

# CURRENT AFFAIRS

*Month of*  
**NOVEMBER-2021**



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# Polity and Governance

## Highlights

- India Young Water Professional Programme
- Gerrymandering & US Democracy
- National Cadet Corps
- O-SMART Scheme
- SDG Urban Index: NITI Aayog
- Swachh Survekshan 2021
- Governor's Power to decide on Bills: Veto Power
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## India Young Water Professional Programme

### Why in News

Recently, the **Ministry of Jal Shakti** has launched the first edition of the **India Young Water Professional Programme**.

- Its launch **marks a significant milestone in Australia-India Water relationship**. This Programme looks to prepare future water leaders.

### Key Points

#### ➤ About:

- This program has been taken up under the **National Hydrology Project**. It will be implemented by Australia India Water Centre (a consortium of Australian and Indian universities).
- It is focused on **Engaged Training and Learning Model**. The Program will aim to achieve its objectives through the **70-20-10 framework**, which states that three types of experience are required to learn:
  - **Experience** 70% (learn and develop on the job)

- **Exposure** 20% (learn and develop through others)
- **Education** 10% (learn and develop through formal training)

- It also **focuses on gender equality and diversity**, because sustainable water management can only benefit from the views and skills of all members of society.
- It is outcome-driven and the **participants will be having certain tools and techniques by the time they are finished** with the Programme.
- Based on the success of this edition, a second phase of YWP will be planned in the **later half of the year 2022**.
- **Aim:**
  - It aims to provide a **structured platform for capacity building with strategic and long-term investment to support the water management reforms** in India.
  - To equip water professionals with **the necessary skills, knowledge, behaviours and networks** that will better enable them to contribute to the development and management of water resources in India, and to address the competency needs and priorities of the water sector in India.

- **Significance:**
  - It will **help in breaking the silos of surface water vs groundwater** and participants will learn to take a comprehensive view of water resources management.
- **Related Initiatives:**
  - **Jal Kranti Abhiyan.**
  - **National Water Mission.**
  - **National Rural Drinking Water Programme.**
  - **NITI Aayog's Composite Water Management Index.**
  - **Jal Jeevan Mission.**
  - **Jal Shakti Abhiyan**
  - **Atal Bhujal Yojana**

### National Hydrology Project

- **About**
  - It was started in 2016 as a **Central Sector Scheme** by the Ministry of Jal Shakti and is supported by the **World Bank**.
- **Aim**
  - To **improve the extent, reliability and accessibility of water resources information.**
  - To **strengthen the capacity of targeted water resource management institutions** in India.
  - To **facilitate acquisition of reliable information efficiently** which would pave the way for an effective water resource development and management.
- **Project Beneficiaries**
  - Central and state implementing agencies responsible for surface and/or groundwater planning and management, including river basin organizations.
  - Users of the **Water Resources Information System (WRIS)** across various sectors and around the World.
    - **WRIS** focuses on ensuring increase in public and stakeholders awareness about the present status of water resources and the need for its effective management by attracting their interest in leading towards the holistic goal of water security.

## Gerrymandering & US Democracy

### Why in News

Recently, the **2020 census results of the US population**

were presented. Following this, the exercise of Gerrymandering has been conducted across the **U.S. Congressional and State legislative districts every decade.**

- **Gerrymandering or redistricting** is the process of **redrawing electoral boundaries.** However, this exercise has been criticised for **undermining democracy in the US.**

### Key Points

- **Background:** Gerrymandering, the term is derived from the name of **Gov. Elbridge Gerry of Massachusetts**, whose administration enacted a law in **1812 defining new state senatorial districts.**
- **Underlying Principle:** The principle behind redistricting is to ensure that the election of public officials embodies the ideal of genuine democratic representation, by factoring in changes in the geographic distribution of population.
- **Undermining Democracy:** A basic objection to gerrymandering of any kind is that it tends to violate **two tenets of electoral apportionment—compactness and equality of size of constituencies.**
- **Issue with US Democracy:** In the US, there is a specific long term demographic trend wherein the supporters of Democratic party relatively belong to urban areas, and that of Republican party come from rural areas.
  - However, the density of people living in urban areas in the US is more than rural areas.
  - In this scenario, the Republican party has Gerrymandered electoral districts to create supermajorities of rural voters.
  - In this way, giving one political party an unfair advantage over its rivals or that dilutes the voting power of members of ethnic or linguistic minority groups.

### Comparison With India

- **Delimitation Commission:** In India, political redistricting is handled by the **Delimitation Commission of India**.
  - **Delimitation** is the act of redrawing boundaries of Lok Sabha and Assembly seats to represent changes in population. In this process, the number of seats allocated to a state may also change.
- **Constitutional Provisions:** Under **Article 82 of Indian Constitution**, Delimitation commission is constituted by the Central Government after the Parliament has enacted a Delimitation Act after every census.
  - Under **Article 170, States** also get divided into territorial constituencies as per Delimitation Act after every Census.
- **Underlying Principle:** To provide equal representation to equal segments of a population.
  - Fair division of geographical areas so that one political party doesn't have an advantage over others in an election.
  - To follow the principle of **"One Vote One Value"**.
- **Delimitation Commissions So Far:** Delimitation Commissions have been set up **four times — 1952, 1963, 1973 and 2002** under the Acts of 1952, 1962, 1972 and 2002.
  - The first delimitation exercise was carried out by the **President (with the help of the Election Commission) in 1950-51**.
  - There was no delimitation after the **1981 and 1991 Census**.
  - The **42<sup>nd</sup> Amendment Act of 1976** froze the allocation of seats in the Lok Sabha to the states and the division of each State into territorial constituencies till the year 2000 at the 1971 level.
  - Further, the **84<sup>th</sup> Amendment Act of 2001** extended this ban on readjustment for another 25 years (i.e., upto year 2026), without affecting the total number of seats based on the 1971 census.
    - The **84<sup>th</sup> Amendment Act of 2001** also empowered the government to undertake readjustment and rationalisation of territorial constituencies in the states on the basis of the population figures of 1991 census.
  - Later, the **87<sup>th</sup> Amendment Act of 2003** provided for the delimitation of constituencies on the basis of the 2001 census and not 1991 census.

- Hence, the **current status of delimitation in India is frozen up to 2026 as per 2001 census**.

### Delimitation Commission

- **About**
  - The Delimitation Commission is appointed by the President of India and works in collaboration with the **Election Commission of India**.
  - The Delimitation Commission in India is a high power body whose orders have the force of law and cannot be called in question before any court.
- **Composition**
  - Retired **Supreme Court** judge
  - Chief Election Commissioner
  - Respective State Election Commissioners
- **Decision**
  - In case of difference of opinion among members of the Commission, the opinion of the **majority prevails**.
- **Functions**
  - To **determine the number and boundaries of constituencies** to make the population of all constituencies nearly equal.
  - To **identify seats reserved for Scheduled Castes and Scheduled Tribes**, wherever their population is relatively large.

## National Cadet Corps

### Why in News

- Recently, the **National Cadet Corps (NCC)** has observed the 73<sup>rd</sup> anniversary of its raising on 28<sup>th</sup> Nov.
- In August 2020, the Ministry of Defence approved the proposal to **Expand the National Cadet Corps (NCC) in border and coastal districts**.
  - In March 2021, the Kerala High Court ordered the Central government to **amend the National Cadet Corps Act (NCC Act) 1948** which excludes transgender persons from joining the National Cadet Corps (NCC).

### Key Points

- **About:**
  - The NCC was formed in 1948 (on the recommendation of **H. N. Kunzru Committee-1946**), and has its roots in British era uniformed youth entities like University Corps or University Officer Training Corps.

- Its history can be traced back to the ‘**University Corps**’, which was created under the **Indian Defence Act 1917** with an objective to make up for personnel shortage in the Indian Army.
- The NCC also **expanded later on to include the Girls Division in 1949** to provide equal opportunities to women willing to serve the country’s defences.
- Currently it has a strength of around **14 lakh cadets** from Army, Navy and Air Force wings.
- NCC is the largest **uniformed youth organisation in the world**. It enrolls cadets at **high school and college level** and also awards certificates on completion of various phases.
  - The NCC **cadets receive basic military training** at various levels and also have academic curriculum basics related to Armed forces and their functioning.
  - Various training camps, adventure activities and military training camps are an important aspect of NCC training.
- **Ministry:**
  - The NCC falls under the purview of the **Ministry of Defence** and is headed by a Director General of three-star military rank.
- **Significance:**
  - NCC cadets have played an **important role over the years in relief efforts** during various emergency situations.
  - During the ongoing **pandemic**, over 60,000 NCC cadets have been deployed for voluntary relief work in coordination with district and state authorities across the country.
  - Contribution of cadets through various initiatives in **Exercise-Yogdan in the management of the Covid-19 pandemic** have been widely appreciated by the people across the country.
  - The cadets participated wholeheartedly in ‘**Swachhta Abhiyan**’, ‘**Mega Pollution Pakhwada**’ and played a pivotal role in spreading awareness about various government initiatives like ‘**Digital Literacy**’, ‘**International Day of Yoga**’, ‘**Tree Plantation**’ and Covid-19 vaccination drive, etc.
  - The multifaceted activities and varied curriculum of the NCC, provides unique opportunities to the youth for **self-development**.

- Many cadets have done the nation and the organisation proud by their remarkable **achievements in the field of sports and adventure**.
- The NCC continues its relentless efforts, towards moulding the present-day youth into responsible citizens of tomorrow.

## O-SMART Scheme

### *Why in News*

The Cabinet Committee on Economic Affairs approved the continuation of the ‘**Ocean Services, Modelling, Application, Resources and Technology (O-SMART)**’ Scheme for the period of 2021-26.

### *Key Points*

- **About:**
  - It is a government scheme that aims at **promoting ocean research and setting up early warning weather systems**.
    - It was **launched in August 2018**.
  - It also aims at **addressing ocean development activities** such as technology, services, resources, science, and observations as well as offering required **technological assistance for implementing aspects of the Blue Economy**.
  - It comprises seven **sub-schemes** which are being implemented by autonomous institutes of the Ministry of Earth Sciences (MoES).
    - **Sub-Schemes are:** Ocean Technology, Ocean Modelling and Advisory Services (OSMAS), Ocean Observation Network (OON), Ocean Non-Living Resources, Marine Living Resources and Ecology (MLRE), Coastal Research and Operation, Maintenance of Research Vessels

➤ **Objectives:**

- To **generate and regularly update information on Marine Living Resources** and their relationship with the physical environment in the Indian **Exclusive Economic Zone (EEZ)**.
- To **periodically monitor levels of seawater pollutants** for health assessment of coastal waters of India, to develop shoreline change maps for assessment of **coastal erosion** due to natural and anthropogenic activities.
- To **develop a wide range of state-of-the-art ocean observation systems** for the acquisition of real-time data from the seas around India and to cater to the testing and sea trial activities of ocean technology.
- To **generate and disseminate a suite of user-oriented ocean information**, advisories, warnings, data and data products for the benefit of society.
- To **develop high-resolution models for ocean forecast** and reanalysis systems.
- To **develop algorithms** for validation of **satellite data for coastal research** and to monitor changes in the coastal research.
- Acquisition of **Coastal Research Vessels (CRVs) for coastal pollution monitoring, testing of various underwater components and technology demonstration** and to support their operation and maintenance.
- To **develop technologies to tap the marine bioresources, generate freshwater and ocean energy** and develop **underwater vehicles** and technologies.
- Establishment of **Ballast water treatment facility**.
  - Ballast Water Discharge by ships is **responsible for the introduction of invasive species** in the oceans by taking water from one port and discharging it during the next port call.
- To carry out exploration of **Polymetallic Nodules (MPN)** from water depth of 5500 m in a site of 75000 sq. km allotted to India by the **United Nations** in the Central Indian Ocean Basin, and to carry out investigations of **gas hydrates**.
  - **MPN**, also called **manganese nodules**, are **rock concretions formed of concentric layers of iron and manganese hydroxides** around a core.
  - **MPN contain multiple metals like copper, nickel, cobalt, manganese, iron, lead, zinc, aluminium, silver, gold and platinum etc.** in variable constitutions and are precipitate of

hot fluids from upwelling hot magma from the deep interior of the oceanic crust.

- Mining for Polymetallic nodules **is of strategic importance for India** as there are no terrestrial sources of these metals in India.

- **Exploration of polymetallic sulphides near Rodrigues Triple junction** (convergence of Central Indian Ridge, the Southeast Indian Ridge, and the Southwest Indian Ridge) in 10000 sq. km of area allotted to India in International waters by **International Seabed Authority**.

- Submission of **India's claim over continental shelf extending beyond the EEZ** supported by scientific data, and the Topographic survey of EEZ of India.

➤ **Significance:**

- It will **augment the capacity building of India in the oceanographic field at the international level** with the ongoing extensive research and technology development activities.
- It will **aid in strengthening India's contribution towards a national policy on Blue Economy** for efficient and effective use of the ocean resources in a sustainable way.
- It will offer further comprehensive coverage while strengthening ongoing activities to deliver cutting-edge technology for the marine sector, **forecast and warning services, understanding marine biodiversity, coastal processes, and conservation strategies for marine living organisms**.
- **It will help in achieving United Nations' Sustainable Development Goal (SDG) 14** to conserve and sustainably use the oceans, seas, and marine resources.

➤ **Major Milestones:**

- It has **helped India get recognized as Pioneer Investor with International Seabed Authority (ISA)** for conducting extensive research on **deep-sea mining** of **MPN** and hydrothermal sulfides in the allotted area of the **Indian Ocean**.
- The scheme has **enabled India to take a leadership role in implementing the Indian Ocean component of the Global Ocean Observing System in UNESCO's Intergovernmental Oceanographic Commission (IOC)**.
- A state-of-the-art Early Warning System for oceanic disasters such as **storms, tsunamis**, has also been set up at **Indian National Centre for Ocean Information Service (INCOIS)**, Hyderabad.

## SDG Urban Index: NITI Aayog

### **Why in News**

Recently, **NITI Aayog** under the **Indo-German Co-operation** released the inaugural **Sustainable Development Goals (SDGs) Urban Index and Dashboard 2021-22**.

- Earlier in June 2021, the **third edition of the Sustainable Development Goals (SDG) India Index and Dashboard 2020–21**.

### **Key Points**

- **About:**
  - The **index and dashboard** are a result of the **NITI Aayog-Germany's International Cooperation Agency (GIZ) and BMZ collaboration** focused on driving **SDG localization** in our cities, under the umbrella of **Indo-German Development Cooperation**.
  - It **ranks 56 urban areas** on 77 **SDG indicators** across 46 targets of the **SDG framework**.
  - It will further **strengthen SDG localization** and institute **robust SDG monitoring at the city level**.
- **Ranking Scale:**
  - The **urban areas are ranked on a scale of 0-100**.
  - A score of **100 implies that the urban area has achieved the targets set for 2030**; a score of **0 implies that it is the farthest from achieving the targets** among the selected urban areas.
  - Overall or composite urban area scores are then generated from the **Goal-wise scores** to measure aggregate performance of the urban area.
  - Urban areas have been classified as below based on their composite score:
    - **Aspirant:** 0-49
    - **Performer:** 50-64
    - **Front-Runner:** 65-99
    - **Achiever:** 100
- **Performance of the States:**
  - **Top Performers:**
    - Shimla, Coimbatore, Chandigarh, Thiruvananthapuram and Kochi.
  - **Worst Performers:**
    - Dhanbad, Meerut, Itanagar, Guwahati and Patna.
- **Significance of the Index:**

- Cities are fast becoming engines of growth. The **SDG Urban index and dashboard** will go a long way in **instituting a robust SDG monitoring system** in our cities, and is a milestone step in our **SDG localisation journey**.
  - The Niti Aayog is of the view that this **transformative change is quite essential**, given the increasing prominence of our cities and urban areas in charting the future of development in India.
- It highlights the **strengths and gaps of Urban Local Body (ULB) level data**, monitoring, and reporting systems.

### **Indo-German Development Cooperation**

#### ➤ **Background:**

- The year **2008 marked 50 years of Indo-German development cooperation**. Begun in the 1950s, development cooperation with India grew so rapidly that in a short time it became the **largest recipient of German development assistance**.
- The **construction of the Rourkela Steel Plant** in Orissa was a hallmark of this intensive cooperation in the early 1960s.
- Later, both countries set up one of India's premiere educational institutions - the Indian Institute of Technology in Madras.

- In the 1990's, **development cooperation dealt with the issues** of poverty reduction and social infrastructure.

➤ **About:**

- Indo-German development cooperation is a **solid pillar of the Indo-German strategic partner-ship**.
- Both countries are equally **committed to achieving the Millennium Development Goals (MDGs)**; further, they want to tackle global challenges in the fields of climate and environment.
- It is well **integrated in the foreign policy framework** of relations between India and Germany.
- India is viewed by Germany as **one of the Global Development Partners** that have a key role to play in solving global development issues.

