the “PM GatiShakti — National Master Plan”** for

infrastructure development aimed at boosting multimodal connectivity and driving down logistics costs.

About the project

- PM GatiShakti is a **digital platform that connects 16 ministries** — including Roads and Highways, Railways, Shipping, Petroleum and Gas, Power, Telecom, Shipping, and Aviation- with a view to **ensuring holistic planning and execution of infrastructure projects**.
- The portal will offer **200 layers of geospatial data**, including on existing infrastructure such as roads, highways, railways, and toll plazas, as well as **geographic information about forests, rivers and district boundaries to aid in planning and obtaining clearances**.
- The portal will also allow various government departments to track, in real time and at one centralised place, the progress of various projects, especially those with multi-sectoral and multi-regional impact.
- The objective is to **ensure that each and every department now has visibility of each other's activities providing critical data while planning and execution of projects in a comprehensive manner**.
- The GatiShakti platform aims to **prevent such situations by**

addressing the issue of government departments working in silos.

- The government expects the platform to enable various government departments to synchronise their efforts into a multi-modal network. It will also offer satellite imagery for monitoring of projects. It is also expected to help state governments give commitments to investors regarding timeframes for the creation of infrastructure.

How will the platform help bring down logistics costs?

- Studies estimate that **logistics costs in India are about 13-14% of GDP as against about 7-8% of GDP in developed economies**.
- High logistics costs impact cost structures within the economy, and also make it more expensive for exporters to ship merchandise to buyers.
- By incorporating infrastructure schemes under various ministries and state governments, and economic zones such as textile and pharmaceutical clusters and electronics parks, the GatiShakti platform aims to boost last-mile connectivity and bring down logistics costs with integrated planning and reducing implementation overlap.

Environment

1) India more Vulnerable to Heat Extremes

What's the news?

- The 'Lancet Countdown on Health and Climate Change', a flagship report of the medical journal *The Lancet*, highlights that **India has become 15% more vulnerable to extremes of heat than in 1990.**

News in detail

- The report notes that **295 billion hours of potential work were lost** across the globe in 2020 **due to heat exposure.**
- The three most populous countries in the medium-HDI (Human Development Index) group (**Pakistan, Bangladesh and India**) had the **greatest losses** (2.5-3 times the world average and the equivalent to 216-261 hours lost per employed person in 2020).
- In 2020, the elderly (over 65) were affected by **3.1 billion** more days of heatwave exposure, compared to the 1986-2005 baseline average. **Chinese, Indian, American, Japanese and Indonesian senior citizens** were the most affected.
- The economic losses of climate-related extreme events were **three times higher** in medium-HDI countries than they are in very high HDI countries while **South-East Asia** was the only region with **increasing air pollution mortality costs** between 2015 and 2019, relative to GDP.
- The report tracks **44 indicators of health impacts** that are directly linked to climate change and shows **key trends are getting worse and exacerbating already existing health and social inequities.**
- The report shows that populations of 134 countries have experienced an **increase in exposure to wildfires**

and millions of farmers and construction workers could have lost income because on some days it's just too hot for them to work.

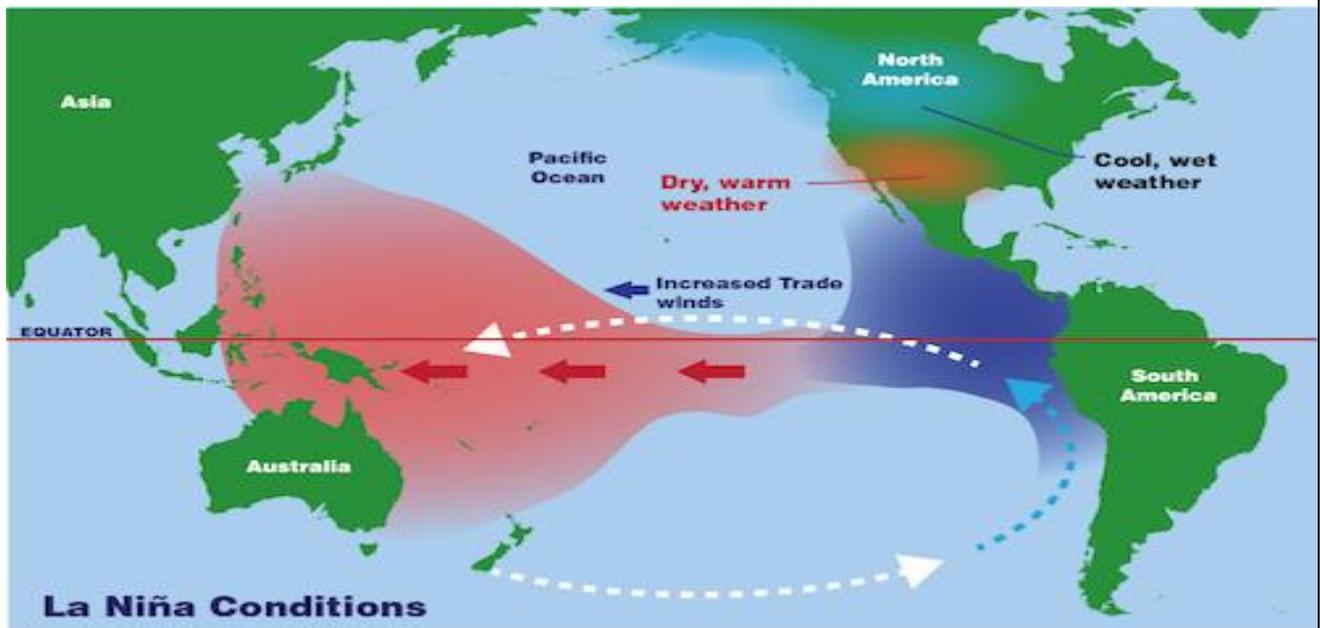
2) La-Nina- A Weather Phenomenon

What is La Nina?

- La Nina (sometimes called **El Viejo, or anti-El Nino**) phenomenon begins when the **atmosphere reacts to a cooler patch of water over the Pacific Ocean.**
- **La Nina** - like its counterpart, **El Nino** usually peaks in the **Northern Hemisphere's winter**, but its effects can trigger widespread consequences across the globe.

What happens during La Nina?

- La Nina forms after **reverse interaction** of weather conditions with **trade winds**, the permanent east-to-west prevailing winds that flow in the Earth's equatorial region.
- During normal conditions in the Pacific Ocean, trade winds take **warm water from South America towards Asia.** To replace that warm water, **cold water rises** from the depths, and this is called **upwelling.**
- During La Nina, trade winds are even **stronger than usual, pushing more warm water toward Asia** which in turn leads to **increasing upwelling off the west coast of the Americas,** which brings cold, nutrient-rich water to the surface.
- This means that Southeast Asia countries like India get much **more rain than usual.** However, the cold water in the eastern Pacific causes less rain clouds to form there. So, places like the southwestern United States can be **much drier than usual.**
- These cold waters in the Pacific **push the jet stream northward.**



How long do these weather phenomena last?

- Episodes of La Nina typically last **nine to 12 months**, but can sometimes last for years.
- Such events occur every **two to seven years**, on average, but they don't occur on a regular schedule.
- Generally, **El Nino occurs more frequently than La Nina.**

Why in News?

- According to Weather Experts, La Nina is set to severely impact the **climate in India.**
- La Nina is threatening to send the temperature in **North India plunging to as low as 3 degrees Celsius. January and February** will be particularly cold, according to forecasters, after which the temperature will recover.
- Experts also pointed out that La Nina appears to have emerged across the **equatorial Pacific**, setting the stage for worsening **droughts** in California and South America, **frigid winters** in parts of the US and Japan and greater risks for the world's already strained energy and food supplies.

3) Gulf of Mannar Marine National Park

About Gulf of Mannar Marine National Park

- The Gulf of Mannar Marine National Park spreads along a 560 Km stretch between Rameswaram and Tuticorin in **Tamil Nadu**. It is also designated as a **Biosphere Reserve by UNESCO.**
- The Gulf of Mannar, endowed with **three distinct Coastal ecosystems** namely **coral reef, seagrass bed and mangroves**, is considered one of the world's richest regions from a marine biodiversity perspective. It is known for its unique biological wealth and is a storehouse of marine diversity of global significance.
- The sea bottom of the inshore area around the islands are carpeted with seagrass beds which serve as ideal feeding ground for **Dugong dugon**, an endangered marine mammal.
- Seagrass beds serve as nursery and spawning grounds for diverse biota and habitat for macro and micro algae as epiphytes.
- This area is also the last refuge of an invertebrate, the unique 'living fossil' **Balanoglossus** that links vertebrates and invertebrates. It is also important for crustaceans, molluscs, echinoderms, fishes, turtles and many other mammals.

Why in News?

- The annual migration of birds from the Arctic to the Gulf of Mannar Marine Biosphere Reserve has begun.
- The seasonal ritual of migration occurs every year over the **Central Asian Flyway (CAF)**, comprising 29 countries including Iraq, Kuwait, Qatar, Kyrgyzstan, Nepal, India, Bhutan, Myanmar and Maldives.
- The birds take the long non-stop haul from the Arctic and European regions to winter in South Asia, and usually stopover in the coastal swamps of the Gulf of Mannar between October and December.
- The Arctic birds begin their journey through India from the **Bhitarkanika National Park, Odisha**, and fly over to Kanyakumari, the southernmost tip of coastal Tamil Nadu. The flocks again return in March on their way back.

About Central Asian Flyway

- Many species migrate along broadly similar, well-established routes known as flyways. The Central Asian Flyway covers a large **continental area of Eurasia** between the Arctic and Indian Oceans and the associated island chains.
- The Flyway comprises several important migration routes of waterbirds, most of which extend from the northernmost breeding grounds in the Russian Federation (Siberia) to the southernmost non-breeding (wintering) grounds in West and South Asia, the Maldives and the British Indian Ocean Territory.
- The CAF covers at least 279 populations of 182 migratory waterbird species, including 29 globally threatened and near-threatened species, which breed, migrate and winter within the region.
- The CAF is the **shortest flyway** in the world.

4) E-waste

Context

- The Covid pandemic has caused an increase in the disposal of e-waste in an unsystematic manner.

What is e-waste?

- Electronic wastes (e-wastes) are various forms of electric and electronic equipment that have ceased to be of value to their users or no longer satisfy their original purpose.
- Computer monitors, motherboards, mobile phones and chargers, compact discs, headphones, television sets, air conditioners and refrigerators are some examples of e-waste (when unfit for use).
- The e-waste stream contains diverse materials — most prominently **hazardous substances** such as lead, polychlorinated biphenyls (PCBs), polybrominated biphenyls (PBBs), mercury, polybrominated biphenyl ethers (PBDEs), brominated flame retardants (BFRs), and **valuable substances** such as iron, steel, copper, aluminum and plastics.
- These require **special treatment** and **cannot be dumped in landfill sites**.

Issues

- When E-waste gets buried at a landfill, it can dissolve in microscopic traces into the sludge that permeates at the landfill. Eventually, these traces of toxic materials pool into the ground below the landfill. This is known as **leaching**.
- The more E-waste and metals at the landfill, the **more of these trace toxic materials show up in the groundwater**.

E-waste (Management) Rules, 2016

- 21 types of electrical and electronic equipment listed. It featured compact fluorescent lights (CFLs), as well as other mercury-containing bulbs and equipment.
- For the first time, the laws imposed **Extended Producer Responsibility (EPR) on producers, along**

with targets. Producers have been given responsibility for the collection and exchange of E-waste.

- A new arrangement called **Producer Responsibility Organisation (PRO)** was introduced to strengthen EPR further. PRO, a professional organisation, would be authorised or financed collectively or individually by producers, to share the responsibility for collection and channelisation of e-waste generated from the 'end-of-life' products to ensure environmentally sound management of such e-waste.
- The **Deposit Refund Scheme** was introduced as an additional economic instrument in which the producer charges an additional amount as a deposit at the time of sale of electrical and electronic equipment and then returns it to the consumer with interest when the end-of-life electrical and electronic equipment is returned.
- There is also a provision for a **penalty** for breaking the rules.
- **State governments** have also been given a role in ensuring the safety, health, and skill development of workers working in dismantling and recycling activities.
- The task of collecting and channelling orphan products to authorised dismantlers or recyclers has been given to **Urban Local Bodies** (Municipal Committee/Council/Corporation).
- The rules also mandate **adequate space for e-waste dismantling and recycling** to existing and upcoming industrial units.

E-Waste (Management) Amendment Rules, 2018

- The E-Waste (Management) Amendment Rules, 2018 of the Ministry of Environment, Forest and Climate Change amended the E-Waste Management Rules, 2016.
- It **revised the collection targets** under the provision of EPR. According

to the 2018 Amendment Rules, the **phase-wise collection targets** for e-waste in weight shall be **10% of the quantity of waste generation during 2017-18, with a 10% increase every year until 2023. After 2023 onwards, the target has been made 70% of the quantity of waste generated.**

- The rules also say that the responsibility of producers is not confined to waste collection, but also to ensure that the waste reaches the authorised recycler/dismantler.
- Under the amended Rules, PROs are required to apply to the Central Pollution Control Board (CPCB) for registration to undertake their activities.

India and e-waste

- India is the **world's third largest electronic waste producer**, as per the **UN's Global E-waste Monitor 2020**.
- According to the **Central Pollution Control Board, India collected just 10 percent of the e-waste** estimated to have been generated in the country 2018-19. This falls short of the targets set by the E-Waste (Management) Amendment Rules, 2018.
- India generated 708,445 tonne e-waste in 2017-18 and 771,215 tonne the following fiscal, the report estimated. In 2019-20, the figure rose 32 per cent to 1,014,961 tonnes.
- Against this, the **e-waste dismantling capacity has not been increased** from 7.82 lakh tonnes since 2017-18.

Reasons behind the problem

- Three major e-waste generators in the country are:
 - Individual consumers,
 - Bulk consumers such as companies and government departments and
 - Electrical and electronic industry.
- In 2018, the Ministry of Environment, Forest and Climate Change had announced that **95 percent of e-waste in India is recycled by the informal**

sector and scrap dealers **unscientifically dispose** of it by burning or dissolving it in acids.

- Though there are several stakeholders that play a role in the e-waste collection channel, the **poor reach of formal collectors** and the **unwillingness of consumers to take ownership** of waste produced by them are largely responsible for the low collection rate.
- The 2016 rules clearly say it is the producers' responsibility to collect end-of-life electronic products as part of the Extended Producer Responsibility (EPR). Yet, **leakage is rampant** and many often these products end up with **dismantlers and recyclers**.

Issues

- The consequences of improper e-waste disposal in landfills or other non-dumping sites pose **serious threats to current public health and can pollute ecosystems** for generations to come.
- When e-waste is improperly in regular landfills or in places where it is dumped illegally, both heavy metals and flame retardants can seep directly from the e-waste into the soil, causing **contamination of underlying groundwater or contamination of crops** that may be planted nearby or in the area in the future.
- **Contamination in the air** occurs when e-waste is informally disposed of by dismantling, shredding or melting the materials, **releasing dust particles or toxins**, such as dioxins, into the environment that cause air pollution and damage respiratory health.
- e-waste contains **toxic components that are dangerous to human health**, such as mercury, lead, cadmium, polybrominated flame retardants, barium and lithium. The negative health effects of these toxins on

humans include brain, heart, liver, kidney and skeletal system damage.

- **Chronic diseases and cancers** are at a higher risk to occur when burning e-waste because it also releases fine particles, which can travel thousands of miles, creating numerous negative health risks to humans and animals.

Way forward

- **State Pollution Control Boards should play a crucial role** and take effort to strengthen the e-waste collection mechanism.
- **Individual users need to be sensitised** to the challenge of e-waste and how they contribute to the same.
- We need to **efficiently use our electronic devices** by regularly maintaining them. By getting devices serviced timely, we can extend the average life of these electronic devices.
- There is a **need to break consumerist patterns**. We need to reevaluate our choices and use one multi-purpose device.
- Another unique solution to the problem can be offered by tech giants through **conditional selling**. All tech companies should mandate their customers to buy new technology only after exchanging old electronic products for the new ones.
- Hardware stores and companies should offer **incentives** such as exchange offers and discounts to customers who give away their old electronic devices.
- There are various legislations to regulate the disposal and management of e-waste in India, but their **implementation is poor**. A **Comptroller and Auditor General of India report** found that **over 75 per cent of state bodies were not implementing these laws**.
- **Close monitoring** is required to deter producers and recyclers from leaking the waste to the informal sector.

Conclusion

- Since India is highly deficient in precious mineral resources (whereas untreated e-waste goes to landfill), there is a need for a well-designed, robust and regulated e-waste collection and recovery regime which would generate jobs as well as wealth. It is also crucial for preventing the adverse effects on the environment and public health.

5) COP-15

Convention on Biological Diversity

- Signed by 150 government leaders at the **1992 Rio Earth Summit**, the Convention on Biological Diversity (CBD) is dedicated to promoting sustainable development.
- Conceived as a practical tool for translating the **principles of Agenda 21** into reality, the Convention recognizes that biological diversity is about more than plants, animals and microorganisms and their ecosystems – it is about people and our need for food security, medicines, fresh air and water, shelter, and a clean and healthy environment in which to live.
- **India** is a party to CBD and enacted the **Biological Diversity Act, 2002** to meet the obligations under Convention on Biological Diversity.
 - *Agenda 21 is a non-binding action plan of the United Nations for sustainable development, covering a wide range of specific natural resources and the role of different groups, as well as issues of social and economic development and implementation.*
 - *It is a product of the **1992 Rio Earth Summit**.*

Objectives

- The CBD entered into force on 29 December 1993. It has 3 main objectives:
 1. The conservation of biological diversity

2. The sustainable use of the components of biological diversity
3. The fair and equitable sharing of the benefits arising out of the utilization of genetic resources

Aichi Targets

- The 'Aichi Targets' were adopted by the Convention on Biological Diversity at the tenth meeting of the Conference of the Parties to the CBD (COP10) which took place in Nagoya, Japan in 2010.
- During the meeting, the parties agreed that previous biodiversity protection targets were not achieved, and therefore they needed to come up with new plans and targets.
- The short-term plan provides a set of **20 time-bound, measurable targets to be met by the year 2020**, collectively known as the **Aichi Biodiversity Targets**, grouped under **five Strategic Goals**.

Protocols to CBD

Cartagena Protocol

- The Cartagena Protocol on Biosafety to the Convention on Biological Diversity is an international agreement which aims to **ensure the safe handling, transport and use of living modified organisms (LMOs)** resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health.
- It entered into force in 2003. Number of Parties: 173 (including **India**).

Nagoya Protocol

- The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity is an international agreement which aims at **sharing the benefits arising from the utilization of genetic resources in a fair and equitable way**.

- It entered into force in 2014. Number of Parties: 129 (including **India**).

Nagoya – Kuala Lumpur Supplementary Protocol

- Adopted as a **supplementary agreement to the Cartagena Protocol on Biosafety**, the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety aims to contribute to the conservation and sustainable use of biodiversity by providing **international rules and procedures in the field of liability and redress relating to living modified organisms**.
- It entered into force in 2018. Number of Parties: 49 (including **India**).

Reports published

- **The Global Biodiversity Outlook (GBO) Report** is the flagship publication of the CBD and summarises progress made towards achieving the objectives of the Convention, such as the Aichi Targets and identifies key actions to achieve these.

Why in News?

- The first half of the United Nations Biodiversity Conference (COP-15) has concluded in Kunming, China. The second phase will be held in April-May 2022 due to the pandemic.

Highlights of the Conference

Kunming Declaration

- The Kunming Declaration was adopted by over 100 countries during COP-15, which calls upon the parties to **mainstream biodiversity protection** in decision-making and recognise the importance of conservation in protecting human health.
- The Declaration calls for “urgent and integrated action” to reflect biodiversity considerations in all sectors of the global economy.

Raised Commitments

- Several nations have increased their commitments to finance initiatives that

conserve or restore biodiversity, or create new habitats.

- The **Chinese Government** pledged \$230bn to create a ‘**Kunming Fund**’, which will be used to support projects overseas in developing nations as well as domestic initiatives.
- The **European Union** committed to double overseas funding for biodiversity-related initiatives by the end of the decade.

6) A Movement to root out Invasive Alien Species

What are invasive species?

- An invasive species can be any kind of living organism—an amphibian, plant, insect, fish, fungus, or bacteria—that are not native to an ecosystem and causes harm.
- **Not all non-native species are invasive.** For example, most of the food crops grown in India, including onion, potato and tomatoes are not native to the region.
- To be invasive,
 - a species must adapt to the new area easily
 - it must reproduce quickly
 - it must harm the economy, or the native plants and animals of the region.
- The **Convention on Biological Diversity (CBD)** defines Invasive Alien Species as “an alien species whose introduction and spread threaten ecosystems, habitats, or species with socio-cultural, economic and environmental harm and harm to human health”.
- Some of the most serious invasive species in India are **Alternanthera philoxeroides, Cassia uniflora, Chromolaena odorata, Eichhornia crassipes, Lantana camara, Parthenium hysterophorus and Prosopis juliflora, Senna Sepctabilis**, etc.

Why in News?

- Environmentalists, retired Forest Department authorities, farmers, and other stakeholders have come together to form a forum called **Movement Against Biological Invasions (MABI)** – a green movement aimed at systematically charting and rooting out invasive species.
- One of the MABI's prime objectives is to **help farmers** improve their productivity by identifying invasive species and rooting it out through seminars, workshops, slideshows, video teasers, documentary, information brochures etc.
- MABI has so far conducted several '**obnoxious weed eradication**' drives in various parts of Maharashtra as well as across the country, namely in Northeastern States like Sikkim.

Invasive Alien Species - a cause of concern

- Forest-invasive species can supplant **native plants, eliminate food and cover for wildlife** and threaten rare plant and animal species.
- The **impact of globalisation** leading to the increased movement of people, trade and deforestation have led to the introduction of invasive species in the **indigenous environment** in massive quantities.
- The spread of invasive species is alarming and is **wiping out local native species** like grasses and other herbaceous species. As a result, the local **food chain is afflicted** with the invasive species competing for space and light with native flora.
- Eg: The widespread prevalence of invasive species like **Lantana camara** has reduced the proportion of natural grasses for herbivorous animals forcing their movement to human habitats in search of paddy crops and other edible items.
- These species can change the functions of ecosystems and increase **losses in forestry and natural resource** management costs as well as being a potential threat to **livestock health**.
- Another indirect effect of the rise in invasive species is a heightening of the **man-animal conflict**.
- The unchecked growth of invasive species affects **soil health**, which is prone to faster deterioration.

Agriculture

1) Kisan Credit Card Scheme

About the Scheme

- The Kisan Credit Card (KCC) scheme was introduced in **1998** with the aim of providing **adequate and timely credit support** from the banking system under a single window with flexible and simplified procedure to the farmers for their cultivation and other needs as indicated below:
 - a. To meet the short term credit requirements for cultivation of crops;
 - b. Post-harvest expenses;
 - c. Produce marketing loan;
 - d. Consumption requirements of farmer household;
 - e. Working capital for maintenance of farm assets and activities allied to agriculture;
 - f. Investment credit requirement for agriculture and allied activities.
- **Note:** The aggregate of components 'a' to 'e' above will form the **short term credit limit portion** and the aggregate of components under 'f' will form the **long term credit limit portion**.
- Under the KCC Scheme, a flexible limit of Rs.10,000 to Rs.50,000 has been provided to marginal farmers (as Flexi

KCC) based on the land holding and crops grown.