➤ **Programme Focus:**

- Today, the Indo-German development cooperation programme focuses on the following **mutually agreed priority areas**:
  - Energy
  - Environment and Management of Natural Resources
  - Sustainable Urban Development

## Swachh Survekshan 2021

### Why in News

Recently, the President awarded the respective cities in the **6<sup>th</sup> Edition of Swachh Survekshan (SS) 2021** for their performance in maintaining cleanliness, hygiene and sanitation.

- The ceremony was held at the '**Swachh Amrit Mahotsav**', which is a celebration of the achievements of cities in the past seven years of **Swachh Bharat Mission-Urban** and a commitment from cities and citizens to move forward with renewed vigour in the next phase of Swachhata through **Swachh Bharat Mission-Urban 2.0**.

### Key Points

- **Swachh Survekshan:**
  - **About:**

- It is an **annual survey of cleanliness, hygiene and sanitation in cities and towns** across India.
- It was launched **as part of the Swachh Bharat Abhiyan**, which aimed to make India clean and free of open defecation.
- The **first survey was undertaken in 2016** and covered 73 cities.
  - By 2020 the survey had grown to cover 4242 cities and was said to be the **largest cleanliness survey in the world**.
- In 2021 Survekshan, participated by 4,320 cities, also saw an unprecedented number of citizens' feedback – over 5 crores, compared to 1.87 cores last year.

- **Nodal Ministry:**

- Ministry of Housing and Urban Affairs (MoHUA).

➤ **SS 2021 Categories:**

- **Less than 1 lakh Population:**

- **Vita, Lonavala, and Saswad cities from Maharashtra** have ranked first, second, and third Cleanest Cities respectively.

- **More than 1 Lakh Population:**

- For the 5<sup>th</sup> consecutive year, **Indore (Madhya Pradesh)** was awarded the title of **India's Cleanest City** under Swachh Survekshan, while Surat and Vijayawada bagged the second and third spots respectively.
- **Hoshangabad in Madhya Pradesh** emerged as the '**Fastest Mover City**' thus securing a place among the top 100 cities at 87<sup>th</sup> position.

- **Best Ganga Town:** Varanasi.

- **Cleanest Cantonment:** Ahmedabad Cantonment, followed by Meerut Cantonment and Delhi Cantonment.

- **Cleanest State:**

- **More than 100 Urban Local Bodies:**

- **Chhattisgarh** has been awarded as the 'Cleanest State' of India **for the 3<sup>rd</sup> consecutive year**.
- **Karnataka** emerged as the '**Fastest Mover State**'.

- **Less than 100 Urban Local Bodies:**

- **Jharkhand** won the 'Cleanest State' of India **for the second time** in this category.

- Mizoram emerged as the 'Fastest Mover State'.
- **Prerak Daaur Samman:**
  - This is a new performance category introduced under SS 2021, five cities – Indore, Surat, Navi Mumbai, New Delhi Municipal Council and Tirupati were categorized as 'Divya' (Platinum).

➤ **Other Awards:**

- **Safaimitra Suraksha Challenge:**
  - Under the **Safaimitra Suraksha Challenge**, the **top performer cities are Indore, Navi Mumbai, Nellore, and Dewas** across different population categories among 246 participating cities while the **top performer states are Chhattisgarh and Chandigarh.**
- **5-star rated Garbage Free Cities in India:**
  - Under the **Star Rating Protocol of Garbage Free Cities**, 9 cities were certified as 5-star cities while 143 cities were certified as 3-star.
    - The **Star Rating Protocol** was launched by MoHUA in 2018 to **institutionalize a mechanism for cities to achieve Garbage Free status**, and to motivate cities to achieve higher degrees of sustainable cleanliness.
  - The nine 5-star rated cities are Indore, Surat, New Delhi Municipal Council, Navi Mumbai, Ambikapur, Mysuru, Noida, Vijayawada, and Patan.

**Swachh Bharat Mission-Urban 2.0**

- SBM-U 2.0, announced in **Budget 2021-22**, is the continuation of **SBM-U first phase.**
- The government is trying to tap safe containment, transportation, disposal of faecal sludge, and septage from toilets. It will be implemented over five years from **2021 to 2026 with an outlay of Rs. 1.41 lakh crore.**
- It focuses on source segregation of garbage, reduction in single-use plastic and air pollution, by effectively managing waste from construction and demolition activities and **bioremediation of all legacy dump sites.**
- Under this mission, all wastewater will be treated properly before it is discharged into water bodies, and the government is trying to make maximum reuse a priority.

## **Governor's Power to decide on Bills: Veto Power**

### **Why in News**

Recently, the **speaker of Tamil Nadu assembly called for setting a binding timeframe within which Bills should be assented to or returned or reserved for the consideration of the President of India by the governors.**

### **Key Points**

➤ **Issues Highlighted by the Speaker:**

- **Related to Governor:**
  - The **governors sometimes sat over the Bills** without giving assent or returning the Bills for an indefinite period, even though the Constitution required it to be done as soon as possible.
  - The **governors were also taking months together to reserve the Bills** for the assent of the President even though it was to be done immediately.
  - This **erodes the authority of the legislatures** and the governors, though heads of the state executive, are appointed by the Union government.
- **Related to President:**
  - The **President of India should also give reasons** for withholding the assent and returning the Bill.
  - This would help the **House to enact another bill** by correcting shortfalls that caused the bill to be rejected.

➤ **Related Examples:**

- The **Speaker's comments assume significance** in the backdrop of a Bill passed by the Tamil Nadu Assembly in September, 2021 **seeking exemption for students from the state from the National Eligibility cum Entrance Test (NEET)** required for undergraduate medical college admissions.
- The **Tamil Nadu assembly passed a resolution in 2018** regarding the release of the seven prisoners convicted in the **Rajiv Gandhi assassination case.**
  - The resolution was sent to the then Governor but he did not take any action for more than two years.
  - In January 2021, the **Supreme Court**, while hearing a plea, expressed that they were unhappy with the delay.

- In February, the **Governor, without taking a call, passed the buck** and said that the President was the competent authority to decide on the resolution.

### **Veto Power of the President and the Governor**

#### ➤ About:

- Veto Power of the President of India is guided by **Article 111 of the Indian Constitution.**
- **Article 200 of the Indian Constitution** deals with the powers of the Governor with regard to assent given to bills passed by the State legislature and other powers of the Governor such as reserving the bill for the President's consideration.
- **Article 201** pertains to 'Bills Reserved for Consideration'.
- The **Governor of India enjoys absolute veto, suspensive veto (except on money bills) but not the pocket veto.**

#### ➤ Three Types of Veto Power: Absolute veto, Suspensive veto and Pocket veto.

- **Exception:** The President has **no veto power** when it comes to the **constitutional amendment bills.**
  - Constitutional amendment bills **cannot be introduced in the state legislature.**

#### ➤ **Absolute Veto:** It refers to the power of the President to **withhold his assent to a bill** passed by the Parliament. The bill then ends and does not become an act.

#### ➤ **Suspensive Veto:** The President uses a suspensive veto when he **returns the bill to the Indian Parliament for its reconsideration.**

- If the Parliament **resends the bill with or without amendment** to the President, he **has to approve the bill** without using any of his veto powers.
- **Exception:** The President **cannot exercise his suspensive veto** in relation to the **Money Bill.**

#### ➤ **Pocket Veto:** The **bill is kept pending by the President for an indefinite period** when he exercises his pocket veto.

- He **neither rejects the bill nor returns the bill for reconsideration.**
- **Unlike the American President** who has to **resend the bill within 10 days, the Indian President has no such time-rule.**

#### ➤ **Veto over State Bills:**

- The **governor is empowered to reserve certain types of bills** passed by the state legislature for the consideration of the President.
  - Then, the **Governor will not have any further role** in the enactment of the bill.
- The President **can withhold his assent to such bills not only in the first instance but also in the second instance.**
  - Thus, the President **enjoys absolute veto (and not suspensive veto) over state bills.**
- Further, the President **can exercise pocket veto** in respect of state legislation also.

## **RERA is Retroactive: SC**

### **Why in News**

Recently, the **Supreme Court (SC)** interpreted that the **Real Estate (Regulation and Development) Act, 2016 (RERA)** is retroactive.

- The SC's ruling is aimed at protecting **homebuyers**, the ruling brings a **major relief for the buyers, speeds up the resolution process**, and makes it difficult for state governments to dilute the intent of the law.

### **Key Points**

#### ➤ **Retroactive Implementation:**

- The SC affirmed that the provisions of the RERA 2016 are **applicable to projects that were ongoing** and for whom completion certificates were not obtained at the time of the enactment of the law.
  - Under the Act, **registration of real estate projects was mandatory.**
  - It mandated that for projects that were ongoing on the date of commencement of the Act, specifically projects for which the completion

certificate had not been issued, the **promoters shall be under obligation to make an application to the authority** for registration of the project.

- Regulations of RERA authorities in states including **Uttar Pradesh, Haryana, Punjab, Karnataka, Telangana and Tamil Nadu are currently not in line** with this position and may need to amend their rules to ensure all ongoing projects get covered under RERA.

➤ **Recovery of Invested Amount:**

- SC also held that the **amount invested by the allottees, along with interest** as quantified by the regulatory authority or the adjudicating officer, **can be recovered as arrears of land revenue from the builders.**
  - The builders had contended that homebuyers are only entitled to recover interest or penalty as arrears of land.
  - However, taking into consideration the scheme of the Act, the court observed, what is to be returned to the allottee is his own life savings. The **amount with interest as computed/quantified by the authority becomes recoverable** and such arrear becomes enforceable in law.

➤ **Penalty for Developers:**

- It is mandatory for real estate developers to **deposit at least 30% of the penalty ordered by the regulator**, or the full amount as the case may be, before they challenge any RERA order. This is expected to **ensure that only genuine appeals are filed and homebuyers' interests are protected.**
  - SC noted that the obligation cast upon the promoter of pre-deposit under the Act, in no circumstance can be said to be in **violation of Article 14** (Equality before law) **or Article 19 1(g)** (freedom to practise any profession, or to carry on any occupation, trade or business) **of the Constitution of India.**
    - Builders/promoters who are in appeal are **required to make the predeposit to get the appeal entertained** by the Appellate Tribunal.
    - A **promoter** is defined as a person who is entrusted with the task of promoting the project (real estate project), which was developed or constructed by the developer.
  - The intention of the legislature appears to be to **ensure that the rights of the decree holder (the**

**successful party) is to be protected** and only genuine bonafide appeals are to be entertained.

**Real Estate Regulation and Development Act, 2016**

➤ **Need:**

- **Securing the Largest Investment Sector:** Regulation of the real estate sector was under discussion since 2013, and the RERA Act eventually came into being in 2016. Data show that **more than 77% of the total assets of an average Indian household are held in real estate**, and it's the single largest investment of an individual in his lifetime.
- **Creating Accountability:** Prior to the law, the real estate and housing sector was largely unregulated, with the consequence that consumers were unable to hold builders and developers accountable.
  - The **Consumer Protection Act, 1986 was inadequate** to address the needs of homebuyers.
  - RERA was introduced with the objective of **ensuring greater accountability towards consumers, to reduce frauds and delays**, and to set up a fast track dispute resolution mechanism.

➤ **Major Provisions:**

- **Establishment of state level regulatory authorities- Real Estate Regulatory Authority (RERA):** The Act provides for State governments to establish more than one regulatory authority with the following mandate:
  - Register and maintain a database of real estate projects; publish it on its website for public viewing,
  - Protection of interest of promoters, buyers and real estate agents
  - Development of sustainable and affordable housing,
  - Render advice to the government and ensure compliance with its Regulations and the Act.
- **Establishment of Real Estate Appellate Tribunal-** Decisions of RERAs can be appealed in these tribunals.
- **Mandatory Registration:** All projects with plot size of minimum 500 sq.mt or eight apartments need to be registered with Regulatory Authorities.
- **Deposits:** Depositing 70% of the funds collected from buyers in a separate escrow bank account for construction of that project only.

- **Liability:** Developer’s liability to repair structural defects for five years.
- **Penal interest in case of default:** Both promoter and buyer are liable to pay an equal rate of interest in case of any default from either side.
- **Cap on Advance Payments:** A promoter cannot accept more than 10% of the cost of the plot, apartment or building as an advance payment or an application fee from a person without first entering into an agreement for sale.
- **Carpet Area:** Defines Carpet Area as net usable floor area of flat. Buyers will be charged for the carpet area and not the super built-up area.
- **Punishment:** Imprisonment of up to three years for developers and up to one year in case of agents and buyers for violation of orders of Appellate Tribunals and Regulatory Authorities.
- **Implementation of the Act:**
  - **34 states/Union Territories have notified rules under RERA**, while its implementation in Nagaland is under process.
  - **West Bengal has enacted its own legislation** — West Bengal Housing Industry Regulation Act, 2017 (HIRA) — instead of notifying rules under RERA.
  - 30 States/UTs have set up Real Estate Regulatory Authorities, and **26 have set up Real Estate Appellate Tribunals**, as per the latest data available with the Ministry of Housing and Urban Affairs.
- For **modernization of land records system** in the country, a modified programme, viz., the **National Land Records Modernization Programme (NLRMP)**, now **renamed as Digital India Land Records Modernization Programme (DILRMP)**, has been formulated.
- **Two Centrally sponsored schemes** of Computerization of Land Records (CLR) and Strengthening of Revenue Administration and updating of Land Records (SRA&ULR) **were merged**.
- **About:**
  - It is a **Central Sector scheme that has been extended to 2023-24**, to complete its original targets as well as expand its ambit with a slew of new schemes.
  - It attempts to build **upon the commonalities that exist in the arena of land records in various States** to develop an appropriate **Integrated Land Information Management System (ILIMS)** across the country, on which different States can also add State-specific needs as they may deem relevant and appropriate.
    - **ILIMS:** The system contains information on **parcel ownership, land use, taxation, location boundaries, land value, encumbrances** and many more.
  - It is **being implemented by the Department of Land Resources (Ministry of Rural Development)**.
- **Aim:**
  - To usher in a system of updated land records, automated and automatic mutation, integration between textual and spatial records, inter-connectivity between revenue and registration, to replace the present deeds registration and presumptive title system with that of conclusive titling with title guarantee.
- **Components:**
  - Computerization of land records.
  - Survey/re-survey.
  - Computerization of Registration.
  - Modern record rooms/land records management centres at tehsil/taluk/circle/block level.
  - Training & capacity building.
- **Benefits:**
  - **Real-time land ownership records** will be available to the citizen.

## Digital India Land Record Modernisation Programme

### **Why in News**

Recently, the **Ministry of Rural Development** inaugurated ‘Bhumi Samvaad’ - National **Workshop on Digital India Land Record Modernisation Programme (DILRMP)**.

- The Ministry also **launched the National Generic Document Registration System (NGDRS) portal** and Dashboard.

### **Key Points**

- **Launch:**
  - The DILRMP was **approved by the Cabinet on 21<sup>st</sup> August, 2008**.

- Free accessibility to the records will **reduce interface between the citizen and the Government functionaries**, thereby reducing rent seeking and harassment.
  - **Public-Private Partnership (PPP)** mode of service delivery will further reduce citizen interface with Govt. machinery, while adding to the convenience.
- The single-window service or the **web-enabled “anytime-anywhere” access will save the citizen time** and effort in obtaining RoRs (Record of Rights), etc.
- Automatic and automated mutations will significantly **reduce the scope of fraudulent property deals**.
- **Conclusive titling** will also significantly reduce litigation.
- **Certificates based on land data** (e.g., domicile, caste, income, etc.) will be available to the citizen through computers.
- This method will **permit e-linkages to credit facilities**.
- **Information on eligibility for Government programs** will be available, based on the data.
- **Other Related Initiatives:**
  - **National Generic Document Registration System:**
    - It is a major shift from the existing manual registration system to **online registration of all transactions in sale-purchase and transfer of land**.
    - It is a big step towards National Integration and a leap towards ‘**One Nation One Software**’.
  - **Unique Land Parcel Identification Number:**
    - Being described as “the Aadhaar for land”, it is a number that would uniquely **identify every surveyed parcel of land and prevent land fraud**, especially in the hinterlands of rural India, where land records are outdated and often disputed.

## First Audit Diwas: CAG

Recently, the Prime Minister **unveiled the statue of Sardar Vallabhbhai Patel** at the office of the **Comptroller and Auditor General (CAG)** of India to mark the **First Audit Diwas (16<sup>th</sup> November, 2021)**.

- It is celebrated to mark the **historic origins of the institution of the CAG**. It aims to **highlight the rich**

**contributions of the CAG to boost transparency and good governance.**

- **Girish Chandra Murmu** assumed office as the Comptroller and Auditor General of India on 8<sup>th</sup> August 2020.