- The beneficiaries under the scheme will be issued with a **Smart card/ Debit card**.
- It enables farmers to purchase agricultural inputs such as seeds, fertilizers, pesticides, etc. and draw cash to satisfy their agricultural and consumption needs.
- The Scheme is implemented by **Commercial Banks, RRBs, Small Finance Banks and Cooperatives**.

Eligibility

- Farmers - individual/joint borrowers who are owner cultivators;
- Tenant farmers, oral lessees & sharecroppers;
- Self Help Groups (SHGs) or Joint Liability Groups (JLGs) of farmers including tenant farmers, sharecroppers etc.
- In 2019, KCC was extended to **farmers who are involved in activities related to animal husbandry and fisheries**.

Why in News?

- The government has announced that it is taking steps to cover every fisherman under the Kisan Credit Card.

Flora and Fauna

1) Olive Ridley Turtles

About olive ridley turtles

- The olive ridley turtle is considered the **most abundant sea turtle in the world**.
- Olive ridleys are found **only in warmer waters**, including the southern Atlantic, Pacific and Indian Oceans.
- They are listed as **vulnerable** in the IUCN Red list.

Mass nesting

- The Olive Ridley Turtles come to the beaches of Odisha coast annually between November and December and stay on until April and May for mass

nesting. Such mass nesting events are called **arribadas**.

- While states like Maharashtra, Goa, and the offshore Andaman islands witness sporadic nesting of olive ridley turtles, **Odisha** is the only state in India that sees mass nesting of olive ridley turtles.
- The Olive Ridley turtles turn up in millions for mass nesting along the Odisha coast every year. **Gahirmatha beach in Odisha** is acclaimed as the **world's largest-known nesting site** for the marine species.
- Apart from Gahirmatha, turtles turn up at the **mouths of Rushikulya and Devi river** (both in Odisha) for mass nesting.



Threats

- The Olive Ridley's face serious threats across their migratory route, habitat and nesting beaches, due to human activities such as turtle unfriendly fishing practices, development and exploitation of nesting beaches for ports, and tourist centers.
- Though international trade in these turtles and their products is banned, they are still extensively poached for their meat, shell and leather.
- All the five species of sea turtles occurring in India, including the Olive Ridley turtles, are legally protected under **Schedule I** of the Wildlife Protection Act, 1972 and **Appendix I** of the CITES Convention which prohibits trade in turtle products.
- As the nesting period stretches over six months, the Indian Coast Guard undertakes the Olive Ridley Turtle protection program under the code name '**Operation Olivia**' every year.

Why in News?

- The Odisha government has announced that it will ban fishing for seven months from November around

the sites where the endangered olive ridley turtles congregate for mass nesting.

Science and Technology

1) Indian Space Association

What's in the news?

- Prime Minister Narendra Modi has launched the Indian Space Association (ISpA), an **industry body of government and private companies** which **aims to supplement the Centre's efforts in commercial space exploration and space-based communication.**

About ISpA

- ISpA is represented by leading home grown and global corporations with advanced capabilities in space and satellite technologies. Its founding members include **government bodies** such as ISRO and **private telecom companies** such as Bharti Airtel's One Web, Tata Group's Nelcom, L&T, MapMyIndia, and others.
- The industry association will act as an **independent and "single-window" agency for enabling the opening up of the space sector to start-ups and the private sector.**
- ISpA aims to contribute to the Government of India's vision of **making India Atmanirbhar** (self-reliant) **in the space arena**, which is fast emerging as the next growth frontier for mankind.
- ISpA will undertake **policy advocacy and engage with all stakeholders in the Indian Space domain**, including the Government and its Agencies, to make India technologically advanced and a leading player in the space arena.
- ISpA will also work towards **building global linkages for the Indian space industry** to bring in critical technology and investments into the country to create more high skill jobs.

Significance

- According to ISRO, the **current size of the global space economy stands at**

about USD 360 billion. However, **India accounts for only about 2% of the space economy with a potential to capture 9% of the global market share by 2030.**

- Though India too has made significant strides in space exploration over time, **state-run ISRO has been at the centre and front of this progress.** Several private sector companies, however, have shown an interest in India's space domain, with space-based communication networks coming to the fore.
- One of the main goals of the organisation is to **supplement the government's efforts towards making India a global leader in commercial space-based excursions.** Of late, ISRO's rockets have been carrying the payload and communication satellites of various countries; now, private players will also look to broach this space with the new organisation.

2) Lucy

What's in the news?

- NASA has launched its Lucy spacecraft to **study Jupiter's Trojan asteroids.**
- It was launched on the Atlas V rocket from Cape Canaveral Space Force Station in Florida, USA.

About the Mission

- Lucy is a **solar-powered mission.** The Lucy probe will head out to the orbit of Jupiter to **study two groups of asteroids**, since some of the Trojan asteroids precede Jupiter in its orbit, while others trail it.
- The Jupiter Trojan asteroids, thought to number well over 7,000, are **leftover raw materials from the formation of our system's giant planets** -- Jupiter, Saturn, Uranus and Neptune. As such, these trojans **hold**

important clues about the early evolution of the Solar System.

- Lucy will use its instrumentation to study these objects, detailing their shape, structure, surface features, composition and temperature.
- Lucy's first encounter will be in **2025** with the asteroid, **Donaldjohanson**, in the Main Belt, between Mars and Jupiter.
- **Named after an ancient fossil of a pre-human ancestor**, Lucy will become the first solar-powered spacecraft to venture so far from the sun and will observe more asteroids than any probe before it.

3) Non-transgenic gene editing

What is it?

- Genome editing technology **enables genetic engineering where DNA is replaced, deleted or inserted in the genome of a living organism**. The most widely used approach to genome editing nowadays is based on **CRISPR-Cas9** (Refer Pulse June 2021 edition).
 - *A genome is the complete set of genetic information in an organism. It provides all of the information the organism requires to function. In living organisms, the genome is stored in long molecules of DNA called chromosomes.*
- **Transgenics** describes the process of introducing foreign DNA into a host organism's genome.
- Unlike the older GM technology which involves the introduction of foreign DNA, **non-transgenic gene editing involves the use of gene editing tools to directly tweak the organism's own genes instead. It does not involve inserting any foreign DNA.**

Why in News?

- Scientists are waiting for the Central Government to decide on a research proposal to consider non-transgenic gene editing techniques as equivalent to conventional breeding methods.

News in Detail

- Scientists at the **Indian Agricultural Research Institute (IARI)** are in the process of **developing resilient and high-yield rice varieties using non-transgenic gene editing techniques**, which have already been approved by many countries.
- However, the proposal for Indian regulators to **consider this technique as equivalent to conventional breeding methods**, since it does not involve inserting any foreign DNA, has been **pending with the Genetic Engineering Appraisal Committee (GEAC)** for almost two years.
- The IARI has previously worked on **golden rice**, a traditional GM variety which inserted genes from other organisms into the rice plant, but ended trials over five years ago due to agronomic issues. **India has not approved any GM food crop for commercial cultivation.**

Newer technologies

- The Institute has now moved to newer technologies such as **Site Directed Nuclease (SDN) 1 and 2**. SDN genome editing involves the use of different DNA-cutting enzymes (nucleases) that are directed to cut the DNA at a predetermined location by a range of different DNA binding systems. After the cut is made, the cell's own DNA repair mechanism recognizes the break and repairs the damage, using pathways that are naturally present in cells.
- These techniques aim to bring **precision and efficiency into the breeding process** using gene editing tools such as CRISPR.
- In this case, scientists are **tweaking a gene that is already there in the plant, without bringing in any gene from outside**. When a protein comes from an outside organism, it needs to be tested for safety. But in this case, this protein is right there in the plant,

and is being changed a little bit, just as nature does through mutation.

- But it is **much faster and far more precise than natural mutation or conventional breeding methods** which involve trial and error and multiple breeding cycles. Scientists claim that it is **potentially a new Green Revolution.**

Safety Concerns

- The U.S., Canada, Australia and Japan are among the countries which have already approved the SDN 1 and 2 technologies as not akin to GM, so such varieties of rice can be exported without any problem.
- The **European Food Safety Authority** has also submitted its opinion that **these technologies do not need the same level of safety assessment as conventional GM**, though the European Union is yet to accept the recommendation.

Related Information

About GEAC

- The Genetic Engineering Appraisal Committee is a **statutory body** constituted under the 'Rules for the Manufacture, Use /Import /Export and Storage of Hazardous Microorganisms/Genetically Engineering Organisms or Cells, 1989' notified under the **Environment (Protection) Act, 1986.**
- It functions under the **Ministry of Environment, Forest and Climate Change.**
- GEAC is responsible for **appraisal of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production** from the environmental angle.
- The committee is also responsible for **appraisal of proposals relating to release of genetically engineered (GE) organisms and products** into the environment including experimental field trials.

4) In Vitro Fertilization (IVF) in Buffalo

What's in the news?

- India's first IVF calf of the Banni Buffalo breed has taken birth recently.

What is IVF?

- Also called as **Ovum Pick-up and In Vitro Embryo Production (OPU-IVEP) Technology, in-vitro fertilization (IVF)** is an **advanced reproductive technology for multiplication of superior female germplasm at much faster rate.**
- By using OPU-IVEP technology, one can get **20-40 calves in a year** from a cow/buffalo.
- This is the process of harvesting oocytes from donor cows, and creating embryos by fertilising the oocytes with semen in a petri dish.
- Using this technology, **embryos are produced under in vitro condition** i.e. inside the laboratory instead in a womb/ uterus.

About Banni Buffalo

- Banni buffaloes are also known as "**Kutchi**" or "**Kundi**" is a breed of buffalo found primarily in the **Kutch district of Gujarat, India.**
- The breed is maintained mostly by the **Maldhari** tribal community under locally adapted typical extensive production systems in its breeding tract.
- Banni buffaloes are trained to graze on Banni grassland during night and brought to the villages in the morning for milking. This traditional system of buffalo rearing has been adapted to **avoid the heat stress and high temperature of the day.**
- Banni buffalo have unique qualities of adaptation such as the **ability to survive water scarcity conditions, to cover long distances during periods of drought and disease resistance.**
- Banni buffalo is known for its **resilience and higher milk**

producing capacity in an arid environment.

Other Assisted Reproduction Technologies

Sexed semen technology

- Semen having either X or Y bearing sperm to **produce progenies of a desired sex** i.e. female or male is known as sexed semen.
- By adopting this technology dairy farmers can produce progenies of desired sex and **abate the menace of unwanted stray male animals**.
- Full potential of this technology can be appreciated if combined with IVF for production of sexed embryos as oocytes from multiple donors can be fertilised using single sexed semen doses.

Embryo Transfer

- Also called **Multiple Ovulation and Embryo Transfer (MOET) Technology**, it is used to **increase the reproduction rate of superior female dairy animals**.
- Normally, one can get one calf from a superior female dairy animal in a year.
- But by using MOET technology, one can get **10-20 calves in a year** from a cow/buffalo.
- An elite cow/buffalo is administered hormones with (Follicle Stimulating Hormone) FSH-like activity to **induce superovulation**.
- Under the influence of the hormone, the female produces several eggs instead of one egg produced normally.
- The superovulated female is inseminated 2-3 times at 12 hour intervals and the embryos when developed are retrieved.
- Good quality embryos either frozen and preserved for transfer in future or transferred fresh into recipient animals approximately seven days post heat date.
- Thus, from an elite dairy animal several calves can be produced in a year.

- The **first embryo transfer technology (ETT) project in the country was initiated by the National Dairy Development Board in 1987**.

Government Measures

- The Government of India under its flagship scheme **Rashtriya Gokul Mission (RGM)** is providing **financial assistance for establishment of around 30 OPU-IVEP facilities** across the country to take the technology at farmers' doorstep.
- The **National Dairy Development Board** conducts **training programmes on OPU-IVEP technology** for veterinarians nominated by different organizations engaged in the genetic improvement of dairy animals.

About NDDB

- The National Dairy Development Board (NDDB) was founded in **1965** to replace exploitation with empowerment, tradition with modernity, stagnation with growth, transforming dairying into an instrument for the development of India's rural people.
- The National Dairy Development Board is **registered under the Companies Act 1956**.
- Since its inception, the Dairy Board has **planned and spearheaded India's dairy programmes** by placing dairy development in the hands of milk producers and the professionals they employ to manage their cooperatives.

5) Nationwide expansion of Pneumococcal Conjugate Vaccine

What is Pneumonia?

- Pneumonia is an infection that **inflames the air sacs in one or both lungs**.
- The air sacs may fill with fluid or pus, causing cough with phlegm or pus, fever, chills, and difficulty breathing.

- A variety of organisms, including **bacteria, viruses and fungi**, can cause pneumonia.
- Pneumonia can range in seriousness from mild to life-threatening.
- It is most serious for infants and young children, people older than age 65, and people with health problems or weakened immune systems.
- The germs that cause pneumonia are **contagious**. Both **viral and bacterial pneumonia** can spread to others through inhalation of airborne droplets from a sneeze or cough. One can contract fungal pneumonia from the environment. However, it doesn't spread from person to person.
- **Vaccines** are available to prevent some types of pneumonia and the flu.

Why in News?

- The Ministry of Health and Family Welfare has launched the **nationwide expansion of Pneumococcal Conjugate Vaccine (PCV) under the Universal Immunization Programme (UIP)** as part of the "Azadi ka Amrit Mahotsav" initiative marking 75 years of India's independence. It is for the first time in the country that PCV will be available for universal use.

About the vaccine

- Pneumonia is a **leading cause of death among children under-5 years old, globally and in India**.
- Pneumonia caused by **pneumococcus** (bacteria) is the most common cause of severe pneumonia in children. In **India, around 16 percent of deaths in Children occur due to pneumonia**. The nationwide rollout of PCV **will reduce child mortality by around 60 percent**.
- The launch of PCV will further ensure healthy growth and development of our children, apart from reducing child mortality.

What are conjugate vaccines?

- Antigens of some pathogenic bacteria do not elicit a strong response from the immune system, so a vaccination against this weak antigen would not protect the person later in life.
- In this case, a conjugate vaccine is used in order to invoke an immune system response against the weak antigen. In a conjugate vaccine, the **weak antigen is covalently attached to a strong antigen**, thereby eliciting a stronger immunological response to the weak antigen.
- Conjugate vaccines target several leading causes of vaccine-preventable deaths.

Related Information

About UIP

- Universal Immunization Programme (UIP) is one of the largest public health programmes targeting close to 26.7 million newborns and 29 million pregnant women annually.
- Under UIP, immunization is being provided free of cost against **12 vaccine preventable diseases**:
 - **Nationally against 10 diseases - Diphtheria, Pertussis, Tetanus, Polio, Measles, Rubella, severe form of Childhood Tuberculosis, Rotavirus diarrhea, Hepatitis B and Meningitis & Pneumonia** caused by Haemophilus Influenzae type B.
 - **Sub-nationally against 2 diseases - Pneumococcal Pneumonia and Japanese Encephalitis**; of which Pneumococcal Conjugate vaccine is nationally expanded recently, while JE vaccine is provided only in endemic districts.

6) CRISP-M tool

About MGNREGA

- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme is the largest social security scheme in the world — guaranteeing **100 days of work** each

financial year to **any rural household** willing to do public work-related **unskilled manual work** at the statutory minimum wage.

- The act makes it **obligatory** for the State to give rural households work on demand. In case such employment is not provided within 15 days of registration, the applicant becomes eligible for an **unemployment allowance**.
- The **Ministry of Rural Development (MRD)** is monitoring the entire implementation of this scheme in association with state governments.

Key Features

- **One-third** of the stipulated workforce must be women.
- **Work site facilities** such as creche, drinking water and shade have to be provided.
- The employment will be provided **within a radius of 5 km**: if it is above 5 km extra wage will be paid.
- The wages are revised according to the **Consumer Price Index-Agricultural Labourers (CPI-AL)**.
- A **60:40 wage and material ratio** has to be maintained.
- Permissible works predominantly include water and soil conservation, afforestation and land development works.
- **Work site facilities** such as crèche, drinking water, shade have to be provided.
- **Gram sabhas** must recommend the works that are to be undertaken and at least 50% of the works must be executed by them.

- **Social Audit** has to be done by the Gram Sabha.

Funding

- Funding is **shared between the centre and the states**.
- The funding pattern of the scheme comprises 100% funding for unskilled labour cost and 75% of the material cost by Central Government and rest shall be borne by the State Government.

Why in News?

- The Government of India has launched Climate Resilience Information System and Planning (CRISP-M) tool for **integration of climate information in Geographic Information System (GIS) based watershed planning** under MGNREGA scheme.
- This tool will be used in **seven states**. The states are Bihar, Jharkhand, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan.
- The integration of climate information in GIS based watershed planning would further **strengthen planning of climate resilient works under MGNREGA**.

About GIS

- A Geographic Information System is a computer system that analyzes and displays geographically referenced information. It uses data that is attached to a unique location.
- It is a tool for mapping and analyzing the geographic terrain and offers scientific choices of development works suitable to the area.

Reports and Indices

1) Global Hunger Index

What is it?

- The Global Hunger Index is an annual score ranking countries of the world on hunger levels.
- The Index is a peer-reviewed report released annually by **Concern Worldwide**, Ireland's largest aid and humanitarian agency and **Welthungerhilfe**, one of the largest private aid organisations in Germany.
- The GHI determines hunger on a **100-point scale**, where 0 is the best possible score (no hunger) and 100 is the worst. Each country's GHI score is classified by severity, from low to extremely alarming.
- It is based on 4 indicators:
 - **Undernourishment**
 - **Child wasting** - the share of children under the age of five who have low weight for their height, reflecting acute undernutrition
 - **Child stunting** - children under the age of five who have low height for their age, reflecting chronic undernutrition
 - **Child mortality** - the mortality rate of children under the age of five.

Why in News?

- The Global Hunger Index 2021 was released recently.

Highlights of the Report

- **India has slipped to 101st position** in the 2021 Index out of 116 countries and is behind its neighbours Pakistan, Bangladesh and Nepal. In 2020, India was ranked 94th out of 107 countries.
- Eighteen countries, including China, Brazil and Kuwait, shared the top rank with a GHI score of less than five.
- With a score of **27.5**, India has a level of hunger that is '**serious**'. According to the report, 15.3 per cent of the country's population is undernourished, while 17.3% of children under the age of five are wasted, and 34.7 per cent of children under the age of 5 are stunted. 3.4 per cent of children die before their fifth birthday. **India has the highest child wasting rate of all countries covered in the index.**
- The **share of wasting** among children in India rose from 17.1 per cent between 1998-2002 to **17.3 per cent** between 2016-2020.
- Neighbouring countries like Nepal (76), Bangladesh (76), Myanmar (71) and Pakistan (92) are also in the 'alarming' hunger category, but have fared better at feeding its citizens than India.



3 Cs

- According to the report, the fight against hunger is dangerously off track.

Based on the current GHI projections, the world as a whole -- and 47 countries in particular -- **will fail to achieve a low level of hunger by 2030.**

- Further, the report noted that **conflict, climate change, and COVID-19—three Cs** threaten to wipe out any progress that has been made against hunger in recent years.

Government's Reaction

- Reacting sharply to the report, the Ministry of Women and Child

Development said that the report is found to be devoid of ground reality and facts and suffers from serious methodological issues.

Organisations

1) African Union

About African Union

- The African Union (AU) is a continental body consisting of the **55 member states that make up the countries of the African Continent**.
- It was officially launched in **2002** as a successor to the Organisation of African Unity (OAU) to promote unity and solidarity of African states, to spur economic development, and to promote international cooperation.
- The AU is guided by its vision of “An Integrated, Prosperous and Peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena.”
- The AU’s headquarters are in **Addis Ababa, Ethiopia**.

Why in News?

- The African Union has suspended **Sudan** from all of its activities following a recent military coup.
- The organisation has suspended Sudan until the civilian-led transitional authority is restored.

2) World Food Programme

About World Food Programme

- The World Food Programme (WFP) is the **food-assistance branch of the United Nations** and the world’s largest humanitarian organization addressing hunger and promoting food security.
- Assisting almost 100 million people in around 83 countries each year, the WFP responds to emergencies making sure food reaches where it is needed, especially in times of civil strife and natural disasters.
- The organisation has widened its operational remit and is now a leading provider of not just emergency food aid but also an agency engaged in **supporting the nutritional**

requirements of communities through food assistance programmes. These vary from supporting school meals projects in different countries, including India, to the provision of cash and vouchers as a complement to in-kind food distributions.

- WFP is **funded entirely by voluntary donations**, most of which comes from governments.
- Established in **1961**, WFP is headquartered in **Rome, Italy**.
- It works closely with the other two Rome-based UN agencies: the **Food and Agriculture Organization (FAO)**, which helps countries draw up policy and change legislation to support sustainable agriculture, and the **International Fund for Agricultural Development (IFAD)**, which finances projects in poor rural areas.
- The **Nobel Peace Prize for 2020** was awarded to the WFP for its efforts to combat hunger.

Why in News?

- The UN World Food Programme has warned that millions of Afghans will face starvation this winter unless urgent action is taken. More than half the population - about 22.8 million people - face acute food insecurity, while 3.2 million children under five could suffer acute malnutrition.
- The WFP said that Afghanistan is now among the world’s worst humanitarian crises.
- Afghanistan fell to the Taliban in August after the US pulled out the last of its remaining troops and the militants swept across the country retaking ground. The takeover weakened an already fragile economy that was heavily dependent on foreign aid.

3) Financial Action Task Force

About Financial Action Task Force (FATF)

- It is an **intergovernmental organization** that designs and promotes policies and standards to combat financial crime.
- Recommendations of the FATF target
 - Money laundering
 - Terrorist financing
 - Other threats to the global financial system
- The FATF was created in 1989 by the **G7 countries**, and is headquartered in Paris.
- There are **37 members**, including **India** and **two regional organisations** - European Commission and the Gulf Cooperation Council.

Grey list FATF

- Member countries that have deficiencies in their anti-money laundering and counter terrorist financing (AML/CTF) regimes but they **commit** to an action plan to address these loopholes.
- Currently, there are more than 20 countries on the grey list, including **Pakistan**.

Black list FATF

- Member countries that have deficiencies in their anti-money laundering and counter terrorist financing (AML/CTF) regimes and **do not end up doing enough**.
- As of now there are only two countries in the blacklist — **Iran and North Korea**.
- While greylist includes countries which are considered as safe havens for supporting terror funding and money laundering, blacklisting will mean **severe strictures on the countries banks and credit rating**, as well as **access to loans and foreign investments**.
- Pakistan has been under the FATF's scanner since 2018, when it was put on

the greylist for terror financing and money laundering risks.

Why in News?

- The Financial Action Task Force has retained Pakistan in the 'greylist' yet again, observing that it needed to further demonstrate that investigations and prosecutions were being pursued against the senior leadership of U.N.-designated terror groups, which include Lashkar-e-Taiba, Jaish-e-Mohammed, al-Qaeda and the Taliban.
- The FATF also announced the 'greylisting' of Jordan, Mali and Turkey.

4) UNHRC

About UNHRC

- The Human Rights Council is an **inter-governmental body within the United Nations system**.
 - The Council's mandate is to promote "universal respect for the protection of all human rights and fundamental freedoms for all" and "address situations of violations of human rights, including gross and systematic violations, and make recommendations thereon."
 - It has the ability to discuss all thematic human rights issues and situations that require its attention throughout the year.
 - The Council was created by the **United Nations General Assembly in 2006**. It replaced the former United Nations Commission on Human Rights.
 - The headquarters of UNHRC is in **Geneva, Switzerland**.
- #### Membership
- The Council is made of **47 Member States**, which are elected by the majority of members of the General Assembly of the United Nations through **direct and secret ballot**.
 - The Council's Membership is based on **equitable geographical distribution**.
 - Members of the Council serve for a period of **three years** and are **not**

eligible for immediate re-election after serving two consecutive terms.