### **Key Points**

- **Constitutional Body: Article 148** provides for an independent office of the CAG. It is the **supreme audit institution of India**.
  - **Other Provisions** Related to CAG include: **Articles 149-151** (Duties & Powers, Form of Accounts of the Union and the States and Audit Reports), **Article 279** (calculation of net proceeds, etc.) and **Third Schedule** (Oath or Affirmation) and **Sixth Schedule** (Administration of Tribal Areas in the States of Assam, Meghalaya, Tripura and Mizoram).
- **Profile in Brief:**
  - **CAG: Head of the Indian Audit and Accounts Department** - created in 1753.
  - **Guardian of the public purse** and controls the entire **financial system** of the country at both the levels—the **Centre and the state**.
  - **One of the bulwarks** of the democratic system of government in India.
    - The others being the **Supreme Court**, the **Election Commission** and the **Union Public Service Commission**.
  - The **accountability of the executive (i.e. Council of Ministers)** to the Parliament in the sphere of **financial administration** is secured through audit reports of the CAG.
- **Appointment:** Appointed by the **President of India** by a warrant under his hand and seal.
- **Tenure:** A period of **six years** or upto the age of **65** years, whichever is earlier.
- **Removal:** CAG can be removed by the President on the **same grounds and in the same manner as a judge of the Supreme Court**. He **does not hold his office till the pleasure of the President**.
  - In other words, he can be removed by the President on the basis of a **resolution** passed to that effect by both the **Houses of Parliament with special majority**, either on the ground of **proved misbehaviour or incapacity**.
- **Other Related Points:**
  - **Not eligible for further office**, either under the

- Government of India or of any state, after he ceases to hold his office.
- **Salary and other service conditions are determined by the Parliament.**
- The administrative expenses of the office of the CAG, including all salaries, allowances and pensions of persons serving in that office are **charged upon the Consolidated Fund of India** (thus are **not subject to the vote of Parliament**).
- **No minister can represent the CAG in Parliament.**
- **Duties & Powers** as also under the **CAG's (Duties, Powers and Conditions of Service) Act, 1971:**
  - Audits the accounts related to all **expenditure from the Consolidated Fund of India**, consolidated fund of each state and consolidated fund of each union territory having a Legislative Assembly.
  - Audits all expenditure from the **Contingency Fund of India** and the **Public Account of India** as well as the contingency fund of each state and the public account of each state.
  - **Audits** profit and loss accounts, balance sheets and other subsidiary **accounts kept by any department of the Central Government and state governments.**
  - Audits the receipts and expenditure of the following:
    - Bodies and authorities substantially **financed from the Central or state revenues;**
    - **Government companies;** and
    - Other corporations and bodies, when so required by related laws.
  - Audits the accounts of any other authority when **requested by the President or Governor.** For example, the audit of local bodies.
  - Acts as a **guide, friend and philosopher of the Public Accounts Committee** of the Parliament.
- **Limitation:**
  - The Constitution of India visualises the CAG to be Comptroller as well as Auditor General. However, in practice, the CAG is **fulfilling the role of an Auditor-General only and not that of a Comptroller.**
  - In other words, the CAG has no control over the issue of money from the consolidated fund and many departments are authorised to draw money by issuing cheques without specific authority from the CAG, who is concerned only at the audit stage when the expenditure has already taken place.

- In this respect, the CAG of India **differs totally from the CAG of Britain** who has powers of both Comptroller as well as Auditor General.
  - In other words, in Britain, the executive can draw money from the public exchequer only with the approval of the CAG.

## Unified Payments Interface (UPI)

### Why in News

The **Unified Payments Interface (UPI)** payments system has **cut across the Indian socio-economic digital divide amazingly fast.**

- Even though UPI is indeed a groundbreaking innovation in the digital payments landscape, **reliability and security are still considered to be at stake**, keeping many individuals and businesses apprehensive about the payment system.

### Key Points

- **Unified Payments Interface (UPI):**
  - It is an **advanced version of Immediate Payment Service (IMPS)** - round-the-clock funds transfer service to make cashless payments faster, easier and smoother.
  - UPI is a system that **powers multiple bank accounts** into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.
  - UPI is **currently the biggest among the National Payments Corporation of India (NPCI) operated systems** including National Automated Clearing House (NACH), Immediate Payment Service (IMPS), Aadhaar enabled Payment System (AePS), Bharat Bill Payment System (BBPS), RuPay etc.
  - The **top UPI apps** today include PhonePe, Paytm, Google Pay, Amazon Pay and **BHIM**, the latter being the Government offering.
  - As part of an agreement, **India's UPI will be linked to Singapore's PayNow.**
  - **NPCI launched UPI** with 21 member banks **in 2016.**
- **Achievements:**
  - Digital transactions through UPI **recorded phenomenal growth during the pandemic year 2020-21**

and several countries have evinced interest to learn from Indian experience so that they could replicate the model.

- The value of transactions made using the UPI crossed **USD100 billion in a month for the first time in October, 2021** according to data from the NPCI, further cementing its position as India's most popular digital payments system.
  - **India's digital payments industry** is likely to grow from Rs. 2,153 trillion at **27% Compounded Annual Growth Rate (CAGR)** to Rs. 7,092 trillion by 2025.
  - The growth is likely to come on the back of strong use cases of merchant payments, government policies including **Jan Dhan Yojana, personal data protection bill** along with the growth of MSMEs, growth of millennials and high smartphone penetration.

➤ **Challenges:**

- The threat of **cybercrime** in the global banking and financial services industry has increased amid the coronavirus pandemic.
  - E.g. Malicious Software **Cerberus**
- Fraudulent claims, chargebacks, fake buyer accounts, promotion/coupon abuse, account takeover, identity theft, card detail theft and triangulation frauds are emerging as challenges.

**National Payments Corporation of India**

- NPCI, an umbrella organisation for operating retail payments and settlement systems in India, is **an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA)** under the provisions of the Payment and Settlement Systems Act, 2007.
- It is a "Not for Profit" Company under the provisions of **Section 25 of Companies Act 1956** (now Section 8 of Companies Act 2013), with an intention to provide infrastructure to the entire Banking system in India for physical as well as electronic payment and settlement systems.

## Constitution Day: 26<sup>th</sup> November

### Why in News

The **Ministry of Law & Justice** has launched 'Online Course on Indian Constitution' on the eve of 'Constitution

Day' as a part of celebrations of 'Azadi Ka Amrit Mahotsav' for **75 years of India's Independence**.

- The online course aims to **enhance the awareness of the constitutional values** to understand the fundamental rights and duties.
- It will also **help the citizens familiarize with the glorious constitutional journey** and to **understand the supreme law of the land** including the right to life, personal liberty and privacy issues.

### Key Points

➤ **About:**

- It is celebrated on **26th November** every year.
- It is also known as **National Law Day**.
- On this day in 1949, the **Constituent Assembly of India formally adopted the Constitution of India** that came into force on 26<sup>th</sup> January 1950.
- The Ministry of Social Justice and Empowerment on **19<sup>th</sup> November 2015**, notified the decision of the Government of India to **celebrate 26 November as 'Constitution Day'**.

➤ **Framing of Constitution:**

- In 1934, **MN Roy** first proposed the idea of a constituent assembly.
- Under the **Cabinet Mission plan** of 1946, elections were held for the **formation of the constituent assembly**.
- The Constitution of India is framed by the Constituent Assembly. The Constituent Assembly of India appointed a total of 13 committees to deal with different tasks related to the framing of the constitution.
- There were 8 major committees and the rest were minor ones. The list of **major committees** and their heads are mentioned below:
  - **Drafting Committee** – B. R. Ambedkar
  - **Union Power Committee** – Jawaharlal Nehru
  - **Union Constitution Committee** – Jawaharlal Nehru
  - **Provincial Constitution Committee** – Vallabhbhai Patel
  - **Advisory Committee on Fundamental Rights, Minorities and Tribal and Excluded Areas** – Vallabhbhai Patel.
  - **Rules of Procedure Committee** – Rajendra Prasad

- **States Committee (Committee for Negotiating with States)** – Jawaharlal Nehru
- **Steering Committee** – Rajendra Prasad
- **Facts about the Constitution of India:**
  - World's **lengthiest Constitution**.
  - **Federal System with Unitary Features**.
  - **Parliamentary Form of Government**.
  - The framing of the Constitution took over **2 years, 11 months and 18 days**.
  - The original copies of the Indian Constitution weren't typed or printed. They have been **handwritten** and are now kept in a helium-filled case within the library of the Parliament.
  - **Prem Bihari Narain Raizada** had written the unique copies of the Structure of India.
  - Originally, the Constitution of India was **written in English and Hindi**.
  - The **basic structure of the Indian Constitution** stands on the **Government of India Act, 1935**.
  - The Constitution of India has also **borrowed some of its features** from a number of countries.

**Indian Constitution Borrowed Features**

|    |                         |   |
|----|-------------------------|---|
| 1. | British Constitution    | Parliamentary form of Government, Rule of Law, Law making procedure. Single Citizenship; Institution of Speaker, doctrine of pleasure tenure of civil servants. |
| 2. | American Constitution   | Judicial System, Fundamental Rights   |
| 3. | Canadian Constitution   | Federal System with a strong central authority; Residual powers, Centre State Relation  |
| 4. | Irish Constitution      | Directive Principles, Election of the President of India  |
| 5. | Australian Constitution | Concurrent list; Freedom of Trade & Service within country  |
| 6. | Weimar Constitution     | Emergency Provision   |
| 7. | Soviet Constitution     | Five Year Plans; Fundamental duties   |
| 8. | Govt. of India Act 1935 | Office of the governor, powers of the federal jury  |
| 9. | South African           | Amendment of Constitution   |

**Further Reading**

- **Preamble to the Indian Constitution**
- **Important Articles from Indian Constitution (Part I and II)**
- **Fundamental Rights (Part-I and II)**
- **Directive Principles of State Policy (DPSP)**
- **Parliament (Part-I, II and III)**
- **Major Constitutional Amendments (Part-I, II and III)**
- **Emergency Provisions**

**Aadhaar 2.0 Workshop**

***Why in News***

Recently, the **Ministry of Electronics & Information Technology (Meity)** inaugurated a 3-day workshop titled '**Aadhaar 2.0- Ushering the Next Era of Digital Identity and Smart Governance**'.

- The Workshop aims to analyze the reach of **Digital Identity** in major reforms and schemes launched by the Government.
- It also aims to look into **various futuristic aspects of Digital Identity** to achieve universal inclusion, both social as well as financial.

***Key Points***

- **About:**
  - It will provide a **platform to share and exchange ideas with Government and Industry leaders, Eminent Academicians and Scientists, Innovators and Practitioners** working on Digital Identity in India and abroad.
  - The workshop will **provide an opportunity to feed into the regional and global debates**, while reflecting on India-specific challenges and opportunities to share best practices in terms of people, processes, technology, research, regulatory framework, legal policy and governance.
- **Major Discussions:**
  - **Expanding Use of Aadhar:** Aadhaar can continue itself as one of the main enablers of identity verification in both on-line as well as offline mode in light of the **SWIK rules (Social welfare, Innovation and Knowledge)**.
    - For example, Aadhaar can deliver on e-gov; e-commerce and e-banking and finance in particular.

- **Aadhaar as an International Digital Identity Standard:** Aadhaar to be developed as a framework for creating International standards for digital identity, a roadmap for International digital identity standards and across borders interoperability.
- **Strengthening Privacy Framework:** Aadhaar's legal framework is settled with the Aadhaar Act, **Supreme Court judgement**, but for addressing privacy aspects **Data Privacy Law** needs to be enacted.
- **Use of Critical Technologies:** Biometrics in Aadhaar, can be improved using **Artificial Intelligence** and **deep learning techniques**.
  - **Blockchain-based technologies** and applications as well as the impact of Aadhaar and these new technologies in the Banking sector should be explored.
- **Helping Bottom of the Pyramid:** Aadhaar has **given identity to a large number of people** who did not have any identity earlier.
  - It has been **used in a range of services and has helped in bringing financial inclusion**, broadband and telecom services, **direct benefit transfers** to the bank account of citizens in a transparent manner.
- **Neutral:** Aadhaar number is **devoid of any intelligence** and does not profile people based on caste, religion, income, health and geography.
  - The Aadhaar number is a proof of identity, however, **it does not confer any right of citizenship or domicile** in respect of an Aadhaar number holder.
- **People-Centric Governance:** Aadhaar is a strategic policy tool for social and financial inclusion, public sector delivery reforms, managing fiscal budgets, increasing convenience and promoting hassle-free people-centric governance.
- **Permanent Financial Address:** Aadhaar can be used as a **permanent Financial Address and facilitates financial inclusion of the underprivileged and weaker sections** of the society and is therefore a tool of distributive justice and equality.
  - Thus, the Aadhaar identity platform is one of the **key pillars of 'Digital India'**.

## Aadhaar

### ➤ About

- Aadhaar number is a **12-digit random number** issued by the **Unique Identification Authority of India (UIDAI)** to the residents of India after satisfying the verification process laid down by the Authority.
- Any individual, **irrespective of age and gender, who is a resident of India**, may voluntarily enrol to obtain an Aadhaar number.
- Person willing to enrol has to provide minimal **demographic and biometric information** during the enrolment process which is totally free of cost.
- An individual needs to enrol for Aadhaar only once and after **de-duplication** only one Aadhaar shall be generated, as the **uniqueness is achieved through the process of demographic and biometric de-duplication**.

➤ **Legal Framework:** The Parliament has passed the **Aadhaar and Other Laws (Amendment) Act, 2019** which allows voluntary use of Aadhaar as proof of identity.

### ➤ Benefits of Aadhaar:

- **Promoting Transparency and Good Governance:** Aadhaar number is verifiable in an online, cost-effective way.
  - It is **unique and robust enough to eliminate duplicates and fake identities** and thus used as a basis/primary identifier to roll out several Government welfare schemes thereby promoting transparency and good governance.

## ACROSS Scheme

### *Why in News*

The **Cabinet Committee on Economic Affairs** approved the continuation of **Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS)** Scheme along with **its eight sub-schemes to the next finance (15<sup>th</sup>) cycle of five years (2021-2026)**.

### *Key Points*

#### ➤ About:

- It pertains to the atmospheric science programs of the Ministry of Earth Sciences (MoES) and **addresses different aspects of weather and climate services**.
- Each of these aspects is incorporated as **eight sub-schemes under the umbrella scheme "ACROSS"**.
  - The sub-schemes are Commissioning of Polarimetric **Doppler Weather Radars (DWRs)**,

Upgradation of Forecast System, Weather & Climate Services, Atmospheric Observations Network, Numerical Modelling of Weather and Climate, **Monsoon Mission III**, Monsoon Convection, Clouds and Climate Change (MC4) and High Performance Computing System (HPCS).

➤ **Implementation:**

- It will be implemented by the **Ministry of Earth Sciences through its institutes** namely **India Meteorological Department (IMD)**, **Indian Institute of Tropical Meteorology (IITM)**, **National Centre for Medium Range Weather Forecasting (NCMRWF)**, and **Indian National Centre for Ocean Information Service (INCOIS)**.
- Each institute has a designated role for accomplishing the above tasks through the following eight schemes.

➤ **Significance:**

- The scheme will provide **improved weather, climate and ocean forecast and services**. This would include warnings for **cyclones**, storm surges, **heat waves** and **thunderstorms**.
- The whole process from generation of forecast to its delivery requires considerable manpower at every stage, thereby **generating employment opportunities for many people**.

**Key Points**

➤ **About:**

- The report **aims to influence the global debate and analyses current trends and challenges to democracy**, exacerbated by the **Covid-19 pandemic**.
- It offers specific **policy recommendations** to spark new and innovative thinking for policymakers, governments and civil society organizations supporting democracy.
- It is released by the **International Institute for Democracy and Electoral Assistance (International-IDEA)**.

➤ **About International Institute for Democracy and Electoral Assistance:**

- International IDEA is an **intergovernmental organization** that supports sustainable democracy worldwide.
- It was **founded in 1995** and currently has 33 member states.
- International IDEA advances democracy worldwide, as a **universal human aspiration and an enabler of sustainable development**, through support to the building, strengthening and safeguarding of democratic political institutions and processes at all levels.

➤ **Highlights of the Report:**

- **Democratic Decline:** Democratically elected Governments, including established democracies, are **increasingly adopting authoritarian tactics**.
- **Effect of Pandemic:** The pandemic placed considerable stress on democracy across the region by **imposing inevitable restrictions on movement** and — where governments were sensitive to criticism — also restrictions on **freedom of expression**.
  - The year 2020 was the worst on record, in terms of the number of countries affected by deepening autocratisation.
  - The pandemic has thus had a particularly damaging effect on non-democratic countries, further closing their already reduced civic space.
- **Popular Support:** This **democratic backsliding** has often enjoyed significant popular support.
- **Indian Scenario:** The report highlighted the case of **Brazil and India** as “some of the most worrying examples of backsliding.”

## Global State of Democracy Report 2021

### **Why in News**

According to the recently released **Global State of Democracy Report, 2021**, the number of countries moving towards **authoritarianism** in 2020 was higher than that of countries becoming more democratic.

- However, India remained in the category of a mid-level performing democracy as it has since 2000.

➤ **Major Suggestions:**

- **New Social Contract:** There is a need to deliver on political or civic reforms or develop a new social contract that closes the gap between what people want and what governments currently deliver.
  - This can be done by designing responsive, inclusive, accountable, and transparent institutions oriented towards achieving sustainable development.
- **Strengthening Institutions:** Rebuilding existing institutions by updating practices in established democracies, building democratic capacity in new democracies, and protecting electoral integrity, fundamental freedoms and rights, and the checks and balances essential to thriving democratic systems.
- **Strengthening Civil Society:** Preventing the rising authoritarianism and democratic backsliding can be done by investing in education and by supporting independent civil society, combatting disinformation and supporting free and independent media that facilitates the growth of democratic cultures, values and practice.

**PESA Act**

**Why in News**

Recently, the Chhattisgarh government has formulated draft rules under **Panchayat Extension to Scheduled Areas**

(PESA) Act, 1996, terming it the **Chhattisgarh Panchayat Provisions (Extension of the Scheduled) Rules, 2021.**

- Tribals in Chhattisgarh have been **demanding the enactment of PESA rules** for some time, as it would give them more power over their resources.
- The bill envisages instituting **devaluation of power, and strengthening the gram sabhas** at the village level.
- Six states (Himachal Pradesh, Andhra Pradesh, Orissa, Jharkhand, Gujarat, Maharashtra) have formed the PESA laws, and Chhattisgarh would become the seventh state if the rules are enacted.

**Key Points**

➤ **About PESA Act 1996:**

- **Background:** To promote local self-governance in rural India, the **73rd constitutional amendment** was made in 1992.
  - Through this amendment, a three-tier Panchayati Raj Institution was made into a law.
  - However, its application to the scheduled and tribal areas under **Article 243(M) was restricted.**
  - After the **Bhuria Committee recommendations in 1995**, PESA Act 1996 came into existence for ensuring tribal self-rule for people living in scheduled areas of India.
- **Role of State Government:** PESA, was enacted by the Centre to **ensure self-governance through gram sabhas (village assemblies)** for people living in scheduled areas.
  - State governments were required to amend their respective Panchayat Raj Acts without making any law that would be inconsistent with the mandate of PESA.
- **Objective:** It legally **recognises the right of tribal communities**, residents of the scheduled areas, to govern themselves through their own systems of self-government.
  - It acknowledges their traditional rights over natural resources.
- **Importance of Gram Sabha in PESA Act:**
  - **Democratic Decentralisation:** PESA empowers gram sabhas to play a key role in approving development plans and controlling all social sectors. This includes management of:
    - Resources over jal, jangal, zameen (water, forest and land)

- **Minor forest produce**
- Human resources: Processes and personnel who implement policies
- Managing local markets
- Preventing land alienation
- Regulating intoxicants among other things
- **Preserving Identity:** The powers of gram sabhas include **maintenance of cultural identity and tradition, control over schemes** affecting the tribals, and control over natural resources within the area of a village.
- **Conflict Resolution:** The PESA Act thus **enables gram sabhas to maintain a safety net over their rights** and surroundings against external or internal conflicts.
- **Public Watchdog:** The gram sabha would have the powers to monitor and prohibit the manufacturing, transport, sale and consumption of intoxicants within their village limits.
- **Issues Related to PESA:**
  - **Partial Implementation:** The state governments are supposed to enact state laws for their Scheduled Areas in consonance with this national law.
    - This has resulted in the partially implemented PESA.
    - The partial implementation has worsened self-governance in Adivasi areas, like in Jharkhand.

#### India's Tribal Policy

- In India, most of the tribes are collectively identified under Article 342 (1&2) as "**Scheduled Tribes**".
- Their right to self-determination is guaranteed by Part X: The Scheduled and Tribal Areas – Article 244: Administration of Scheduled Areas and Tribal Areas.
- That is, **Fifth** and **Sixth Schedules** of the Indian Constitution.
- The Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996 or PESA.
- The **Tribal Panchsheel Policy**
- **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006** concerns the rights of forest-dwelling communities to land and other resources.
- **Administrative Hurdles:** Many experts have asserted that PESA did not deliver due to the lack of clarity, legal infirmity, bureaucratic apathy, absence of a

political will, resistance to change in the hierarchy of power, and so on.

- **Followed in Letter Rather than Spirit:** Social audits conducted across the state have also pointed out that in reality different developmental schemes were being approved on paper by Gram Sabha, without actually having any meeting for discussion and decision making.

## Repealing Farm Laws

### *Why in News*

Recently, the Prime Minister announced the **repeal of the three contentious farm laws**.

- The **Parliament** ( Lok Sabha + Rajya Sabha + President) has the authority to **enact, amend, and repeal any law**.
- The farm laws had witnessed **protests from farmers**, mainly from Punjab and Haryana, on the borders of Delhi for more than a year.

### *Key Points*

- **Three Farm Laws:**
  - **Farmers Produce Trade and Commerce (Promotion and Facilitation) Act, 2020:** It is aimed at allowing trade in agricultural produce outside the existing **APMC (Agricultural Produce Market Committee)** mandis.
  - **Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020:** It seeks to provide a framework for contract farming.
  - **Essential Commodities (Amendment) Act, 2020:** It is aimed at removing commodities such as cereals, pulses, **oilseeds, edible oils**, onion and potato from the list of essential commodities.
- **Reason for Enacting the Laws:**
  - There has been a **long-pending demand** for reforms in agricultural marketing, a **subject that comes under the purview of state governments**.
  - The Centre **took the issue up in the early 2000s** by pushing for reforms in the APMC Acts of the states.
  - The Agriculture Ministry under the then government **designed a model APMC Act in 2003 and circulated it among the states**.
    - The subsequent government, too, pushed for these reforms. But given that it is a state subject,

the Centre has had little success in getting the states to adopt the model APMC Act.

- It was in this backdrop that the government went for reforms in the sector by passing these laws.

➤ **Reasons Behind Farmers Protest:**

- **Repealing the farm laws:** The first and foremost demand of the protesting farmers' organisations is the **repeal of three new agricultural laws**.

- As per the farmers the law is framed to **suit big corporations who seek to dominate the Indian food and agriculture business** and will **weaken the negotiating power of farmers**. Also, big private companies, exporters, wholesalers, and processors may get an edge.

- **Minimum support price:** The second demand of farmers is the **guarantee of Minimum Support Price (MSP)** to ensure procurement of crops at a suitable price.

- The Farmers are also demanding to get a written assurance in the form of a Bill for the continuation of the MSP and conventional food grain procurement system.
- The Farmers' organisations want the APMC or the Mandi System to be protected.

- **Electricity (Amendment) Bill:** The third demand of farmers is the **withdrawal of the Electricity (Amendment) Bill**, as they feel that they won't get free electricity due to this.

- **Swaminathan Commission:** The Farmers are demanding MSP as recommended by the Swaminathan Commission.

- The **Swaminathan Commission Report states that the government should raise the MSP to at least 50%** more than the weighted average cost of production. It is also known as the C2+50% formula.

- It includes the imputed cost of capital and the rent on the land (called 'C2') to give farmers 50% returns.

➤ **Staying the Implementation:**

- The **Supreme Court** stayed the implementation of the three laws in January 2021.

- The **farm laws were in force for only 221 days** — June 5<sup>th</sup> 2020, when the ordinances were promulgated to January 12<sup>th</sup> 2021, when the Supreme Court stayed their implementation.

- Since the stay, the **laws have been suspended**. The government has used old provisions of the **Essential Commodities Act, 1955** to impose stock limits, having amended the Act through one of the three farm laws.

➤ **Impacts of Repealing the Law:**

- **Need of Consultation:**

- The repeal underlines that any future attempts to reform the rural agricultural economy would require a **much wider consultation**, not only for **better design of reforms, but for wider acceptance**.

- The repeal would leave the government hesitant about pursuing these reforms in stealth mode again.

- The government will doubtless have to walk the path of reform very cautiously.

- **Low Farmers Income:**

- Given that the **average holding size stands at just 0.9 ha** (2018-19). Unless one goes for **high-value agriculture** — and, that's where one needs **efficient functioning value chains from farm to fork** by the infusion of private investments in logistics, storage, processing, **e-commerce**, and digital technologies — the incomes of farmers cannot be increased significantly.

- There is no doubt that this **sector is crying for reforms**, both in the marketing of outputs as well as inputs, including land lease markets and direct benefit transfer of all input subsidies — **fertilisers, power, credit and farm machinery**.

- **Negative Impact on Industries:**

- Industries including **logistics, cold chain, agri-related, and farm equipment would be impacted the most** because they were supposed to be the direct beneficiaries of these laws.

- **Constant Agri-GDP:**

- The agri-**Gross Domestic Product (GDP)** growth has been **3.5% per annum in the last 14 years**. One expects this trend to continue — there might be minor changes in the agri-GDP depending on rainfall patterns.

- **Cropping patterns** will remain skewed in favour of rice and wheat, with the granaries of the **Food Corporation of India** bulging with stocks of grain. The food subsidy will keep bloating and there will be large leakages.

## Allahabad High Court Decision on Uniform Civil Code

### Why in News

Recently, the Allahabad High Court has **called upon the Central government to initiate the process for implementation of Uniform Civil Code (UCC)**.

- The court's direction came in the context of a bunch of **17 petitions** filed by interfaith couples, who contracted marriage upon conversion, seeking protection of their life, liberty and privacy guaranteed under **Article 21** of the Constitution.

### Key Points

➤ **Background - New Anti-Conversion Law:** The Government of Uttar Pradesh has recently passed an anti-conversion law called the **Uttar Pradesh Prevention of Unlawful Conversion of Religion Act, 2021**.

- The marriage cannot be registered without the district authority making an enquiry as to whether the **conversion is voluntary and not induced by coercion, allurements and threat**.
- The Act mandates that the **approval of the District Magistrate (DM) is necessary** to be obtained before conversion or marriage.
- The Act makes religious conversion for marriage a **non-bailable offence**.

➤ **Observation by the Court:**

- The **marriage registrar lacks the power to withhold** the registration of marriage merely for the reason that the parties have not obtained the necessary approval of conversion from the district authority.
  - The court directed the marriage registrar to forthwith register the marriage of such couples.
- The Court observed that **such an approval is directory and not mandatory**.
  - The Act would not satisfy the test of **reasonableness and fairness, and would fail to pass the muster of Article 14** (Equality before law) **and Article 21** (Protection of Life and Personal Liberty).
- It observed that the **consent of the family or the community or the clan or the State or executive is not necessary**, once two adult individuals agree to enter into a wedlock which is lawful and legal.

- The court **directed the police** of the respective districts to **ensure the safety of these couples**.
- Further, the court **urged the central government to make a law implementing the UCC**, so that such atrocities are not repeated.
  - This is because after implementation there will be less need for anti-conversion laws.

### Uniform Civil Code

➤ **Background:**

- Increase in legislation dealing with personal issues in the far end of British rule forced the government to form the **B N Rau Committee** to codify **Hindu law in 1941**.
- UCC is one that would provide for one law for the entire country, applicable to all religious communities in their personal matters such as marriage, divorce, inheritance, adoption etc.
- **Article 44 of the Constitution** lays down that the state shall endeavour to secure a UCC for the citizens throughout the territory of India.
  - Article 44 is one of the **Directive Principles of State Policy (DPSP)**.
- In order to bring uniformity, the courts have often said in their judgements that the government should move towards a UCC.
  - The judgement in the **Shah Bano case (1985)** is well known.
  - The Supreme Court in **Shayara Bano case (2017)** had declared the practise of Triple Talaq (talaq-e-biddat) as unconstitutional.

➤ **Need for UCC:**

- **National Integration:** A common civil code will help the cause of national integration by removing disparate loyalties to laws which have conflicting ideologies.
- **In Conformity With Changing Times:** There has been a steep rise in inter-community, inter-caste and interfaith marriages and relationships, in recent times.
  - Also, coupled with the rise in the number of single women, a comprehensive UCC will be in conformity with the changing times.
- **Protection to Vulnerable Section of Society:** The UCC aims to provide protection to vulnerable sections as envisaged by Ambedkar including women and religious minorities.

- **Adhering to Ideal of Secularism:** Secularism is the objective enshrined in the Preamble, a secular republic needs a common law for all citizens rather than differentiated rules based on religious practices.
- **Simplification of Laws:** The code will simplify the complex laws around marriage ceremonies, inheritance, succession, adoptions making them one for all. The same civil law will then be applicable to all citizens irrespective of their faith.
- **Associated Challenges:**
  - **Communal Politics:** The demand for a uniform civil code has been framed in the context of communal politics.
    - A large section of society sees it as majoritarianism under the garb of social reform.
  - **Constitutional Hurdle: Article 25** of Indian constitution, that seeks to preserve the freedom to practise and propagate any religion gets into conflict with the concepts of equality enshrined under **Article 14** of Indian Constitution.
- Government and civil service transparency.
- Capacity for civil society oversight which includes the media's role.
- **Performance of the Countries:**
  - **India:**
    - India has slipped to **82<sup>nd</sup> position in 2021**, five places down from 77<sup>th</sup> rank last year.
      - In 2020, **India ranked 77 with a score of 45** while this year, the country stood at **82<sup>nd</sup> position with a score of 44.**
    - **India fared better than its neighbours** – Pakistan, China, Nepal and Bangladesh. Bhutan, meanwhile, secured 62<sup>nd</sup> rank.
  - **World:**
    - North Korea, Turkmenistan, Venezuela and Eritrea **pose the highest commercial bribery risk**, while Denmark, Norway, Finland, Sweden and New Zealand **present the lowest.**
    - Over the past five years, the **business bribery risk environment in the United States worsened significantly** when compared with global trends.
    - From 2020 to 2021, all of the **Gulf Cooperation Council (GCC)** countries saw an **increase in commercial bribery risk.**

## Bribery Risk Matrix 2021

### *Why in News*

Recently, Bribery Risk Matrix 2021 was **released by TRACE, an anti-bribery standard setting organisation.**

### *Key Points*

- **About the Matrix:**
  - It **measures business bribery risk in 194 countries, territories, and autonomous and semi-autonomous regions.**
  - It was **originally published in 2014** to meet a need in the business community for more reliable and nuanced information about the risks of commercial bribery worldwide.
  - It **aggregates relevant data obtained** from leading public interest and international organisations, including the **United Nations, World Bank, V-Dem Institute** at the University of Gothenburg and **World Economic Forum.**
- **Calculation Methods:** Score is calculated on the basis of four factors:
  - Enforcement and anti-bribery deterrence.
  - Business interactions with the government.
- **Related Steps Taken by India:** India, in pursuance of its commitment to **"Zero Tolerance Against Corruption"** has taken several measures to combat corruption which, inter alia, include:
  - Systemic improvements and reforms to provide **transparent citizen-friendly services** and reduce corruption. These, inter alia, include:
    - Disbursement of welfare benefits directly to the citizens under various schemes of the Government in a transparent manner through the **Direct Benefit Transfer initiative.**
    - Implementation of **E-tendering** in public procurements.
    - Introduction of **e-Governance** and simplification of procedure and systems.
    - Introduction of Government procurement through the **Government e-Marketplace (GeM).**
  - The **Prevention of Corruption Act, 1988:**
    - It clearly **criminalizes the act of giving bribes** and will help check big ticket corruption by creating a vicarious liability in respect of senior management of commercial organizations.

- **Central Vigilance Commission (CVC)**, through various orders and circulars recommended adoption of **Integrity Pact to all the organizations** in major procurement activities and to ensure effective and expeditious investigation wherever any irregularity / misconduct is noticed.
- The **institution of Lokpal has been operationalised** by appointment of Chairperson and Members.
  - **Lokpal is statutorily mandated** to directly receive and process complaints as regards alleged offences against public servants under the Prevention of Corruption Act, 1988.

## Milestone for LGBTQ Rights

### **Why in News**

The **senior advocate Saurabh Kirpal** could be be India's **first openly gay judge**. After deferment for four times, the Supreme Court Collegium has finally recommended his name as **judge of the Delhi High Court**.

- Although **conflict of interest** was claimed as the excuse for deferment, it has been a popular argument in legal circles that the delay in recommending his name was due to his sexual orientation.
- If selected, his elevation will mark a key turning point in LGBTQ rights. LGBTQ is an acronym for lesbian, gay, bisexual, transgender and queer or questioning.
- Earlier, the European Parliament had declared the **European Union an "LGBTIQ Freedom Zone"**.