Why in News?

- India has been re-elected to the UN Human Rights Council for the 6th term with an overwhelming majority.

5) National Human Rights Commission

About NHRC

- The National Human Rights Commission (NHRC) is a **statutory organisation** established in 1993 under the Protection of Human Rights Act (PHRA), 1993.
- The Act also created Human Rights Commissions at the levels of the various States.
- NHRC was established in conformity with the **Paris Principles**, adopted at the first international workshop on national institutions for the promotion and protection of human rights held in Paris in 1991, and endorsed by the General Assembly of the United Nations in 1993.

Functions of NHRC

- The NHRC enquires into complaints of violation of human rights or negligence in the prevention of such violation by a public servant, studies treaties and international instruments on human rights and makes recommendations for their effective implementation to the Government.
- It is responsible for spreading human rights awareness amongst the masses.
- While inquiring into complaints under the Act, the Commission shall have all the powers of a **civil court**.

Composition of NHRC

- According to the **Protection of Human Rights (Amendment) Act, 2019**, the NHRC consists of
 - A **Chairperson**, who has been a Chief Justice of India or a Judge of the Supreme Court
 - One member who is, or has been, a Judge of the Supreme Court of India

- One member who is, or has been, the Chief Justice of a High Court
- Three Members, out of which at least one shall be a woman to be appointed from amongst persons having knowledge of, or practical experience in, matters relating to human rights
- In addition, the Chairpersons of National Commissions viz., National Commission for Scheduled Castes, National Commission for Scheduled Tribes, National Commission for Women, National Commission for Minorities, National Commission for Backward Classes, National Commission for Protection of Child Rights; and the Chief Commissioner for Persons with Disabilities serve as **ex officio members**.

- The term of the Chairperson and Members of the Commission is **three years or until he attains the age of seventy years**, whichever is earlier. They shall be **eligible for re-appointment**.
- They can be removed only on the **charges of proved misbehavior or incapacity**, if proved by an inquiry conducted by a Supreme Court Judge.

Limitations of NHRC

- As per the Protection of Human Rights Act, the NHRC **can only recommend the government but the recommendations are non-binding**. This lack of authority gives an outright rejection of any recommendation or partial compliance.
- State human rights commissions cannot call for information from the national government, which means that they are implicitly denied the power to investigate armed forces under national control.
- Also, the National Human Rights Commission powers related to violations of human rights by the armed forces have been **largely restricted**.

- Another major problem is that it is **flooded with too many complaints**, and are finding it difficult to address the increasing number of complaints.

Why in News?

- 28th National Human Rights Commission Foundation day programme was celebrated recently.

6) Animal Welfare Board of India

About AWBI

- The Animal Welfare Board of India (AWBI) is a **statutory advisory body** on Animal Welfare Laws and promotes animal welfare in the country.
- Established in **1962** under the **Prevention of Cruelty to Animals Act, 1960**, AWBI was started under the stewardship of Rukmini Devi Arundale, well known humanitarian.
- From ensuring that animal welfare laws in the country are diligently followed, to providing grants to Animal Welfare Organizations and advising the Government of India on animal welfare issues, the Board has been the face of the animal welfare movement in the country for the last 50 years.
- AWBI's mandate is to prevent the infliction of unnecessary pain or

suffering on animals, in terms of the provision of the Prevention of Cruelty to Animals Act, 1960.

- The Board consists of 28 Members. The term of office of Members is for a period of 3 years.

Why in News?

- The Animal Welfare Board of India celebrated World Animal Day 2021 on 4th October.
- The Day is celebrated every year internationally to educate humans about how their actions impact animals and create awareness about the protection of animals all over the world.

7) G20

About G20

- Founded in 1999, the Group of Twenty (G20) is the premier forum for its members' international economic cooperation and decision-making.
- The G20 comprises Argentina, Australia, Brazil, Canada, China, European Union, France, Germany, **India**, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, UK and USA.

G20 members



Note: The European Union is also a member

BBC

- The G-20's member-countries represent around 85% of the world's economic output, three-quarters of international trade and two thirds of the world's population.
- The objectives of the G20 are:
 - Policy coordination between its members in order to achieve global economic stability, sustainable growth;
 - To promote financial regulations that reduce risks and prevent future financial crises; and
 - To create a new international financial architecture.

Why in News?

- Prime Minister Narendra Modi participated in the 16th G-20 Summit along with global leaders.
- The forum has met every year since 1999 and includes, since 2008, a yearly Summit, with the participation of the respective Heads of State and Government.
- This year, the Summit is centered around the theme - **People, Planet, Prosperity**.

Polity

1) Central Consumer Protection Authority

About CCPA

- The Central Consumer Protection Authority (CCPA) was constituted under **The Consumer Protection Act, 2019**.
- The CCPA **aims to protect the rights of the consumer** by cracking down on unfair trade practices, and false and misleading advertisements that are detrimental to the interests of the public and consumers.
- The CCPA is empowered to conduct investigations into violation of consumer rights and institute complaints/prosecution, order recall of unsafe goods and services, order discontinuation of unfair trade practices and misleading advertisements, impose penalties on manufacturers/endorsers/publishers of misleading advertisements.
- It functions under the **Ministry of Consumer Affairs**.

Why in News?

- The Central Consumer Protection Authority has sent notices to e-commerce entities for violations reported on their platforms.

Related Information

About Consumer Protection Act

- The Consumer Protection Act, 2019 aims to provide for protection of the interests of consumers and for the said purpose, to establish authorities for timely and effective administration and settlement of consumers' disputes and for matters connected therewith or incidental thereto.

Key features of the Act

- **Definition of consumer:** A consumer is defined as a person who buys any good or avails a service for a consideration. It does not include a person who obtains a good for resale

or a good or service for commercial purpose.

- It covers transactions through all modes including **offline, and online through electronic means, teleshopping, multi-level marketing or direct selling**.
- The following consumer rights have been defined in the Act, including the right to:
 - be protected against the marketing of goods and services which are hazardous to life and property;
 - be informed of the quality, quantity, potency, purity, standard and price of goods or services;
 - be assured of access to a variety of goods or services at competitive prices; and
 - seek redressal against unfair or restrictive trade practices.
- **Product liability clause:** A manufacturer or a service provider has to compensate a consumer if their good/service cause injury or loss to the consumer due to manufacturing defect or poor service. The most significant impact of this provision will be on **e-commerce** platforms as it also includes service providers under its ambit.
- **Central Consumer Protection Authority (CCPA):** To be set up by the central government to promote, protect and enforce the rights of consumers. It will regulate matters related to violation of consumer rights, unfair trade practices, and misleading advertisements.
- **Misleading advertisements:** The CCPA may impose a penalty on a manufacturer or an endorser of up to Rs 10 lakh and imprisonment for up to two years for a false or misleading advertisement. In case of a subsequent offence, the fine may extend to Rs 50

lakh and imprisonment of up to five years.

- **Consumer Disputes Redressal Commissions (CDRCs):** It will be set up at the district, state, and national levels. A consumer can file a complaint with CDRCs in relation to:
 - Unfair or restrictive trade practices;
 - Defective goods or services;
 - Overcharging or deceptive charging; and
 - The offering of goods or services for sale which may be hazardous to life and safety.
- **Appeals from a District CDRC** will be heard by the **State CDRC**. Appeals from the State CDRC will be heard by the **National CDRC**. Final appeal will lie before the **Supreme Court**.
- The Act also enables regulations to be notified on **E-commerce and direct selling** with focus on protection of interest of consumers.

2) Commission for Air Quality Management in NCR

About the Commission

- The **Commission for Air Quality Management in the National Capital Region and Adjoining Areas Act, 2021**, was recently passed by the Parliament. It replaces the Commission for Air Quality Management in the National Capital Region and Adjoining Areas Ordinance.

What is the Act all about?

- The monitoring and management of air quality in the Delhi-NCR region has been done in pieces by multiple bodies, including the Central Pollution Control Board (CPCB), the state pollution control boards, the state governments in the region, including Delhi, Haryana, Uttar Pradesh, and Rajasthan, and the Environment Pollution (Prevention and Control) Authority (EPCA) of the National Capital Region.

- They, in turn, are monitored by the **Union Ministry of Environment and Forests and Climate Change (MoEF)**, and the **Supreme Court** which monitors air pollution as per the judgment in '**M C Mehta vs Union of India**' case in 1988.
- The Act, however, seeks to create an overarching body - **Commission for Air Quality Management in National Capital Region and Adjoining Areas** - to consolidate all monitoring bodies, and to bring them on one platform so that air quality management can be carried out in a more comprehensive, efficient, and time-bound manner.
- The Centre also seeks to **relieve the Supreme Court from having to constantly monitor pollution levels through various cases**.

What will the new commission replace?

- Apart from consolidating all agencies that monitored, investigated and planned mitigation of air pollution in the region, the commission has replaced the **Supreme Court-appointed Environment Pollution (Prevention and Control) Authority (EPCA)** which had been running for 22 years.
- Over the years, the EPCA's powers had been waning. While dissolving the body, the Centre felt that the EPCA had become redundant and had been ineffective in addressing issues related to air pollution. The EPCA also **did not have penal provisions that the commission will now have**.

What are the powers of the commission?

- The Commission is the **most powerful air pollution monitoring body set up by the Centre to date**. The rulings by the commission on air pollution will **override anything contained in any other law**.
- The powers of the commission will also **supersede that of any other body in matters of air pollution**.

Therefore, in cases where conflict may arise between orders or directions issued by the other state governments, state pollution control boards or even the Central Pollution Control Board, the **orders of the commission will prevail.**

- The Commission will have the power to **take measures, issue directions and entertain complaints “for the purpose of protecting and improving the quality of air in the National Capital Region”.**
- It will also coordinate action taken by states on air pollution and will lay down parameters for air quality and emission or discharge of environmental pollutants. It will also have **powers to restrict industries** in any area, **carry out random inspections** of any premises including factories and be able to **close down an industry or cut its power and water supply** in case of non-compliance.
- It will also be **monitoring the measures taken by the states to prevent stubble burning.**

What will be the composition of the commission?

- The Commission will be headed by a **full-time chairperson** with experience of not less than 15 years in the field of environmental protection and pollution control or having administrative experience of not less than 25 years.
- The **members of the commission** will also comprise of an official from the Environment Ministry, five ex-officio members who are either chief secretaries or secretaries from Delhi, Punjab, Haryana, Rajasthan and Uttar Pradesh, one full-time member who is or has been a joint secretary, three full-time independent technical members who are experts in air pollution, one technical member each from the Central Pollution Control Board and Indian Space Research Organisation,

three members from non-governmental organisations who deal in air pollution and one representative of the National Institution for Transforming India.

- The commission will also have **three members**, being stakeholders from sectors such as agriculture, industry, transport or construction apart from representatives of several ministries, including Road Transport and Highways, Power, Housing and Urban Affairs, Petroleum and Natural Gas, Agriculture and Farmers’ Welfare, Commerce and Industry. There will also be representatives of any association from the commerce or industry sector.
- The Chairperson and members of the Commission will have a tenure of **three years or till the age of seventy years**, whichever is earlier, and shall be eligible for re-appointment.
- The commission will have at least **three sub-committees** —monitoring and identification, safeguarding and enforcement, and research and development.
- The Act further says that **no civil court** will have jurisdiction to entertain any suit, proceeding or dispute pertaining to or arising out of the actions taken or directions issued by the commission and that **orders of the commission can only be contested before the National Green Tribunal.**

Why in News?

- In view of the fact that dust emanating from Construction & Demolition (C&D) sites is a major consistent source of air pollution, the Commission for Air Quality Management in NCR and Adjoining Areas has directed the Government of National Capital Territory of Delhi and State Governments of Haryana, Rajasthan and Uttar Pradesh for strict compliance of dust mitigation measures at C&D sites.