**has a role only after names have been decided** by the collegium.

- A **High Court (HC) collegium** is led by its Chief Justice and four other senior most judges of that court.
  - The names recommended for appointment by a HC collegium reaches the government only after approval by the CJ and the SC collegium.
- The government's role is limited to getting an inquiry conducted by the Intelligence Bureau (IB) if a lawyer is to be elevated as a judge in a High Court or the Supreme Court.
  - **Intelligence Bureau (IB):** It is a reputed and established intelligence agency. It is authoritatively **controlled by the Ministry of Home Affairs**.
- It can also raise objections and seek clarifications regarding the collegium's choices, but if the collegium reiterates the same names, the government is bound, under Constitution Bench judgments, to appoint them as judges.

### **Key Points**

- **Status of LGBTQ Rights in India:**
  - **National Legal Services Authority Vs. Union of India (2014):** The SC observed that "**recognition of transgenders as a third gender** is not a social or medical issue, but a human rights issue".
  - **Navtej Singh Johar vs. Union Of India (2018):** The SC **decriminalised homosexuality by striking off parts of Section 377 of the Indian Penal Code (IPC)** which were held violative of Fundamental

**Appointment of a High Court Judge**

- **Article 217 of the Indian Constitution** states that the **Judge of a High Court shall be appointed by the President in consultation with the Chief Justice of India (CJI), the Governor of the State**, and, in the case of appointment of a **Judge other than the Chief Justice, the Chief Justice of the High Court**.
- The **Second Judges Case (1993)** introduced the **Collegium system**, holding that “**consultation**” really meant “**concurrence**”.
  - It added that it was not the CJI’s individual opinion, but an institutional opinion formed in consultation with the two senior-most judges in the SC.
- Judges of the higher judiciary are appointed only through the collegium system and the **government**

**Rights of LGBTQ Community.**

- The SC held that **Article 14 of the Constitution guarantees equality before law** and this applies to all classes of citizens thereby restoring ‘inclusiveness’ of LGBTQ Community.
- It also **upheld the pre-eminence of Constitutional morality** in India by observing that equality before law cannot be denied by giving precedence to public or religious morality.
- The SC stated that the “**Yogyakarta Principles on the Application of International Law in Relation to Issues of Sexual Orientation and Gender Identity**” should be applied as a part of Indian law.
  - Yogyakarta Principles recognise freedom of sexual orientation and gender identity as part of Human Rights.



- They were outlined in 2006 in Yogyakarta, Indonesia by a distinguished group of International Human Right experts.
- **Tussle Over Same Sex Marriages:** In *Shafin Jahan v. Asokan K.M. and others (2018)* case, the SC observed that choice of a partner is a person's fundamental right, and it can be a same-sex partner.
  - However, in February, 2021, the **Central Government opposed same-sex marriage** in Delhi High Court stating that a marriage in India can be recognised only if it is between a **"biological man" and a "biological woman" capable of producing children.**
- **Transgender Persons (Protection of Rights) Act, 2019:** The Parliament has passed the **Transgender Persons (Protection of Rights) Bill, 2019** which has been criticised for its poor understanding of gender and sexual identity.
- **Challenges Faced by LGBTQ Community:**
  - **Family:** The problem of sexual orientation and gender identity leads to fighting and family disruption.
    - Lack of communication and misunderstanding between parents and their LGBTQ children increases family conflict.
  - **Discrimination at Work Place:** LGBTQ suffers from the socio-economic inequalities in large part due to discrimination in the workplace.
  - **Health Issues:** Criminalisation of homosexuality leads to discrimination and results in LGBTQ people getting poor or inadequate access to services within the health system.
    - It also creates barriers to both the availability and the ability to access HIV prevention, testing and treatment services.
  - **Isolation and Drug Abuse:** They gradually develop low self-esteem and low self-confidence and become isolated from friends and family.
    - These people mostly get addicted to drugs, alcohol, and tobacco to get themselves relieved of stress and rejection and discrimination.

## USOF Scheme for Aspirational Districts in 5 states

### **Why in News**

Recently, the Union Cabinet has approved the

**Universal Service Obligation Fund (USOF) scheme for provisioning of 4G-based mobile services in uncovered villages of aspirational districts across five states** — Andhra Pradesh, Chhattisgarh, Jharkhand, Maharashtra, and Odisha.

- **NITI Aayog's Aspirational Districts programme** aims to quickly and effectively transform 112 most under-developed districts across the country.

### **Key Points**

- **About:**
  - It envisages to provide **4G based mobile services in the 7,287 uncovered villages of 44 Aspirational Districts across five States.** It would be **funded by the Universal Service Obligation Fund (USOF).**
  - It will **enhance digital connectivity** useful for self-reliance, facilitate learning, dissemination of information and knowledge, skill upgradation and development, disaster management, e-Governance initiatives, establishment of enterprises & e-commerce facilities, etc.
  - It seeks to fulfill the vision of **Digital India** promoting domestic manufacturing and fulfilling the objectives of **Atmanirbhar Bharat** etc.
- **Universal Service Obligation Fund (USOF):**
  - **About:**
    - USOF ensures that there is **universal non-discriminatory access to quality ICT** (Information and Communications Technology) **services** at economically efficient prices **to people in rural and remote areas.**
    - It was **created under the Ministry of Communications in 2002.**
    - It is a **non-lapsable fund**, i.e., the unspent amount under a targeted financial year does not lapse and is accrued for next years' spending.
    - All credits to this fund require parliamentary approval and it has statutory support under **Indian Telegraph (Amendment) Act, 2003.**
  - **Objectives:**
    - **Economic:** Network extension & stimulate uptake of the ICT services
    - **Social:** Mainstreaming the underserved & unserved areas/groups by bridging the Access Gap.
    - **Political:** to enable citizens exercise their political rights in an informed way and

- **Constitutional:** Equitable distribution of the fruits of the telecom/digital revolution and fair allocation of national resources (pooled USO levy) via targeted subsidies.
- **Significance:**
  - The rural areas get the Village Public Telephones (VPTs), Rural Community Phones (RCPs), Rural Household Telephones (RDELs), and mobile infrastructure.
  - With access to affordable telecom services in remote and rural areas it **can help stemming urban migration and ensure generating employment opportunities in the rural areas.**
  - The increased awareness of ICT services in the rural areas and growing participation of the rural people **will help promote facilities related to health, education etc.**
  - It can ensure the **growth of Rural Business Process Outsourcing (BPOs-Rural) and Rural Knowledge Process Outsourcing (KPOs-Rural.)**
  - USOF is also perceived as the right tool **to extend the benefits of the government schemes** aimed at the social development of the rural population.

#### Related Schemes

- **BharatNet Project**
- **National Broadband Mission**
- **Submarine Cable Connectivity to Andaman and Nicobar Islands**
- **National Optical Fibre Network**
- **Digital India**
- **National Digital Communications Policy, 2018**

## **Pradhan Mantri Awaas Yojana – Gramin**

### **Why in News**

- Recently, Pradhan Mantri Awaas Yojana – Gramin (PMAY-G) **has completed 5 years** on 20<sup>th</sup> November, 2021.
- Earlier, it was reported that due to adverse impact of **Covid-19**, only 5.4% of the sanctioned houses under the PMAY-G, have reached completion for the year 2020-2021.
  - The **Ministry of Housing and Urban Affairs implements the Pradhan Mantri Awas Yojana – Urban.**

### **Key Points**

- **Launch:** To achieve the objective of **“Housing for All” by 2022**, the erstwhile rural housing scheme Indira Awaas Yojana (IAY) was restructured to PMAY-G w.e.f 1<sup>st</sup> April, 2016.
- **Ministry Involved:** Ministry of Rural development.
- **Aim:** To **provide a pucca house with basic amenities to all rural families**, who are homeless or living in kutcha or dilapidated houses **by the end of March 2022.**
  - To **help rural people Below the Poverty Line (BPL) in construction of dwelling units** and upgradation of existing unserviceable kutcha houses by providing assistance in the form of a full grant.
- **Beneficiaries:** People belonging to SCs/STs, freed bonded labourers and non-SC/ST categories, widows or next-of-kin of defence personnel killed in action, ex servicemen and retired members of the paramilitary forces, disabled persons and minorities.
- **Selection of Beneficiaries:** Through a three stage validation - **Socio Economic Caste Census 2011, Gram Sabha, and geo-tagging.**
- **Cost Sharing:** The cost of unit assistance is shared between Central and State Governments in the ratio 60:40 in plain areas and 90:10 for North Eastern and hilly states.
- **Features:**
  - The minimum size of the house has been increased to 25 sq.mt (from 20 sq.mt) with a hygienic cooking space.
  - The unit assistance has been increased from Rs. 70,000 to Rs. 1.20 lakh in plain and from Rs. 75,000 to Rs. 1.30 lakh in hilly states.
  - The assistance for construction of toilets shall be leveraged through convergence with **Swachh Bharat Mission-Gramin (SBM-G), MGNREGS** or any other dedicated source of funding.
  - Convergence for piped drinking water, electricity connection, LPG gas connection etc. different Government programmers are also to be attempted.

## **IPC Report on the PDP Bill**

### **Why in News**

Recently, a **Joint Parliamentary Committee (JPC)** has finalised and adopted the draft report on **The Personal Data Protection (PDP) Bill, 2019** by a majority.

- The Bill will be soon tabled in the upcoming **Winter Session of Parliament**. The JPC has got five extensions to submit a report on the Bill in two years.

### Key Points

#### ➤ PDP Bill:

- It was first brought to the **Parliament in 2019** and was referred to the JPC for examination at the time.
  - The Bill was drafted after a **Supreme Court ruling** that declared **'Right to Privacy' a fundamental right** in August 2017, **Puttaswamy judgment**.
- It is commonly referred to as the **"Privacy Bill"** and intends to protect individual rights by regulating the **collection, movement, and processing of data that is personal, or which can identify the individual**.
- The Bill is landmark legislation meant to regulate how various companies and organizations use individuals' data inside India.
- The 2019 draft of the Bill proposed the **formation of a Data Protection Authority (DPA)**, which would regulate the use of **users' personal data by social media companies** and other organizations within the country.

#### ➤ Report:

- **Clause 35/Exemption Clause:**
  - The committee has retained the Clause with minor change.
  - It allows the Government to keep any of its agencies outside the purview of the law.
    - The Clause in the name of **"public order", 'sovereignty', "friendly relations with foreign states" and "security of the state"** allows any agency under the Union Government exemption from all or any provisions of the law.

- The clause is for **"certain legitimate purposes"** and also there is **precedent in the form of the reasonable restrictions imposed upon the liberty** of an individual, as guaranteed under **Article 19 of the Constitution** and the **Puttaswamy judgment**.

#### ○ Recommendations:

##### ● Policy on Data Localisation:

- Development of an alternative indigenous financial system for cross-border payments on the lines of Ripple (U.S.) and INSTEX (EU) and that the Central Government, in consultation with all the sectoral regulators, must prepare and pronounce an extensive policy on data localisation.

##### ● Certification for Digital Devices:

- Government should make efforts to establish a mechanism for the formal certification process for all digital and IoT (Internet of Things) devices that will ensure the integrity of all such devices with respect to data security.

##### ● Accountability of Social Media:

- It has recommended that all social media platforms, which do not act as intermediaries, should be treated as publishers and be held accountable for the content they host, and should be held responsible for the content from unverified accounts on their platforms.
- The government should also define the threshold of users of significant social media platforms and process of voluntary user verification.

##### ● Sharing Data:

- Under **clause 94**, previously clause 93, which deals with granting powers to the government to make rules, the panel recommends that the government decide the manner in which a data fiduciary can share, transfer or transmit the personal data to any person as part of any business transaction.
  - A **data fiduciary** is an entity or individual who decides the means and purpose of processing personal data.
- The **government should take the final call** on whether sensitive personal data can be shared with a foreign government or agency.

- The recommendations also give the government the scope to set up a future statutory body to **look into the use of personal data by journalistic organisations.**
  - The recommendations **suggest the government will decide the penalty** for those failing to comply with the provisions, which was earlier defined with respect to the global turnover of the company as part of the bill.
- **Concerns:**
- The committee expressed concerns with possible misuse. Though the State has rightly been empowered to exempt itself from the application of this Act, this power may be used only under exceptional circumstances and subject to conditions as laid out in the Act.
  - The Bill creates two parallel universes — one for the private sector where it would apply with full rigour and one for the Government where it is riddled with exemption, carve outs and escape clauses.
  - A Bill that seeks to provide **blanket exemptions either in perpetuity or even for a limited period to the ‘state’ and its instrumentalities**, is beyond the legal power of the Fundamental Right to privacy as laid down in Puttaswamy judgement.
  - Bill does **not provide adequate safeguards to protect the right to privacy** and gives an overboard exemption to the Government. **Clause 35 is open to misuse** since it gives unqualified powers to the Government.
  - The Bill pays little attention to **“harms arising from surveillance and effort to establish a modern surveillance framework”**.
  - The Bill has **no provision to keep a check on collection of data by hardware manufacturers.**
- **About:**
- PMGKAY is a part of **Pradhan Mantri Garib Kalyan Package (PMGKP)** to help the poor fight the battle against **Covid-19.**
    - Its nodal Ministry is the **Ministry of Finance.**
  - It was initially announced for a **three month period (April, May and June 2020), covering 80 crore ration cardholders.** Later it was extended till November 2020.
    - **Phase-I and Phase-II** of this scheme was operational from **April to June, 2020 and July to November, 2020** respectively.
    - **Phase-III** of the scheme was operational from **May to June, 2021.**
    - **Phase-IV** of the scheme is currently operational for **July-November, 2021 months.**
  - The scheme aimed at providing each person who is covered under the **NFSA (National Food Security Act 2013)** with an **additional 5 kg grains (wheat or rice) for free**, in addition to the 5 kg of subsidised foodgrain already provided through the **Public Distribution System (PDS).**
  - The new version of the PMGKAY lacks one of its important components which was there in 2020 PMGKAY i.e free-of-cost 1 kg pulses per month to each household covered under the **NFSA.**
- **Expenditure:**
- The government will be incurring an expenditure of nearly Rs. 2.60 lakh Crore in PMGKAY Phase I- V.
  - PMGKAY-V will entail an estimated **additional food subsidy of Rs. 53344.52** Crore.
- **Distribution So Far:**
- Under the PMGKAY (phase 1 to 4), a total of almost **600 lakh Metric Tonnes (LMT)** foodgrains has been allocated to the states/UTs, equivalent to about Rs 2.07 lakh crore in food subsidy.
  - The distribution under **PMGKAY 4 is presently ongoing**, and as per the reports available from states/UTs so far, 93.8 % food grains have been lifted.
- **Significance:**
- It is significant in a **view of daily wagers and informal sector entrepreneurs** who lost their job in the wake of Covid-19 induced **Lockdown.**
- **Challenge:**

## Pradhan Mantri Garib Kalyan Anna Yojana

### Why in News

Recently, the Union Cabinet has approved the extension for the **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY-Phase V)** for a period of another 4 months i.e. December 2021 till March 2022.

### Key Points

- A key issue is that the beneficiaries of the NFSA are based on the last census (2011). The **number of food-insecure people has increased** since then and they **remain uncovered**.

## **Integrated Command and Control Centres**

### ***Why in News***

The **Ministry of Housing and Urban Affairs (MoHUA)** has begun work to finalise its recommendation for providing **Integrated Command and Control Centres (ICCCs)** as a service to states and smaller cities.

### ***Key Points***

#### ➤ **About:**

- The **Smart Cities project**, which aims at developing **100 citizen-friendly and self-sustainable urban settlements**, includes setting up ICCCs for **each city** as a vital step.
- These ICCCs, designed to **enable authorities to monitor the status of various amenities in real time**.
- Initially aimed at controlling and monitoring water and power supply, sanitation, traffic movement, integrated building management, city connectivity and Internet infrastructure.
  - However, these centres will now also monitor various other parameters and are also linked to the **CCTNS (Crime and Criminal Tracking Networks and Systems) network** under the Ministry of Home Affairs (MHA).
- The MoHUA aims to finalise the ICCC model and implement a pilot project across six major states —

**Uttar Pradesh, Maharashtra, Karnataka, Madhya Pradesh, Rajasthan and Tamil Nadu.**

- So far, these ICCCs have been operationalised in 69 cities, with **Agartala, Indore and Vadodara ranked the best for a sustainable business model** of these centres.
- **Smart City Mission:**
  - **About:** It is an innovative initiative under the **Ministry of Housing and Urban Affairs**, to **drive economic growth and improve the quality of life of people** by enabling local development and harnessing technology as a means to create smart outcomes for citizens.
  - **Objective:** To promote cities that **provide core infrastructure** and give a decent quality of life to its citizens, a clean and sustainable environment and application of Smart Solutions.
  - **Focus:** On **sustainable and inclusive development** and to look at compact areas, create a replicable model which will act like a lighthouse to other aspiring cities.
  - **Strategy:**
    - Pan-city initiative in which at least one Smart Solution is applied city-wide.
    - Develop areas step-by-step with the help of these three models:
      - Retrofitting.
      - Redevelopment.
      - Greenfield.
  - **Coverage and Duration:** The Mission covers 100 cities for the duration of five years starting from the financial year (FY) 2015-16 to 2019-20.
  - **Financing:** It is a **Centrally Sponsored Scheme**.



# Economic Scenario

## Highlight s

- Central Bank Digital Currency
- Draft Framework for Cross Border Insolvency
- Corporate Houses & Banking
- Zero Defect Zero Effect Scheme
- India Becomes the Highest Recipient of Remittances
- India-US Digital Tax Deal
- Drop in Coffee Output
- All India Survey on Domestic Workers
- Draft Scheme of Amalgamation of PMC & USF Bank: RBI
- World Fisheries Day: 21st November
- Tight/Shale Oil
- Purvanchal Expressway: UP
- Renewable Energy Production by Thermal Power Plants
- Regulating Cryptocurrency
- River Cities Alliance
- National Milk Day: 26<sup>th</sup> November

## Central Bank Digital Currency

### Why in News

Recently, the **Reserve Bank of India (RBI)** has proposed amendments to the **Reserve Bank of India Act, 1934**, which would enable it to launch a **Central Bank Digital Currency (CBDC)**, thus enhancing the scope of the definition of ‘bank note’ to include currency in digital form.

- The move has come amid the government’s plans to introduce a **Bill on cryptocurrencies in the current Parliament session** that seeks to prohibit **all private cryptocurrencies in India with certain exceptions**.

### Key Points

#### ➤ About:

- CBDC is a **digital form of Fiat Currency** which can be transacted using wallets backed by blockchain and is **regulated by the central bank**. It is a **legal tender** issued by a central bank in a digital form.
- **Fiat money** is a government-issued currency that is not backed by a commodity such as gold. Fiat money gives central banks greater control over the economy because they can control how much money is printed.
- Though the concept of CBDCs was **directly inspired by bitcoin**, it is **different from decentralised virtual currencies and crypto assets**, which are not issued by the state and lack the ‘legal tender’ status.

#### ➤ Need:

##### ○ Addressing the Malpractices:

- The need for a sovereign digital currency arises from the anarchic design of existing cryptocurrencies, wherein their creation, as well as maintenance, are in the hands of the public.
  - By regulating digital currency, **the central bank can put a check on their malpractices**.

##### ○ Addressing Volatility:

- As the cryptocurrencies are not pegged to any asset or currency, **its value is solely determined by speculation (demand and supply)**.
- Due to this, there has been huge volatility in the value of cryptocurrencies like bitcoin.

##### ○ Digital Currency Proxy War:

- India runs the risk of being caught up in the whirlwind of a **proxy digital currency war as the US and China battle** it out to gain supremacy across other markets by introducing new-age financial products.
  - Today, a sovereign Digital Rupee isn’t just a matter of financial innovation but a need to push back against the inevitable proxy war which threatens our national and financial security.

##### ○ Reducing Dependency on Dollar:

- Digital Rupee provides an opportunity for India to establish the dominance of Digital Rupee as **a superior currency for trade with its strategic**

- partners, thereby reducing dependency on the dollar.
- **Advent of Private Currency:**
  - If these private currencies gain recognition, national currencies with limited convertibility are likely to come under some kind of threat.
- **Significance:**
  - It would **reduce the cost of currency management** while enabling real-time payments without any inter-bank settlement.
  - India's fairly high currency-to-GDP ratio holds out another benefit of CBDC to the extent large cash usage can be replaced by (CBDC), **the cost of printing, transporting and storing paper currency can be substantially reduced.**
  - It will also **minimize the damage to the public** from the usage of private virtual currencies.
  - It will enable the user to conduct both domestic and cross border transactions which **do not require a third party or a bank.**
  - It has the potential to provide significant benefits, such as **reduced dependency on cash, higher seigniorage due to lower transaction costs, and reduced settlement risk.**
  - It would also possibly lead to a **more robust, efficient, trusted, regulated and legal tender-based payments option.**
- **Issues:**
  - Some key issues under RBI's examination include, **the scope of CBDCs, the underlying technology, the validation mechanism and distribution architecture.**
  - Also, **legal changes would be necessary** as the current provisions have been made keeping in mind currency in a physical form under the Reserve Bank of India Act.
  - Consequential amendments would also be required in the Coinage Act, **Foreign Exchange Management Act (FEMA) and Information Technology Act.**
  - **Sudden flight of money** from a bank under stress is another point of concern.
- **Recent Developments:**
  - **El Salvador**, a small coastal country in Central America, has become the first in the world to adopt Bitcoin, as legal tender.
  - **Britain** is also exploring the possibility of creating a Central Bank Digital Currency (Bitcoin).

- In 2020, **China started testing its official digital currency** which is unofficially called "Digital Currency Electronic Payment, DC/EP".
- In April 2018, RBI banned banks and other regulated entities from supporting crypto transactions after digital currencies were used for frauds. In March 2020, the **Supreme Court struck down the ban** as unconstitutional.

## **Draft Framework for Cross Border Insolvency**

### ***Why in News***

Recently, the Ministry of Corporate Affairs (MCA) has published a draft framework for **cross border insolvency** proceedings based on the **UNCITRAL (United Nations Commission on International Trade Law)** model under the **Insolvency and Bankruptcy Code (IBC).**

- It is proposed to be made applicable for both **corporate debtors as well as personal guarantors** to such debtors.
- A personal guarantor is a person or an entity that promises the payment of another person's debt, in case the latter fails to pay it off.

### ***Key Points***

- **About:**
  - **Cross Border Insolvency Proceedings:**
    - It is relevant for the resolution of distressed companies with assets and liabilities across **multiple jurisdictions.**
    - Broadly, the cross-border insolvency process **pertains to those debtors having assets and creditors overseas.**
    - A framework for cross border insolvency proceedings allows for the **location of such a company's foreign assets, the identification of creditors and their claims and establishing payment towards claims** as well as a process for coordination between courts in different countries.
    - The need for having robust institutional arrangements to **deal with cross-border insolvency issues has gained momentum in various jurisdictions**, particularly under the aegis of UNCITRAL Model Law, during the last few decades.

- **Current Status in IBC:**
  - While foreign creditors can make claims against a domestic company, the IBC currently **does not allow for automatic recognition of any insolvency proceedings in other countries.**
- **Significance:**
  - The inclusion of a cross-border insolvency chapter in the IBC **would be a major step forward and would bring the law on par with that of matured jurisdictions.**
  - It would **enable Indian firms to claim their dues from foreign companies**, while allowing foreign creditors to recover loans from Indian companies.
  - It will **help foreign branches of Indian banks to recover their dues in India.**
  - It will **also bring overseas assets of a domestic corporate debtor into consideration of insolvency resolution in India** and will avoid delays in resolution of stressed assets.
- **UNCITRAL Model Law:**
  - The UNCITRAL model is the **most widely accepted legal framework** to deal with cross-border insolvency issues.
    - It has been **adopted by 49 countries**, including the UK, the US, South Africa, South Korea and Singapore.
  - The model law deals with **four major principles of cross-border insolvency:**
    - **Direct access to foreign insolvency professionals and foreign creditors** to participate in or commence domestic insolvency proceedings against a defaulting debtor.
    - **Recognition of foreign proceedings** & provision of remedies.
    - **Cooperation between domestic and foreign courts** & domestic and foreign insolvency practitioners.
    - **Coordination between two or more concurrent insolvency proceedings** in different countries. The main proceeding is determined by the concept of **Centre of Main Interest (COMI)**.
      - The COMI for a company is determined based on where the company conducts its business on a regular basis and the location of its registered office.
- It is **designed to assist States in reforming and modernizing their laws on arbitral procedure** so as to take into account the particular features and needs of international commercial arbitration.
- **Difference between Indian framework's and Model Law:**
  - Many countries that adopt the UNCITRAL model law do make certain changes to suit their domestic requirements.
  - Indian cross border insolvency framework **excludes financial service providers from being subjected to cross border insolvency proceedings**, noting that many countries “ exempt businesses providing critical financial services, such as banks and insurance companies, from the provisions of cross- border insolvency frameworks.”
  - The companies undergoing the **Pre-packaged Insolvency Resolution Process (PIRP)** be exempted from cross border insolvency proceedings as the provisions for PIRP have been introduced recently, and the “jurisprudence and practice under the pre-pack mechanism are at a nascent stage”.
    - The PIRP was introduced earlier this year under the IBC to permit speedy resolution of **Micro, Small and Medium Enterprises.**

#### UNCITRAL

- It is the **core legal body of the United Nations system** in the **field of international trade law.**
- UNCITRAL was **established in 1966** with a recognition that international trade cooperation among States is an important factor in the promotion of friendly relations and, consequently, in the maintenance of peace and security.
- Through its several model laws, conventions, legislative guides and robust debates in working groups, UNCITRAL **has provided a valuable platform for countries to compare, examine, debate and adopt principles of international commercial and trade law** appropriate to their circumstances.
- Since its inception, **India is only one of eight countries** that has been a member of UNCITRAL.

#### Insolvency and Bankruptcy Code

- It is a **reform enacted in 2016.** It amalgamates various laws relating to the insolvency resolution of business firms.

- **Insolvency:** It is a situation where individuals or companies are unable to repay their outstanding debt.
- **Bankruptcy:** It is a situation whereby a court of competent jurisdiction has declared a person or other entity insolvent, having passed appropriate orders to resolve it and protect the rights of the creditors. It is a legal declaration of one's inability to pay off debts.
- It **lays down clear-cut and faster insolvency proceedings to help creditors**, such as banks, recover dues and prevent bad loans, a key drag on the economy.

## Corporate Houses & Banking

### **Why in News**

Recently, the **Reserve Bank of India (RBI)** has put on hold the recommendations from its **Internal Working Committee (IWG)**, that said large corporate and industrial houses may be allowed to promote banks after amendments to the **Banking Regulations Act, 1949**.

- The RBI has **accepted 21 out of 33 recommendations of the IWG** on ownership of private banks, but kept silent on giving banking licence to big business groups.

### **Key Points**

- **About:**
  - Corporate Houses (CH) were active in the banking sector till five decades ago when the banks **promoted by them were nationalised in the late sixties** amid allegations of connected lending and misuse of depositors' money.

- The Banking sector was opened up again for the **CHs Post Liberalisation (1991)** with the first round of licensing of private banks **that was done in 1993**.
- Since then, there were two more rounds of licensing of banks in the private sector – **in 2003-04 and 2013-14 – culminating with the on-tap licensing regime of universal banks in 2016**.
  - However, even some prominent business houses were not considered in 2013-14.
- **Pros of Allowing Corporations To Own Bank:**
  - **Plugging Capital Gap:**
    - Currently, the government keeps picking money from the taxpayers pocket and funding the **public sector banks**.
    - Hence, by allowing the big corporates into the banking sector the capital requirement can be fulfilled.
  - **Financial Inclusion:**
    - Even today a significant population do not have access to banking in the country, the corporates' entry would mean the **opening of more branches and subsequently bringing more people into the banking net**.
  - **Improving Competition:**
    - Privatization of banks has been a long-proposed reform in the Indian banking industry. Allowing corporations into the banking sector **will further pressurize Public sector banks to become competitive**.
- **Concerns of Allowing Corporates To Own Bank:**
  - **Connected Lending & Moral Hazard:**
    - There are apprehensions that it would not be easy for supervisors to **prevent or detect self-dealing or connected lending** as banks could hide connected party or related party lending behind complex company structures and subsidiaries or through lending to suppliers of promoters and their group companies.
      - Connected lending **involves the controlling owner of a bank giving loans to himself or his related parties** and group companies at favourable terms and conditions.
    - Big business groups already account for a major chunk of **Non-Performing Assets (NPAs)** in the banking system even without becoming promoters of a bank.

- In ethical terms, this will **erode the bank's role as an effective financial and create a moral hazard** or conflict of interest situation.
- **Circular Lending & Difficulty In Regulation:**
  - Under circular lending, corporate bank X funding projects of an industry group, which owns corporate bank Y, and corporate bank Y funding projects of an industry group owning bank Z, and finally, corporate bank Z funding projects of industry group owning bank X.
  - With available legal structures and the proliferation of **shell companies**, makes it hard to track such lending on a real-time basis.
- **Inequality & Concentration of Wealth:**
  - Corporations owning banks will add more muscle to big industry groups, **which already dominate many important sectors** of the economy, including telecom, organised retail, aviation, software and e-commerce.
  - This will further **accelerate the concentration of wealth and increase inequalities.**
- **Contradicting the Previous Ruling:**
  - The banking sector in India has been in trouble for the last few years, keeping that in mind **the RBI in 2016 had created new guidelines** on the limit of lending to a single company.
  - The rationale behind this ruling was that if a bank lends too much to one company only then it risks losing that money if the company sinks.
  - Therefore, the recommendation of allowing the entry of industry groups in the banking sector is **in contradiction with the above-said ruling in 2016.**

## **Zero Defect**

### **Zero Effect Scheme**

#### ***Why in News***

According to the recent data, as many as **23,948 Micro, Small and Medium-sized Enterprises (MSMEs)** had registered with intent to adopt the principle of the **Zero Defect Zero Effect Scheme (ZED).**

#### ***Key Points***

➤ **About the Scheme:**

- **Launched in 2016 by the Ministry of MSME**, the scheme is an integrated and comprehensive certification system.
- The **scheme accounts for productivity, quality, pollution mitigation**, energy efficiency, financial status, human resource and technological depth including design and IPR in both products and processes.
- Its mission is to **develop and implement the 'ZED' culture in India** based on the principles of Zero Defect & Zero Effect.
- **Zero Defect:**
  - The Zero defect concept is focusing on the customer.
  - Zero non-conformance or non-compliance.
  - Zero waste.
- **Zero Effect:**
  - Zero **air pollution**, liquid discharge, solid waste.
  - Zero wastage of natural resources.
- **ZED Certification \ Rating:**
  - The Rating is a **weighted average of the marks** obtained on each parameter.
  - The MSMEs will be assessed & rated on defined enabler & outcome parameters on operational level indicators and organisational level indicators at the operational level.
  - Based on the assessment, the MSME will be **ranked as Bronze-Silver-Gold-Diamond-Platinum enterprises.**
  - There are **50 parameters for ZED rating** and additional 25 parameters for ZED Defence rating under ZED Maturity Assessment Model.
- **Objective of the Scheme:**
  - **To develop an Ecosystem** for Zero Defect Manufacturing in MSMEs.
  - **To promote adaptation of quality tools/systems** and energy efficient manufacturing. Enable MSMEs for manufacturing of quality products.
  - **To encourage MSMEs to constantly upgrade** their quality standards in products and processes.
  - **To develop professionals** in the area of ZED manufacturing and certification.
  - To support the **'Make in India' campaign**
- **Implementation Agency of the Scheme:**

- **Quality Council of India (QCI)** has been appointed as the National Monitoring & Implementing Unit (NMIU) for implementation of ZED.
  - The **Quality Council of India (QCI)** is a non-profit organization registered under the **Societies Registration Act of 1860**.
- **Other Initiatives to Promote MSMEs Sector:**
  - **Prime Minister's Employment Generation programme (PMEGP)**
  - **Scheme of Fund for Regeneration of Traditional Industries (SFURTI)**
  - **A Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE)**
  - **Interest Subvention Scheme for Incremental Credit to MSMEs**
  - **Credit Guarantee Scheme for Micro and Small Enterprises**
  - **CHAMPIONS portal**

#### MSMEs & Indian Economy

- They are the **growth accelerators of the Indian economy**, contributing about 30% of the country's **Gross Domestic Product (GDP)**.
- **In terms of exports**, they are an **integral part of the supply chain** and contribute about 48% of the overall exports.
- MSMEs also **play an important role in employment generation**, as they employ about 110 million people across the country.
- Interestingly, **MSMEs are intertwined with the rural economy** as well, as more than half of the MSMEs operate in rural India.

- India is followed by **China, Mexico, the Philippines, and Egypt**.
- **The United States being the biggest source**, accounting for over 20% of all Remittances.