- Following the directions of the Commission, dedicated teams were deployed in the states to inspect Construction and Demolition sites.

3) MTP (Amendment) Act, 2020

About MTP Act, 1971

- The Medical Termination of Pregnancy Act, 1971 provides for the termination of certain pregnancies by registered Medical Practitioners. It is possible to get an abortion under the Act if pregnancy is **under 20 weeks**.
- However, it is **subject to several conditions** and conducting an abortion without fulfilling the conditions is considered a crime.

Issues with the law

- Legal and medical experts felt that a revision of the legal limit for abortion is long overdue.
- Foetal abnormalities show up only by **18 weeks**, so just a two-week window after that is too small for the would-be parents to take the difficult call on whether to keep their baby and for the medical practitioner to exhaust all possible options before advising the patient to take the extreme step.
- Since lack of legal approval does not prevent abortions from being carried out beyond 20 weeks, women are put under risk since the abortions then are often conducted in unhygienic conditions by untrained, unqualified persons. It is estimated that about **8% of maternal deaths happen due to unsafe abortions**.

Medical Termination of Pregnancy (Amendment) Act, 2020

- In March 2021, the Parliament passed the Medical Termination of Pregnancy (Amendment) Act, 2020 that increases the time period within which an abortion may be carried out.

Highlights of the Act

- The Act **allows abortion up to 24 weeks of gestational age** for vulnerable categories of women and

there is **no limit of gestational age** in case of pregnancies with substantial foetal abnormalities, diagnosed by a medical board.

- The Act proposes the **constitution of a Medical Board** in every State and UT, which will decide on pregnancies beyond 24 weeks in cases of foetal abnormalities.
- Each board will have **one gynaecologist, one radiologist or sonologist, one paediatrician, and other members prescribed by the State/UT government**.
- Currently, abortion requires the **opinion of one doctor** if it is done within 12 weeks of conception, and **two doctors** if it is done between 12 and 20 weeks.
- The amendment Act allows abortion to be done on the **advice of one doctor up to 20 weeks, and two doctors** in the case of certain categories of women (central government will notify these categories) between **20 and 24 weeks**.
- For a pregnancy to be terminated **after 24 weeks** in case of substantial foetal abnormalities, the **opinion of the State-level medical board is essential**.

Criticisms

Huge vacancies

- A recent study by the Centre for Justice, Law and Society at the O.P. Jindal Law Global School has revealed that a panel of doctors to decide on termination of pregnancy beyond 24 weeks is **“unfeasible”** as 82% of these posts are lying vacant in the country.
- The report analysed district-wise availability of specialists, including surgeons, obstetricians and gynaecologists, physicians and paediatricians.

Infringes privacy

- The study also flags the **constitution of the Medical Boards as draconian**

and invasive as they strip away autonomy from the pregnant person.

- Even if the Boards are set up, pregnant persons who are in more remote areas of the country will incur many costs in travelling and this will **add to their financial burden**.
- This legal reform will make access to abortion more challenging for many people, especially those from marginalised groups.

Inequality in access

- The **World Health Organization** also urges nations not to create barriers by including complex authorisation processes and noted that negotiating authorization procedures disproportionately burdens poor women, adolescents, those with little education and those subjected to, or at risk of, domestic conflict and violence, creating inequality in access.

Why in News?

- The Government has notified the Medical Termination of Pregnancy (Amendment) Rules, 2021, under which the gestational limit for termination of pregnancy has been increased from 20 to 24 weeks for certain categories of women.
- These categories include **survivors of sexual assault or rape or incest, minors and women whose marital status changes** during an ongoing pregnancy.
- As per the new rules, the medical board will allow or deny termination of pregnancy beyond 20-24 weeks of gestation period only after due consideration and ensuring that the **procedure would be safe for the woman** at that gestation age and whether the **foetal malformation has substantial risk** of it being incompatible with life or if the child is born it may suffer from such physical or mental abnormalities to be seriously handicapped.

- The new rules have been framed under the Medical Termination of Pregnancy (Amendment) Act, 2021 passed by Parliament in March this year.

Inconsistencies

- The abortion rules recognise **minors** as a vulnerable category and seek to make services more accessible to them. But social stigma and conflict with POCSO Act, 2012, or the law against child sexual abuse, pose hurdles.
- Minors were included as a special category because it was found that a large number of them were approaching courts for permission to terminate pregnancies beyond 20 weeks. The detection of pregnancies in case of minors gets delayed, and then after that the need to negotiate and seek relevant care becomes all the more difficult.
- According to the **National Family Health Survey (NFHS)-4 (2015-2016)**, women aged between 20 to 24 years who were **married before age 18 were at 27%** and **nearly 8% women between the age of 15-19 years were already mothers or pregnant**.
- Further, **contraception services rarely reach adolescents**. According to a study by the Guttmacher Institute in 2021, many adolescent women in India — 34 lakh — want to avoid pregnancy. This includes 32 lakh married women and 1.95 lakh sexually active unmarried women. Among women wanting to avoid a pregnancy, the **proportion who have an unmet need for modern methods is much higher for adolescents (71%) than for all women of reproductive age (27%)**.
- Medical practitioners also note the obstacles posed by the **Protection of Children from Child Sexual Offences (POCSO) Act, 2012**, in providing services. Section 19 of the Act requires any person aware of a minor engaging

in sex to report the matter to the local police even if it was a consensual act as the law pegs the age of consent at 18 years.

- Globally, according to the Center for Reproductive Rights, India is behind 32 countries that allow abortion on request with varying gestational limits. But it is ahead of 24 countries that prohibit abortion altogether, 42 countries that allow abortion only if a woman's life is at risk and 20 countries where it is permitted only on health grounds.

4) PM CARES Fund

About PM CARES Fund

- The Prime Minister's Citizen Assistance and Relief in Emergency Situations (PM CARES) Fund was set up in the aftermath of the Covid-19 pandemic to mobilize resources. The Fund was established in March, 2020.
- PM CARES Fund is a **public charitable trust**. It has been set up keeping in mind the need for having a dedicated fund with the primary objective of dealing with any kind of emergency or distress situation, like posed by the COVID-19 pandemic, and to provide relief to the affected.
- The **Prime Minister** is Chairperson (ex-officio) of the PM CARES Fund and Minister of Defence, Minister of Home Affairs and Minister of Finance, Government of India are ex-officio Trustees of the Fund.

Objectives

- The primary objectives of the PM CARES Fund Trust are:-
1. To undertake and support relief or assistance of any kind relating to a **public health emergency or any other kind of emergency, calamity or distress**, either man-made or natural, including the creation or upgradation of healthcare or pharmaceutical facilities, other necessary infrastructure, funding

relevant research or any other type of support.

2. To render financial assistance, provide grants of payments of money or take such other steps as may be deemed necessary by the Board of Trustees to assist the affected population.
3. To undertake any other activity, which is not inconsistent with the above Objects.

Legal Provisions

- PM CARES Fund has been registered as a Public Charitable Trust under the Registration Act, 1908.
- PM CARES Fund accepts **voluntary contributions** by individuals/organizations as well as contributions as part of **Corporate Social Responsibility (CSR)** from Companies/Public Sector Undertakings (PSUs). However, **contributions flowing out of budgetary sources of the PSUs are not accepted.**
- All contributions towards the PM CARES Fund are **100% exempt from Income Tax** under Section 80(G) of the Income Tax Act, 1961 for those who opt for the old tax slabs.
- Any contribution made to the PM CARES Fund by any Company or a PSU shall **qualify as CSR expenditure** as provided under the Companies Act, 2013.
- PM CARES Fund is audited by an **independent auditor.**

Whether Foreign Donation is accepted in the PM CARES Fund?

- **Yes.** PM CARES Fund has received exemption from operation of all provisions of the **Foreign Contribution (Regulation) Act, 2010.**

Why in News?

- The Government has sanctioned more than 1000 oxygen generation plants across the country under the PM CARES Fund.

- The aim of establishing oxygen generation plants at Government hospitals in the district headquarters is to further strengthen the public health system and ensure that each of these

hospitals has a captive oxygen generation facility.

Economy

1) Trade multilateralism at risk

Context

- The World Trade Organization (WTO), the global trade body, is facing a serious existential crisis. The upcoming WTO ministerial meeting scheduled in Geneva (from 30 November to 3 December) provides an opportunity to rescue this critical global institution from irrelevance.

Concerns

- Created in 1995, during the heyday of neoliberalism, the WTO became a shining example of triumphant free-market capitalism.
- But the critics of neoliberalism rebuked the WTO for **pushing the American imperialist agenda**.
- Paradoxically, more than two-and-a-half decades later, the **United States seems to have lost interest in WTO**, as it hasn't served the American national interest.
- The WTO has **failed to stem China's rise and regularly indicted the U.S.** in several trade disputes.

Crippling of the WTO's Dispute Settlement Mechanism

- The **Appellate Body (AB)** is part of the WTO's dispute settlement mechanism. It is a **permanent body with seven members**, and acts as an appellate court hearing appeals from the decisions given by WTO panels.
- However, since December 2019, the AB has **stopped functioning due to rising vacancies**.
- Over the years, the U.S. has consistently blocked the appointment of AB members. The U.S. also vetoes proposals to find solutions to this impasse, including stalling the proposal of the European Union to establish an alternative interim appellate arbitration mechanism.

- The number of pending appeals to the AB has increased sharply to around 20 cases.
- As a result, countries now have an easy option **not to comply with the WTO panel decisions by appealing into the void**.
- Additionally, there are some other challenges that the WTO faces.

Public Stockholding for Food Security Purposes

- No solution has been found to the public stockholding for food security purposes despite a clear mandate to do so in the **2015 Nairobi ministerial meeting**.
- This is of paramount concern for countries like India that use Minimum Support Price-backed mechanisms to procure foodgrains.
- With rising prices and the need to do higher procurement to support farmers and provide food to the poor at subsidised prices, **India might breach the cap on subsidies**.
- Although countries have agreed that legal suits will not be brought if countries breach the cap, it is imperative to find a permanent solution such as not counting MSP-provided budgetary support as trade-distorting.
 - Refer Pulse September 2021 edition "Agreement on Agriculture" topic for more details.

TRIPS Agreement on Medical Products

- The WTO member countries continue to disagree on the **need of waiving the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement for COVID-19 related medical products**.
- A year back **India and South Africa proposed a TRIPS waiver** to overcome intellectual property (IP)-related obstacles in increasing

accessibility of COVID-19 medical products, including vaccines.

- The WTO needs to adopt a waiver in the upcoming ministerial meeting.
- Refer *Pulse September 2021 edition "Intellectual Property Rights waiver" topic for more details.*

Regulation of Irrational Fishing Subsidies

- The WTO is close to signing a deal on regulating irrational subsidies provided for fishing that has led to the **overexploitation of marine resources** by countries like China, which is the largest catcher and exporter of fish.
- However, this agreement should **strike a balance between conserving ocean resources and the livelihood concerns of millions of marginal fishermen.**

Mega Plurilateral Trade Agreements

- The deadlock at the WTO has led to the emergence of mega plurilateral trade agreements like the **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)** — a treaty between 11 countries.
- Another key trade treaty is the **Regional Comprehensive Economic Partnership (RCEP) agreement** between Asian economies and countries down under.
- These plurilateral agreements not only **fragment the global governance on international trade** but also **push the multilateral order to the margin**, converting the WTO to what some call an **"institutional zombie"**.

Way Forward

- In this situation of utter chaos, not just an institution, but also the future of trade multilateralism is in stake.

- Hence, there is an **urgent need for a rule-based global order.**
- **Institutional multilateralism would be the ideal antidote to unilateralism and economic nationalism.**

Conclusion

- Notwithstanding its flaws, the WTO is the **only forum where developing countries** like India, not party to any mega plurilateral trade agreements, **can push for evolving an inclusive global trading order that responds to the systemic imbalances of extant globalisation.**
- Hence, developing countries should make continuous efforts to keep multilateral institutions like WTO intact.