#### Key Points

- **Factors for Remittance Growth:**
  - **Migrants'** determination to support their families in times of need, aided by economic recovery in Europe and the United States which in turn was supported by the **Fiscal Stimulus** and employment support programs.
  - In the **Gulf Cooperation Council (GCC)** countries and Russia, the recovery of outward remittances was also facilitated by stronger oil prices and the resulting pickup in economic activity.
  - The severity of **Covid-19** caseloads and deaths during the second quarter (well above the global average) played a prominent role in **drawing substantial flows** (including for the purchase of oxygen tanks) to the country.
  - Flows from migrants **have greatly complemented government cash transfer programs** to support families suffering economic hardships during the Covid-19 crisis.
- **Projection for 2022:**
  - Remittances are projected to **grow 3% in 2022 to USD 89.6 billion**, because of a **drop in overall migrant stock**, as a large proportion of returnees from the Arab countries await return.
- **Other Countries:**
  - Remittances registered **strong growth in most regions**.
    - **Latin America and Caribbean (21.6%)**, Middle East and North Africa (9.7%), South Asia (8%), Sub-Saharan Africa (6.2%), Europe and Central Asia (5.3%).
  - In **East Asia and the Pacific**, remittances fell by 4% - though excluding China, remittances **registered a gain of 1.4%** in the region.
  - **Factors:** In Latin America and the Caribbean, growth was **exceptionally strong due to economic recovery in the United States** and additional factors, including **migrants' responses to natural disasters in their countries of origin** and remittances sent from home countries to migrants in transit.

## India Becomes the Highest Recipient of Remittances

### Why in News

According to the **World Bank's Migration and Development Brief**, India has become the world's largest recipient of **Remittances**, receiving USD 87 billion (a gain of 4.6 % from previous year) in 2021.

➤ **Suggestions:**

- To keep remittances flowing, especially through digital channels, providing access to **bank accounts for migrants and remittance service providers remains a key requirement.**
- Policy responses also must continue to be **inclusive of migrants especially in the areas of access to vaccines and protection from underpayment.**

**World Bank’s Migration and Development Brief**

- This is prepared by the Migration and Remittances Unit, Development Economics (DEC)- the premier research and data arm of the World Bank. .
- The brief aims to provide an update on key developments in the area of **migration** and remittance flows and related policies over the past six months.
- It also provides medium-term projections of remittance flows to developing countries..
- The brief is produced **twice a year.**

**Remittances**

- Remittances are usually understood as financial or in-kind transfers made by migrants to friends and relatives back in communities of origin.
- These are basically sum of **two main components** - Personal Transfers in cash or in kind between resident and non-resident households and Compensation of Employees, which refers to the income of workers who work in another country for a limited period of time.
- Remittances help in stimulating economic development in recipient countries, but this can also make such countries over-reliant on them.

**India-US  
Digital Tax Deal**

**Why in News**

Recently, India and the United States have agreed for a **transitional approach on equalisation levy or digital tax on e-commerce supplies** beginning from 1<sup>st</sup> April, 2022.

- Earlier in January 2021, the Office of the **United States Trade Representative (USTR)** had said that the **Digital services taxes adopted** by India, Italy and Turkey **discriminate against US companies.**

**Key Points**

➤ **Background:**

- On 8<sup>th</sup> October, 2021, 136 countries, including India, agreed to enforce a **minimum corporate tax rate** (Global tax Deal) of 15%, as well as an equitable system of taxing profits of big companies in markets where they are earned.
  - The deal **requires countries to remove all digital services tax** and other similar unilateral measures.
- After that, the **US, Austria, France, Italy, Spain and the United Kingdom reached an agreement** on a transitional approach to existing unilateral measures while implementing Pillar one

➤ **Global Tax Deal:**

- It is **tailored to address the low effective rates of tax shelled out by some of the world’s biggest corporations**, including Big Tech majors such as Apple, Alphabet and Facebook.
- The global minimum tax rate **would apply to overseas profits of multinational firms** with USD 868 million in sales globally.
  - **Pillar 1 (Minimum tax and subject to tax rules):** Governments could still set whatever local corporate tax rate they want, but if companies pay lower rates in a particular country, their home governments could “top up” their taxes to the 15% minimum, eliminating the advantage of shifting profits.
  - **Pillar 2 (Reallocation of additional share of profit to the market jurisdictions):** Allows countries where revenues are earned to tax 25% of the largest multinationals’ so-called excess profit – defined as profit in excess of 10% of revenue.

➤ **India-US Deal:**

- India and the US have agreed that the **same terms (as agreed by US, Austria, France, Italy, Spain and the United Kingdom) shall apply between the US and India with respect to India’s charge of 2% equalisation levy on e-commerce supply of services** and the US’ trade action regarding the said Equalisation Levy.
- Under the agreement, India will continue to impose the levy till March 2024, or till the implementation of the Pillar 1 of the **Organisation for Economic Cooperation and Development (OECD)** agreement

on taxing multinationals and cross-border digital transactions.

- India and the U.S. will **remain in close contact to ensure that there is a common understanding** of the respective commitments and endeavour to resolve any further differences of views on this matter through constructive dialogue.
  - The **US will terminate the trade tariff actions** it had announced in response to the levy and will not take any further actions.
- **Significance of India-US Deal:**
- It is beneficial to India as it **can carry on with the present 2% levy with certainty** until Pillar One takes into effect, along with a commitment from the US side to terminate the proposed trade actions and not to impose further actions as well.
  - This would **help prevent the tax loss arising due to online transactions** as India has to roll back **Equalisation Levy (EL) 2.0** any way after Pillar 1.
    - It is to be kept in mind that **Pillar 1 only applies to companies with a global turnover above 20 billion euros**, which is precisely top 100 companies.

- Earlier, the **equalisation levy (at 6%) was introduced in 2016** and imposed on the revenues generated on business-to-business digital advertisements and allied services of the resident service provider.

- The new levy came into effect from **1<sup>st</sup> April 2020**. **E-commerce operators are obligated to pay the tax at the end of each quarter.**

## Drop in Coffee Output

### *Why in News*

As per data provided by the planters' community, **India's arabica coffee production will drop by 30%** and **robusta by 20%** this harvest season ending January.

### *Key Points*

- **Current Challenges:**

- **Excessive Rainfall:**

- Coffee production will drop due to **excessive rainfall, plant damage**, bean splitting and berry dropping.



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**Digital Services Taxes (DSTs)**

- These are the **adopted taxes on revenues** that certain companies generate from providing certain digital services. E.g. digital multinationals like Google, Amazon and Apple etc.
- The **OECD** is currently hosting negotiations with over 130 countries that aim to adapt the international tax system. One goal is to address the tax challenges of the digitalization of the economy.
  - Some experts argue that a **tax policy designed to target a single sector** or activity is likely to be unfair and have complex consequences.
  - Further, the digital economy **cannot be easily separated out** from the rest of the global economy.

**India's Tax on Digital Companies**

- The government had moved an amendment in the **Finance Bill 2020-21 imposing a 2% Digital Service Tax (DST)** on trade and services by non-resident e-commerce operators with a turnover of over Rs. 2 crore.
  - This effectively **expanded the scope of equalisation levy** that, till 2020, only applied to digital advertising services.

- Coffee-growing regions in India are **witnessing extended rains** brought about by the depression and low pressure areas in the Bay.

- Harvesting of arabicas, which is currently going on, is challenging during rains for the drying and spreading of the bean in the yards.

**Cost of Coffee Production:**

- The **increasing production costs**, including **fertilizers and labour costs**, are expected to reduce growers' current gains from increased prices and slow down investment in production.

**Coffee:****History:**

- Coffee was introduced to India during the **late seventeenth century**.
- The story goes that an **Indian pilgrim to Mecca** smuggled seven beans back to India from Yemen in 1670 (it was illegal to take coffee seeds out of Arabia at the time) and planted them in the Chandragiri hills of Karnataka.
- The **Dutch** (who occupied much of India throughout the 17<sup>th</sup> century) **helped spread the cultivation of coffee** across the country,



but it was with the **arrival of the British Raj** in the mid-nineteenth century that commercial coffee farming fully flourished.

- **About:**
  - **Coffee in India** is grown under a canopy of thick natural shade in ecologically sensitive regions of the **Western and Eastern Ghats**.
    - This is one of the **25 biodiversity hotspots** of the world.
  - Coffee is predominantly an export oriented commodity and 65% to 70% of coffee produced in the country is exported while the rest is consumed within the country.
  - Coffee **contributes significantly to sustain the unique bio- diversity of the region** and is also responsible for the socio-economic development in the remote, hilly areas.
- **Climatic Conditions Required:**
  - Coffee plants require a **hot and humid climate** with temperatures ranging between 15°C and 28 °C and rainfall from 150 to 250 cm.
  - **Frost, snowfall, high temperature** above 30°C and strong sun shine is not good for coffee crops and is generally grown under shady trees.
  - **Dry weather is necessary** at the time of ripening of the berries.
  - **Stagnant water is harmful** and the crop is grown on hill slopes at elevations from 600 to 1,600 metres above sea level.
  - **Well drained, loams containing a good deal of humus** and minerals like iron and calcium are ideal for coffee cultivation.
- **Soil Types for Coffee Production:**
  - Coffee can be grown on lots of soils but the ideal types are **fertile volcanic red earth or deep sandy loam**.
  - For coffee trees to grow it is important that the soil is well draining which makes heavy clay or heavy sandy soils inadequate.
- **Major Areas:**
  - In India, coffee is traditionally grown in the Western Ghats spread over **Karnataka, Kerala and Tamil Nadu**.
    - **Karnataka is the largest producer** accounting for about 70% of the total coffee production.
  - Coffee cultivation is also expanding rapidly in the nontraditional areas of **Andhra Pradesh and Odisha as well as in the North East states**.
- **Main Varieties:** Arabica and Robusta are grown in India.
  - Arabica is mild coffee, but the beans being more aromatic, it has higher market value compared to Robusta beans. On the other hand **Robusta has more strength** and is, therefore, used in making various blends.
    - **Arabica is grown in higher altitudes** than Robusta.
  - **Arabica requires more care & nurture** and is more suitable for large holdings whereas Robusta is suitable irrespective of size of the farm.
  - Arabica is **susceptible to pests & diseases** such as White Stem Borer, leaf rust etc., and requires more shade than Robusta.
  - The **harvest of Arabica** takes place between **November to January**, while for **Robusta it is December to February**.

## **All India Survey on Domestic Workers**

### **Why in News**

Recently, the Union Minister for Labour and Employment flagged off the **first ever All India Survey on Domestic Workers (DW)**.

- This was a **first-ever such survey** in independent India and will be completed in a year.

### **Key Points**

➤ **About:**

- The **main objectives of the survey** are:
  - Estimate the number/proportion of DWs at National and State level.
  - Household Estimates of Live-in/ Live-out DWs.
  - Average number of DWs engaged by different types of households.
- Parameters the survey **aims to** capture the number and proportion of household workers by major states, with separate rural and urban break-ups, their percentage distribution, households that employ them and socio-demographic characteristics.
- The survey **would cover 37 States and Union Territories**, covering 1.5 lakh households in 742 districts.
- The survey for domestic workers is **among five national jobs surveys** that will be conducted periodically and provide crucial data for an upcoming national employment policy.
  - The other four surveys are the All-India Survey of Migrant Workers, All-India Survey of Employment Generated by Professionals and All-India Survey of Employment Generated in the Transport Sector, **All-India Quarterly Establishment-based Employment Survey (AQEES)**.

➤ **Need of the Survey:**

- **Domestic workers (DWs) constitute a significant portion** of total employment in the informal sector. However, there is a **dearth of data on the magnitude and prevailing employment conditions** of DW.
- The Survey is **intended to have time series data** on domestic workers.
- The survey will help the government understand significant issues on certain special and vulnerable segments of labour and **will guide effective policymaking.**

➤ **Domestic Worker:**

- **About:**
  - Any person engaged by a household shall be classified as a domestic worker **if the frequency of visits by the worker to the household is at least four days during the last 30 days** and the goods and/or services produced by the worker are consumed by the members of the household against payment either through cash or kind.
- **Status of Domestic Workers:**

- According to the latest data on the **e-Shram portal**, around **8.8% of the registered 8.56 crore informal sector workers** fall in the category of domestic workers.
  - India has around **38 crore workers in the informal sector.**
- At the current rate of registration in the e-shram portal, there would be **3-3.5 crore domestic workers in the country.**
- Domestic workers are the **third-largest category of workers** after agriculture and construction.
- India is a signatory of the **International Labour Organisation Convention C-189** (Domestic Workers Convention, 2011).

## **Draft Scheme of Amalgamation of PMC & USF Bank: RBI**

### ***Why in News***

Recently, the **Reserve Bank of India (RBI)** released a draft scheme of amalgamation of **Punjab and Maharashtra Cooperative (PMC) Bank** and **Unity Small Finance Bank (USF)**.

- Earlier, **PMC was put under restrictions on account of fraud** that led to a steep deterioration in the networth of the bank.

### ***Key Points***

- **About:**
  - According to the draft scheme of amalgamation, following the amalgamation, **depositors of PMC Bank will get their money back over a period of 3-10 years.**
  - The **interest on any interest-bearing deposit with the transferor (PMC) bank will not accrue** after 31<sup>st</sup> March 2021.
- **Significance:**
  - The **takeover of assets and liabilities of PMC Bank, including deposits, by Unity, will give a greater degree of protection for the depositors.**
  - **USF Bank is being set up with capital of about Rs 1,100 crore as against a regulatory requirement of Rs 200 crore** for setting up a small finance bank under the guidelines for on-tap licensing of small finance banks in the private sector.

## Merger of Banks

### ➤ About:

- In a Merger, banks are benefited in combined business operations and ventures. Together they are able to increase shareholder value and cater the needs more effectively.
- Bank consolidated procedures are provided under the **Banking Regulation Act, 1949. Section 45** in the act empowers RBI to apply to the Central Government for suspension of business by a banking company and to **prepare a scheme of reconstitution of amalgamation.**

### ➤ Recent Examples:

- In 2019 the Finance Minister announced the biggest consolidation plan of **Public sector Banks (PSBs)- merging 10 of them into just 4.**
- In January 2019 Cabinet Committee on Economic Affairs (CCEA) approved the merger of state-run **Vijaya Bank, Bank of Baroda and Dena Bank.**
- In April 2017, **5 associate banks were merged with SBI** – State Bank of Bikaner and Jaipur, State Bank of Hyderabad, State Bank of Travancore, State Bank of Mysore and State Bank of Patiala.
- Government also initiated **amalgamation of Regional Rural Banks** under Phase 3 consolidation, bringing them down from 56 to 38.

### ➤ Benefits:

- **Competitive:** The consolidation of Banks helps in strengthening its presence globally, nationally and regionally.
- **Capital and Governance:** The government's intention is **not just to give capital but also give good governance.** The financial system of the enlarged institution will be more profitable and protected.
  - The lending capacity of the banks will increase and their balance sheet would also be strong.
- **Efficiency:** It has the **potential to reduce operational costs** due to the presence of shared overlapping networks. And this enhanced operational efficiency will reduce the lending costs of the banks.
- **Technological Synergy:** All merged banks in a particular bucket share common **Core Banking Solutions (CBS)** platform synergizing them technologically.
- **Self-Sufficiency:** Larger banks have a **better ability to raise resources** from the market rather than relying on State exchequer.

- **Monitoring:** With the number of Banks coming down after the process of merger – capital allocation, performance milestones, and monitoring would become easier for the government.

### ➤ Challenges:

- **Decision Making:** The banks that are getting merged are **expected to see a slowdown in decision making** at the top level as senior officials of such banks would put all the decisions on the back-burner and it will lead to a drop in credit delivery in the system.
- **Geographical Synergy:** During the process of merger, the **geographical synergy between the merged banks is somewhat missing.** In three of the four merger cases, the merged banks serve only one specific region of the country.
  - However, the merger of Allahabad Bank (having a presence in the East & North region) with the Indian Bank (having a presence in South) increases its geographical spread.
- **Slowdown in Economy:** The move is a good one but the timings are not just apt. There is **already a slowdown in the economy**, and private consumption and investments are on a declining trend. Hence, **there is a need to lift the economy and increase the credit flow** in the short-term, & this decision will block that credit in the short-term.
- **Weak Banks:** A complex merger with a weaker and under-capitalized PSB would **stall the bank's recovery efforts** as the **weaknesses of one bank may get transferred** and the merged entity may become weak.

## World Fisheries

### Day: 21<sup>st</sup> November

#### Why in News

**World Fisheries Day (WFD)** is observed on the 21<sup>st</sup> November every year.

- The award ceremony was organised by the **ministry of fisheries, animal husbandry and dairying, in Bhubaneswar** on the occasion of WFD.
- Balasore district (Odisha) has been awarded India's **"Best Marine District"**.

#### Key Points

- WFD is celebrated to **demonstrate solidarity with all fisherfolk, fish farmers and concerned stakeholders** throughout the world.
- It was started in the year 1997 when “**World Forum of Fish Harvesters & Fish Workers**” met at New Delhi leading to formation of “**World Fisheries Forum**” with representatives from 18 countries and signed a declaration advocating for a global mandate of sustainable fishing practices and policies.
- It is aimed at drawing attention to **overfishing, habitat destruction and other serious threats** to the sustainability of marine and inland resources.