2) 15th Finance Commission

Background

- Last year, the 15th Finance Commission (Chair: **Mr. N. K. Singh**) submitted recommendations for the 2021-26 period and the report was tabled in Parliament on February 1, 2021.

Key recommendations in the report for 2021-26 include:

Share of states in central taxes

- The share of states in the central taxes for the 2021-26 period is **recommended to be 41%**, same as that for 2020-21. This is less than the 42% share recommended by the 14th Finance Commission for 2015-20 period.
- The adjustment of 1% is to provide for the newly formed union territories of Jammu and Kashmir, and Ladakh from the resources of the centre.

Criteria for devolution

1 : Criteria for devolution

Criteria	14 th FC	15 th FC	15 th FC
	2015-20	2020-21	2021-26
Income Distance	50.0	45.0	45.0
Area	15.0	15.0	15.0
Population (1971)	17.5	-	-
Population (2011) [#]	10.0	15.0	15.0
Demographic Performance	-	12.5	12.5
Forest Cover	7.5	-	-
Forest and Ecology	-	10.0	10.0
Tax and fiscal efforts*	-	2.5	2.5
Total	100	100	100

- **Income distance:** It is the distance of a state's income from the state with the highest income. Income of a state has been computed as average per capita GSDP during the three-year period between 2016-17 and 2018-19. A state with lower per capita income will have a higher share to maintain equity among states.
- **Demographic performance:** The Commission used **2011 population data** for its recommendations. The demographic performance criterion has been used to **reward efforts made by states in controlling their population**. States with a lower fertility ratio will be scored higher on this criterion.
- **Forest and ecology:** This criterion has been arrived at by calculating the share of the dense forest of each state in the total dense forest of all the states.
- **Tax and fiscal efforts:** This criterion has been used to reward states with higher tax collection efficiency. It is measured as the ratio of the average

per capita own tax revenue and the average per capita state GDP during the three years between 2016-17 and 2018-19.

Grants

- Over the 2021-26 period, the following grants will be provided from the centre's resources.
- **Revenue deficit grants:** 17 states will receive grants worth Rs 2.9 lakh crore to eliminate revenue deficit.
- **Sector-specific grants:** Sector-specific grants of Rs 1.3 lakh crore will be given to states for eight sectors: (i) health, (ii) school education, (iii) higher education, (iv) implementation of agricultural reforms, (v) maintenance of PMGSY roads, (vi) judiciary, (vii) statistics, and (viii) aspirational districts and blocks. A portion of these grants will be **performance-linked**.
- **State-specific grants:** The Commission recommended state-specific grants of Rs 49,599 crore. These will be given in the areas of: (i) social needs, (ii) administrative governance and infrastructure, (iii) water and sanitation, (iv) preservation

of culture and historical monuments, (v) high-cost physical infrastructure, and (vi) tourism. The Commission recommended a high-level committee at state-level to review and monitor utilisation of state-specific and sector-specific grants.

- **Grants to local bodies:** The total grants to local bodies will be Rs 4.36 lakh crore (a portion of grants to be performance-linked) including: (i) Rs 2.4 lakh crore for rural local bodies, (ii) Rs 1.2 lakh crore for urban local bodies, and (iii) Rs 70,051 crore for health grants through local governments. The grants to local bodies will be made available to all three tiers of Panchayat- village, block, and district.
- Grants to local bodies (other than health grants) will be distributed among states **based on population and area, with 90% and 10% weightage**, respectively.
- **Disaster risk management:** The Commission recommended retaining the existing cost-sharing patterns between the centre and states for disaster management funds. The cost-sharing pattern between centre and states is: (i) 90:10 for north-eastern and Himalayan states, and (ii) 75:25 for all other states.

Fiscal roadmap

- **Fiscal deficit and debt levels:** The Commission suggested that the centre bring down the fiscal deficit to **4% of GDP by 2025-26**. For states, it recommended the fiscal deficit limit (as % of GSDP) of: (i) 4% in 2021-22, (ii) 3.5% in 2022-23, and (iii) 3% during 2023-26.
- **Extra annual borrowing worth 0.5% of GSDP** will be allowed to states during first four years (2021-25) upon undertaking power sector reforms including: (i) reduction in operational losses, (ii) reduction in revenue gap, (iii) reduction in payment of cash

subsidy by adopting direct benefit transfer, and (iv) reduction in tariff subsidy as a percentage of revenue.

- The Commission observed that the recommended path for fiscal deficit for the centre and states will result in a **reduction of total liabilities of:** (i) the centre from 62.9% of GDP in 2020-21 to 56.6% in 2025-26, and (ii) the states on aggregate from 33.1% of GDP in 2020-21 to 32.5% by 2025-26.
- It recommended forming a **high-powered inter-governmental group to:** (i) review the Fiscal Responsibility and Budget Management Act (FRBM), (ii) recommend a new FRBM framework for centre as well as states, and oversee its implementation.
- **GST:** GST rate structure should be rationalised by **merging the rates of 12% and 18%**. States need to step up field efforts for expanding the GST base and for ensuring compliance.
- **Financial management practices:** A comprehensive framework for public financial management should be developed. An **independent Fiscal Council** should be established with powers to assess records from the centre as well as states. The Council will only have an **advisory role**.
- The centre as well as states **should not resort to off-budget financing or any other non-transparent means of financing** for any expenditure.
- States may form an **independent debt management cell** to manage their borrowing programmes efficiently.

Other recommendations

- **Health:** States should increase spending on health to **more than 8% of their budget by 2022**. **Primary healthcare expenditure** should be **two-thirds of the total health expenditure** by 2022. **All India Medical and Health Service** should be established.
- **Funding of defence and internal security:** A dedicated non-lapsable

fund called the **Modernisation Fund for Defence and Internal Security (MFDIS)** will be constituted to primarily bridge the gap between budgetary requirements and allocation for capital outlay in defence and internal security. The fund will have an estimated corpus of Rs 2.4 lakh crore over the five years (2021-26).

Why in News?

- The Ministry of Finance has released the 7th monthly installment of Post Devolution Revenue Deficit (PDRD) Grant of 9,871 crore rupees to the states. The grants are released as per the recommendations of the Fifteenth Finance Commission in monthly installments to meet the gap in revenue accounts of the states post devolution.

3) Purchasing Managers' Index

What is PMI?

- Purchasing Managers' Index (PMI) is an economic indicator which indicates the business activity & economic health of both the **manufacturing and service sectors**.
- PMI of India is published by Japanese firm **Nikkei** but compiled and constructed by **IHS Markit**, a London-based global information provider.

- PMI is an **investor sentiment tracking index** and is more dynamic in nature. They are derived from monthly surveys of private companies.
- Variables used for calculating the PMI are: Output, New Orders, Employment, Input Costs, Output Prices, Backlogs of Work, Export Orders, Quantity of Purchases, Suppliers' Delivery Times, Stocks of Purchases and Stocks of Finished Goods.
- PMI, which is usually released at the **start of the month**, serves as a leading indicator of economic activity. It comes before the official data on industrial output, core sector manufacturing and GDP growth.

How to read PMI?

- While PMI >50 implies an expansion of business and economic activity, PMI <50 means contraction.

Why in News?

- According to the latest Purchasing Managers' Index, India's services sector hit the 55.2 mark in September, the second-fastest expansion since February 2020. A reading above 50 indicates an expansion in activity.

International Relations

1) East Asia Summit

About EAS

- The East Asia Summit (EAS) is a unique Leaders-led forum of **18 countries of the Asia-Pacific region** formed to further the objectives of regional peace, security and prosperity.
- It has evolved as a forum for strategic dialogue and cooperation on political, security and economic issues of common regional concern and plays an important role in regional architecture.

Membership

- Established in **2005**, EAS allows the principal players in the Asia-Pacific region to discuss issues of common interest and concern, in an open and transparent manner, at the highest level.
- The membership of EAS consists of **ten ASEAN Member States** (i.e. Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand, the Philippines and Vietnam), **Australia, China, India, Japan, New Zealand, Republic of Korea, Russian Federation and the USA.**
- **India** is a founding member of EAS.
- EAS is an initiative of ASEAN and is based on the premise of the centrality of ASEAN. **EAS can only be chaired by an ASEAN member.**

Priority areas

- There are **six priority areas of regional cooperation** within the framework of the EAS. These are – Environment and Energy, Education, Finance, Global Health Issues and Pandemic Diseases, Natural Disaster Management, and ASEAN Connectivity.
- **India endorses regional collaboration in all six priority areas.**

Why in News?

- Prime Minister Narendra Modi attended the 16th East Asia Summit held recently.

2) Indo-Pacific Regional Dialogue

About IPRD

- The Indo-Pacific Regional Dialogue (IPRD) is the **apex international annual conference of the Indian Navy** and is the principal manifestation of the Navy's engagement at the strategic-level.
- The dialogue has been **held every year since 2018.**
- The **National Maritime Foundation (NMF)** is the Navy's knowledge partner and chief organiser of each edition of this annual event.
 - *NMF was established in 2005 in New Delhi as the nation's first maritime think-tank for conducting independent and policy-relevant research on India's maritime interests.*
- The IPRD aims to review the prevailing geopolitics within the Indo-Pacific region and identify both opportunities and challenges arising from these geopolitical moves and countermoves of regional and extra-regional powers.

Why in News?

- Indo-Pacific Regional Dialogue, the apex international annual conference of the Indian Navy, was held recently as an online event.

3) Uighurs

About Uighur issue

- The **Xinjiang province** in China's far west has had a long history of discord between the authorities and the indigenous ethnic Uighur population.
- Most Uighurs are **Muslim**, their language is related to **Turkish**, and they regard themselves as culturally

and ethnically close to Central Asian nations.



- Some Uighurs living there refer to the region as **East Turkestan** and argue that it ought to be independent from China. There have been open calls for **separation of Xinjiang from China** since the 1990s. Since then, China suppressed any dissent from Uyghur and began placing restrictions on them.
- Ethnic tensions caused by economic and cultural factors are considered the root cause of the recent violence. There are complaints of severe restrictions on Islam, with fewer mosques and strict control over religious schools.

Recent developments

- Rights activists have said the Xinjiang region is home to a vast network of extrajudicial internment camps that have imprisoned at least one million people, which China has defended as vocational training centres to counter extremism.
- Most of the people who have been arbitrarily detained are Uighur. Human rights organizations, UN officials, and many foreign governments are urging China to stop the crackdown.
- But Chinese officials maintain that what they call vocational training centers do not infringe on Uighurs' human rights. They have refused to

share information about the detention centers, and prevented journalists and foreign investigators from examining them.

Why in News?

- Forty-three countries have called on China to ensure full respect for the rule of law for the Muslim Uighur community in Xinjiang.
- The declaration, signed by the United States as well as several European and Asian member states and others, accused China of a list of human rights violations against the Uighurs, including torture, forced sterilisation and forced disappearances.
- Beijing has long denied accusations of ethnic cleansing against Uighurs and other Muslim Turkic people in Xinjiang, where experts have estimated that more than one million people are incarcerated in camps.

4) NAM Summit

About the NAM

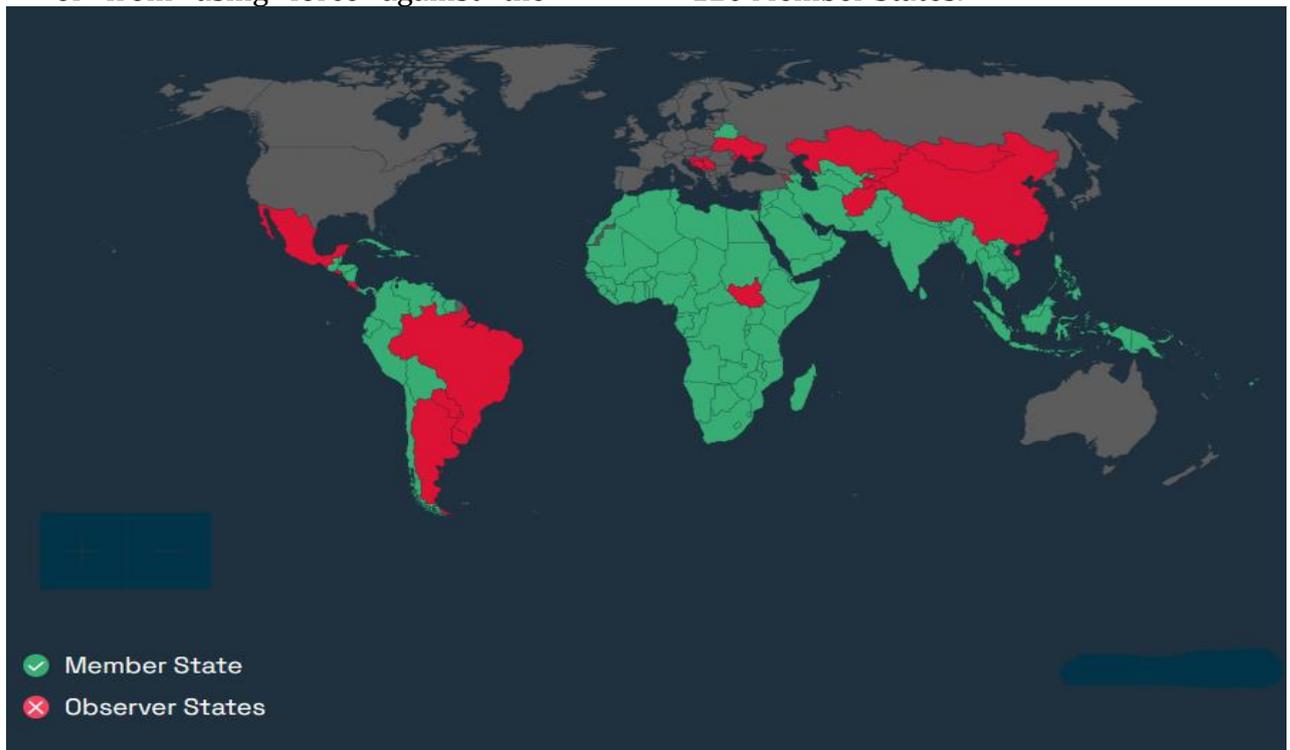
- The Non-Aligned Movement was formed during the Cold War as an organization of States that did not seek to formally align themselves with either the United States or the Soviet Union, but sought to remain independent or neutral.
- NAM was officially founded in **1961**, at the **Belgrade Summit**, drawing on the principles (also known as **Bandung Principles**) agreed at the Afro-Asian Conference held in Bandung, Indonesia in 1955.
- Such principles were adopted later as the main goals and objectives of the policy of non-alignment. The fulfillment of those principles became the essential criterion for Non-Aligned Movement membership.
- The **ten principles of Bandung** are followings:
 - Respect of fundamental human rights and of the objectives and

principles of the Charter of the United Nations.

- Respect for the sovereignty and territorial integrity of all nations.
- Recognition of the equality among all races and of the equality among all nations, both large and small.
- Non-intervention or non-interference into the internal affairs of another -country.
- Respect the right of every nation to defend itself, either individually or collectively, in conformity with the Charter of the United Nations.
- Non-use of collective defense pacts to benefit the specific interests of any of the great powers. Non-use of pressures by any country against other countries.
- Refraining from carrying out or threatening to carry out aggression, or from using force against the

territorial integrity or political independence of any country.

- Peaceful solution of all international conflicts in conformity with the Charter of the United Nations.
- Promotion of mutual interests and of cooperation.
- Respect of justice and of international obligations.
- India is one of the **founding members** of the NAM.
- The following are considered to be the founding fathers and historic leaders of the Movement: Joseph Broz Tito (President of Yugoslavia), Gamal Abdel Nasser (President of Egypt), Jawaharlal Nehru (Prime Minister of India), Sukarno (President of Indonesia), and Kwame Nkrumah (President of Ghana).
- At present, the NAM consists of around 120 Member States.



Why in News?

- India participated in the High-Level Meeting to mark the 60th Anniversary

of Non-Aligned Movement NAM in Belgrade, Serbia.

Art and Culture

1) Kushinagar

What's in the news?

- Recently, Prime Minister Narendra Modi inaugurated the Kushinagar international airport in Uttar Pradesh.
- The airport is expected to **provide seamless connectivity to tourists from Sri Lanka, Japan, Taiwan, South Korea, China, Thailand, Vietnam, Singapore, etc.**
- Kushinagar is the **centre of the Buddhist circuit**, which consists of pilgrimage sites at Lumbini, Sarnath and Gaya.

Kushinagar and The Buddha

- Among the most important of Buddhist pilgrimages, Kushinagar was where The Buddha attained **Mahaparinirvana** (ultimate salvation) in c. 483 BC.
- Today's Kushinagar is identified with **Kushinara, capital of the ancient Malla republic**, which was one of the 16 mahajanapadas of the 6th-4th centuries BC.
- The area went on to be part of the kingdoms of the Mauryas, Shungas, Kushanas, Guptas, Harshavardhana, and the Palas. Kushinara is believed to have been inhabited until at least the 12th century.
- The first excavations in Kushinagar were **carried out by Alexander Cunningham and ACL Carlleyle**, who unearthed the main stupa and the 6-metre-long statue of the Reclining Buddha in 1876.
- Kushinagar is among the very few places in India where The Buddha is depicted in **reclining form**.

Buddhist tourism Circuit

- In 2016, the **Ministry of Tourism** announced the **Buddhist Circuit** as the **country's first transnational tourism circuit**, covering sites in Nepal and Sri Lanka alongside those in India.

- While Buddhism originated in India and seven of the eight main Buddhist pilgrimage sites are in India, **our country gets not even 1 percent of Buddhist pilgrims in the world.**
- The ministry's map of the Buddhist Circuit includes Bodh Gaya, Vaishali, and Rajgir in Bihar, Kushinagar, Sarnath, and Shravasti in UP, and Lumbini in Nepal.
- There is awareness in the government that the absence of tourist infrastructure is a major reason why India loses out to Southeast Asian nations such as Indonesia and Thailand.
- The hope is that world-class facilities will be able to attract Buddhist tourists to India, and boost revenues and employment generation.
- A Buddhist Circuit tourist train covers all destinations in 14 days, and helicopter services and more airports are in the pipeline.
- The push is intended to **assert and consolidate India's position as the original centre of Buddhism, against the claims from China.**

Cultural diplomacy

- **Rekindling India's ties with Buddhist countries** and building **strong relationships** with them is one of the major objectives of the Buddhist circuit. The associated **strategic partnerships and tourism potential** that derive from this enhanced partnership are second-order benefits.
- **Buddhism is not limited to Asia**; it has sparked spiritual awakenings in other parts of the world and impacted a variety of philosophical systems.
- India currently possesses a plethora of resources in the form of pilgrimage sites, the Dalai Lama's presence, and international goodwill, as well as the appropriate intentions.

- The **effect of Lord Buddha's and Buddhism's teachings** can be linked to the **ideals of peace, accommodation, inclusion, and compassion** that are part of contemporary societies.

2) Chola Inscriptions

What's in the news?

- A recent study has found that the Chola-era inscriptions of **Uthiramerur** in Kancheepuram (**TamilNadu**) bear testimony to the **qualifications required for members of the village administrative council**.
- The inscriptions of Uthiramerur in Kancheepuram district dwells upon '**Kudavolai**' — a system to elect members to annual committee ('variya'), garden committee, tank committee and other committees.
- Known as "**Thenneri inscriptions**", they lay down qualifications for candidates to village administrative committees ('perumkuri sabai').
- According to the inscriptions, candidates should own land and should not have any case pending against them. He should be highly educated and should have maintained his accounts in a transparent manner.
- The inscriptions are on the walls of the **Kanthaleeswarar temple**, constructed by Sembian Mahadevi (10th century CE), the grandmother of Chola King Rajaraja, in memory of her son Uthama Chola.

Tax system based on the inscriptions

- The study also revealed that the **rulers were considerate while taxing agricultural produce**.
- For areca nuts, only 50% tax would be collected for the first 10 years after cultivation. Farmers would pay full tax only after the trees started yielding fruits. Similarly, 50% tax was imposed on banana crops until the yield.

Defence

1) Border Security Force

About BSF

- After the India-Pakistan war in 1965, the Border Security Force (BSF) was formed.
- It is **one of the Union of India's Central Armed Police Forces**, and it is **administered by the Ministry of Home Affairs (MHA)**.
- Assam Rifles (AR), Indo-Tibetan Border Police (ITBP), Central Industrial Security Force (CISF), Central Reserve Police Force (CRPF), National Security Guards (NSG), and Sashastra Seema Bal (SSB) are other Central Armed Police Forces.
- It is **deployed alongside the Indian Army on the Indo-Pakistan International Border, the Indo-Bangladesh International Border, the Line of Control (LoC), and in anti-Naxal operations**. It is known as **India's First Line of Defense**.
- It is also deployed in areas affected by Left Wing Extremism (LWE) and is routinely deployed for election and other law and order duties on the request of State governments.
- According to the **BSF Act, 1968**, the BSF has been assigned **three primary tasks** while deployed along the borders — promote a sense of security among the people living in the border area; prevent trans-border crimes/unauthorised entry into or exit from the territory of India and prevent smuggling and any other illegal activity.

Powers of BSF

- In border areas, the BSF can “**arrest, search and seize**” in cases pertaining to smuggling of narcotics, prohibited items, illegal entry of foreigners and offences punishable under any other Central Act and select provisions of the Code of Criminal Procedure (CrPC).

- The BSF **does not have policing powers** and after apprehending a suspect, it can only conduct “**preliminary questioning**” and the seized consignment or a suspect have to be handed over to the local police within 24 hours.
- The BSF **does not have any investigating powers**.

Why in News?

- The Union Home Ministry has enhanced the powers of the Border Security Force to “arrest, search and seize” within 50 km from the international boundary in Assam, West Bengal and Punjab. Earlier, the BSF’s powers were limited to up to 15 km in these states.
- In Gujarat, the limit was reduced from the existing 80 km to 50 km and in Rajasthan, the 50 km limit has remained unchanged.
- The amendment establishes uniformity in defining the area within which the BSF can operate and also to improve its operational effectiveness in curbing trans-border crimes.

2) Malabar Exercise

About the Exercise

- The Malabar exercise started in 1992 as a bilateral drill between the **Indian Navy and the U.S. Navy in the Indian Ocean**.
- **Japan** became a permanent member of the exercise in 2015.
- Following India’s invitation, **Australia** participated in the Malabar exercise in 2020, which effectively made it a drill by all four member nations of the **Quad**.

Why in News?

- Phase II of the Malabar naval exercise was conducted in the Bay of Bengal.

Significance of the exercise

- There have been mounting global concerns over **China’s growing**

military assertiveness in the Indo-Pacific region.

- India, the U.S., Australia, Japan and many other like-minded countries are working towards **ensuring a free, open and inclusive Indo-Pacific**.
- The exercise provides an opportunity for common minded navies to enhance inter-operability, gain from best practices and develop a common understanding of procedures for maritime security operations.

Related Information

Quad grouping

- The grouping of four democracies – **India, Australia, US and Japan** – known as the quadrilateral security dialogue or quad, was first mooted by Japanese Prime Minister Shinzo Abe in 2007. Quad was revived in 2017.

- The QUAD partners share a **commitment towards a free, open, prosperous and inclusive Indo-Pacific region** based on shared values and principles and respect for international law.
- There is a focus on practical cooperation in the areas of connectivity and infrastructure development, and counter-terrorism, cyber security, maritime security, humanitarian and disaster relief, with the objective of promoting peace, security, stability and prosperity in an increasingly inter-connected Indo-Pacific region.
- With growing concerns in all four quad countries about Chinese foreign policy and regional influence, the group has found renewed relevance.