### **Fisheries Sector**

#### ➤ **About:**

- Fishing is the capture of **aquatic organisms in marine, coastal and inland areas**.
- Marine and inland fisheries, together with aquaculture, provide food, nutrition and a source of **income to around 820 million people around the world, from harvesting, processing, marketing and distribution**. For many it also forms part of their traditional cultural identity.
- One of the greatest threats to the sustainability of global fishery resources is **illegal, unreported and unregulated fishing**.

#### ➤ **Indian Scenario:**

- In 2019-20, with an overall production of 142 lakh tons, India produced 8% of the global share.
  - During the same time period, India’s fisheries exports stood at Rs 46,662 crore, constituting about 18% of India’s agricultural exports.
- India aims to **achieve a target of producing 22 million metric tonnes of fish by 2024-25**.
- The fisheries sector has witnessed **three major transformations in the last few years:**
  - The growth of **inland aquaculture, specifically freshwater aquaculture**.
  - The **mechanization** of capture fisheries.
  - The successful commencement of **brackish water shrimp aquaculture**.
- As compared to last year there has been a 34% increase in the budget for the fisheries sector in 2021-22.

#### ➤ **Significance of Fisheries for India:**

- India is the **second major producer of fish** through aquaculture in the world.
- India is the **4<sup>th</sup> largest exporter of fish in the world** as it contributes 7.7% to the global fish production.
- Currently, this sector provides **livelihood to more than 2.8 crore people within the country**. Nevertheless, this is a sector with untapped potential.
  - The Economic Survey of India, 2019-20 estimated that, only 58% of the country’s inland potential has been tapped so far.
- Despite challenges pertaining to infrastructure, the measures by the Central government in the past six years ensured that the fisheries sector continued to register an **annual growth rate of more than 10%**.

#### ➤ **Challenges for Fisheries sector:**

- The **Food and Agriculture Organization (FAO)** points out that nearly 90% of the global marine fish stocks have either been fully exploited or overfished or depleted to the extent that recovery may not be biologically possible.
- Discharge of harmful substances like plastics and other waste into water bodies that cause devastating consequences for aquatic life.
- **Changing climate**.

#### ➤ **Government’s Effort to Improve Fisheries:**

- **Fishing Harbours:**
  - The development of **five major Fishing Harbours** (Kochi, Chennai, Visakhapatnam, Paradip, Petuaghat) as hubs of economic activity.
- **Seaweed Park:**
  - Multipurpose **seaweed** park in Tamil Nadu would be the center of production for quality **seaweed-based products**, developed on a hub and spoke model.
- **Pradhan Mantri Matsya Sampada Yojana:**
  - It strives to create direct employment to 15 lakh fishers, fish farmers, etc. and about thrice this number as indirect employment opportunities.
  - It also aims to double the incomes of fishers, fish farmers and fish workers by 2024.
- **Palk Bay Scheme:**
  - The Scheme, “Diversification Of Trawl Fishing Boats From Palk Straits Into Deep Sea Fishing Boats”, was launched in 2017 as a **Centrally**

**Sponsored Scheme.** It was launched as part of the umbrella **Blue Revolution Scheme.**

- **Marine Fisheries Bill:**
  - The Bill proposes to only grant licenses to vessels registered under the Merchant Shipping Act, 1958, to fish in the **Exclusive Economic Zone (EEZ).**
- **Fisheries and Aquaculture Infrastructure Development Fund (FIDF):**
  - FIDF is created to attract private investment in creation and management of fisheries infrastructure facilities.
- **Kisan Credit Card (KCC):**
  - The Kisan Credit Card (KCC) scheme was introduced in 1998 for 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 like purchase of agriculture inputs such as seeds, fertilizers, pesticides etc. and draw cash for their production needs.
- **Marine Products Export Development Authority:**
  - MPEDA is a nodal coordinating, state-owned agency engaged in fishery production and allied activities.
  - It was established in 1972 under the Marine Products Export Development Authority Act (MPEDA), 1972.
- **Extraction Process:** Extraction requires creation of fractures in oil and gas rich shale to release hydrocarbons through a process called **hydraulic fracking/fracturing.**
  - It requires a mixture of **'pressurised water, chemicals, and sand'** (shale fluid) to break low permeable rocks and have access to the shale gas reserves.
- **Top Producers: Russia and the US** are among the largest shale oil producers in the world, with a surge in shale oil production in the US having played a key role in turning the country from an importer of crude to a **net exporter in 2019.**
- **Associated Concerns:** Shale oil and gas exploration faces several challenges other than environmental concerns around **massive water requirements** for fracking and potential for **groundwater contamination.**
  - Shale rocks are usually found adjacent to rocks containing usable/ drinking water known as 'aquifers'.
  - While fracking, the shale fluid could possibly penetrate aquifers leading to **methane poisoning of groundwater** used for drinking and irrigation purposes.
- **Prospects of Shale Oil Exploration in India:**
  - Currently, there is **no large-scale commercial production** of shale oil and gas in India.
  - State-owned ONGC had, in 2013, found prospects of shale oil at the **Cambay basin in Gujarat and the Krishna Godavari basin in Andhra Pradesh.**
  - However, it concluded that the quantity of oil flow observed in these basins did **not indicate**

## Tight/Shale Oil

### **Why in News**

Cairn India will partner US-based Halliburton to start shale exploration in the Lower Barmer Hill formation, Western Rajasthan.

### **Key Points**

- **Shale Oil and Gas:**
  - **Tight Oil:** The key difference between shale oil and conventional crude is that the former, also called 'tight oil', **is found in smaller batches, and deeper than conventional crude deposits.**
  - **Shale Gas:** Unlike conventional hydrocarbons that can be extracted from the permeable rocks easily, shale gas **is trapped under low permeable rocks.**

“commerciality” and that the general characteristics of Indian shales are quite different from North American ones.

#### Conventional and Unconventional Resources

- **Conventional oil or gas** comes from formations that are straightforward to extract product from.
  - Extracting fossil fuels from these geological formations can be done with standard methods that can be used to economically remove the fuel from the deposit.
  - Conventional resources tend to be easier and less expensive to produce simply because they require no specialized technologies and can utilize common methods.
- **Unconventional oil or gas resources** are much more difficult to extract.
  - Some of these resources are trapped in reservoirs with poor permeability and porosity, meaning that it is extremely difficult or impossible for oil or natural gas to flow through the pores and into a standard well.
  - To be able to produce from these difficult reservoirs, specialized techniques and tools are used.

## Purvanchal Expressway: UP

### Why in News

Recently, the Prime Minister inaugurated the **Purvanchal Expressway** in Uttar Pradesh.

### Key Points

- **About:**
  - It starts from **Chandsarai village**, located near the existing Lucknow-Sultanpur Road (NH-731), in Lucknow district and it ends at **Haidaria village on National Highway 31** in Ghazipur, 18 km from the UP-Bihar border, in Ghazipur district.
  - The expressway will connect with the existing Agra-Lucknow and Agra-Noida Yamuna expressways to form an **industrial corridor**, providing connectivity from the eastern to western borders of UP.
    - An **industrial corridor** is basically a corridor consisting of multi-modal transport services that would pass through the states as main arteries.

- The districts falling on this **greenfield expressway** are Lucknow, Barabanki, Amethi, Sultanpur, Ayodhya, Ambedkar Nagar, Azamgarh, Mau and Ghazipur.
- **Features of the Expressway:**
  - It will have **CNG stations, electric recharge stations for vehicles** and will be connected with the **defence corridor** through the Agra and Bundelkhand expressways.
- **Expected Benefits:**
  - The **eastern region of the state would not only be connected to Lucknow** but also further to the National Capital through Agra-Lucknow and Yamuna Expressways.
  - It is going to **give a boost to the economic development** of the eastern parts of Uttar Pradesh.
  - The expressway will provide **better and quick access to bigger markets** for agri commodities and other products manufactured in the region.
- **UP's New Network of Expressways:**
  - Besides Purvanchal, at least three more expressways, besides the **proposed defence corridor** and already operational Agra-Lucknow and Yamuna expressways, are in various stages of completion in UP.
  - The **Uttar Pradesh Expressways Industrial Development Authority (UPEIDA)** has been given the responsibility of completing these projects.
    - **UPEIDA has been set up** under the UP Industrial Area Development Act.

### Industrial Corridor

- **About:**
  - India is developing various Industrial Corridor Projects as part of the **National Industrial Corridor programme**.
  - National Industrial Corridor Development Programme is **India's most ambitious infrastructure programme** aiming to develop new industrial cities as "Smart Cities" and converging next generation technologies across infrastructure sectors.
- **Aim:**
  - It is **aimed at development of futuristic industrial cities in India** which can compete with the best manufacturing and investment destinations in the world.
  - The same will **create employment opportunities and economic growth** leading to overall socio-economic development.
- **Implementing Agency:**
  - The development of these eleven industrial corridor projects will be **implemented through the National Industrial Corridor Development and Implementation Trust (NICDIT)**.
- Industrial corridors **constitute world-class infrastructure**, such as:
  - High-speed transportation network – rail and road
  - Ports with state-of-the-art cargo handling equipment
  - Modern airports
  - Special economic regions/industrial areas
  - Logistic parks/transshipment hubs
  - Knowledge parks focused on catering to industrial needs
  - Complementary infrastructure such as townships/real estate
  - Other urban infrastructure along with enabling policy framework

### Renewable Energy Production by Thermal Power Plants

#### Why in News

Recently, **Ministries of Power and New and Renewable Energy** released **guidelines** which allows **thermal generation companies to set up renewable energy generation capacity** and supply power to consumers **under existing Power Purchase Agreements (PPAs)**.

#### Key Points

- **Guidelines:**
  - **Thermal Energy Producer to Produce Green Energy:** The new guidelines allow thermal generation companies "to set up renewable energy generation capacity either by themselves (or) through developers by open bids and supply power to consumers under existing PPAs.
    - A **Power Purchase Agreement (PPA)**, or electricity power agreement, is a contract between two parties, one which generates electricity (power generating companies (gencos)) and one which is looking to purchase electricity (**Discoms**).
  - **Complements Discoms' RPOs:** The discoms **would be allowed to count** renewable energy purchased under the scheme **towards their Renewable Purchase Obligation (RPO)**.
    - **RPO** is a mechanism by which the State Electricity Regulatory Commissions are obliged to purchase a certain percentage of power from renewable energy sources.
    - RPO is being implemented throughout the country to create demand for renewable energy.
  - **RPO Targets:** Under the long-term growth trajectory of RPOs, states have been asked to increase the proportion of power procured from renewable sources **to 21.2% of their total procurement in FY2022**.
  - **Funds Sharing with Discoms:** Any savings to thermal power plants from lower cost of power generation through renewable energy would be shared with discoms **on a 50:50 basis**.

- **Significance:**
  - **Green Energy Push:** This will enable the replacement of fossil fuel based energy by renewable energy under the existing PPAs.
  - **Synergy with Global Commitments:** The move is aimed at boosting the installed capacity of renewable energy to **500 GW by 2030** in line with **commitments made by the Indian Prime Minister at the COP26 climate change conference.**

## Regulating Cryptocurrency

### **Why in News**

Recently, the **Prime Minister of India** chaired a meeting regarding the **management of the cryptocurrency sector**. Citing the unregulated nature of the **crypto market**, he called for taking **progressive and forward-looking steps**.

- At the moment, there is no legislature that covers cryptocurrencies in India. In India, owning cryptocurrencies is still not illegal. In 2020, the **Supreme Court had struck down a ban** on trading of crypto currency in India, which was imposed by the Reserve Bank of India (RBI).

- **China has declared all cryptocurrency transactions illegal**, effectively imposing a complete ban, whereas **El Salvador has permitted Bitcoin as legal tender.**

### **Key Points**

- **Benefits Associated with Cryptocurrency:**
  - **Fast and Cheap Transactions:** Cryptocurrencies are way cheaper to use to execute international transactions because the transactions don't have to be handled by a series of intermediaries before they reach their destinations.
  - **Investment Destination:** There is a limited supply of cryptocurrency – partially like gold. Moreover, the last few years have seen the price of cryptocurrencies rising faster than other financial instruments.
    - Due to this, cryptocurrencies can become a preferred investment destination.
  - **Anti-Inflationary Currency:** Due to high demand of cryptocurrency its prices have largely remained on a growing trajectory. In this scenario, people tend to hold more cryptocurrency than spending it.
    - This will cause a deflationary effect on currency.
- **Associated Concerns with Cryptocurrencies:**
  - **Bombardment of Advertisement:** The crypto market is seen as a way to earn quick profits. Due to this, there is bombardment of advertising, both online and offline, to lure people into speculating in this market.
    - However, there are concerns that these are attempts to mislead the youth through “over-promising” and “non-transparent advertising”.
  - **Counterproductive Utility:** Unregulated crypto markets can become avenues for money laundering and terror financing.



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- **Cryptocurrencies are Extremely Volatile:** Bitcoin skyrocketed from USD 40,000 to reach an all-time high of USD 65,000 (between January to April 2021).
  - Then in May 2021, it plunged and throughout June it remained below USD 30,000.
- **Macroeconomic and Financial Stability:** According to a Group of Crypto exchanges, crores of Indians have invested over Rs 6,00,000 crore in crypto assets.
  - The extent of investment exposure of Indian retail investors in this unregulated asset class, poses a risk to Macroeconomic and Financial Stability.
- **Stock Market Issues: Securities and Exchange Board of India (SEBI)** has flagged the issue that it has no control over the “clearing and settlement” of crypto currencies, and it cannot offer counterparty guarantee as is being done for stocks.
  - Further, whether cryptocurrency is a currency, commodity, or security has not been defined.

## River Cities Alliance

### **Why in News**

Recently, the **Ministry of Jal Shakti** along with the **Ministry of Housing and Urban Affairs** has launched the **River Cities Alliance (RCA)**.

- It is a dedicated platform for river cities in India **to ideate, discuss and exchange information for sustainable management of urban rivers.**

### **Key Points**

#### ➤ **About:**

- The Alliance will focus on **three broad themes**- Networking, Capacity Building and Technical Support.
- Although the Alliance began with the **Ganga basin** cities, it was extended to include cities beyond the basin as well. The **participating cities** in the River Cities Alliance are:
  - Dehradun, Haridwar, Rishikesh, Srinagar, Begusarai, Bhagalpur, Munger, Patna, Berhampore, Hooghly-Chinsurah, Howrah, Jangipur, Maheshtala, Rajmahal, Sahibganj, Ayodhya, Bijnor, Farrukhabad, Kanpur, Mathura-Vrindavan, Mirzapur, Prayagraj, Varanasi, Aurangabad, Chennai, Bhubaneswar, Hyderabad, Pune, Udaipur and Vijayawada.

- The **National Mission for Clean Ganga (NMCG)** and **National Institute for Urban Affairs (NIUA)** have collaborated together to launch the RCA.
- **Objectives:**
  - To provide the member cities with a **platform to discuss and exchange information** on aspects that are **vital for sustainable management of urban rivers.**
  - To work towards **adopting and localizing national policies and instruments with key river-related directions.**
  - To prepare cities urban river management plans and develop **city-specific sectoral strategies** that are required for sustainable urban river management.
- **Significance:**
  - It will enable **cities to learn from each other’s successes and failures** as well as connect people with the rivers.
  - It can play a **crucial role in connecting cities with their rivers**, and that it can be a model for all cities in the Basin and beyond to emulate.
  - It will give an opportunity to **municipal administrators and their teams to take path breaking initiatives** and learn and inspire each other.
  - It gives opportunities to the cities to strengthen governance aspects for river cities and **improves their liveability to attract external economic investments**, access state of the art knowledge and frameworks as well as an opportunity to serve as the site for unique demonstration projects.
- **Suggestions:**
  - Cities should be responsible for rejuvenating their rivers. It has to be done **not just with a regulatory mindset** but also with a **developmental and facilitatory outlook.**
  - There is a **need for a framework for integration** between Urban Built Form including landscape and urban water cycle.
  - **Cities** have largely been held responsible for the deteriorated state of rivers, and therefore, **will need to play a vital role in the rejuvenation efforts as well.**
  - There is a need to mainstream **river sensitive approaches** while planning for the cities.

**Related Initiatives**

- **Namami Gange Programme:** It is an Integrated Conservation Mission to accomplish the twin objectives of effective abatement of pollution and **conservation and rejuvenation of National River Ganga.**
- **Ganga Action Plan:** It was the first River Action Plan that was taken up by the Ministry of Environment, Forest and Climate Change in 1985, to improve the water quality by the interception, diversion, and treatment of domestic sewage.
- **National River Ganga Basin Authority (NRGBA):** It was formed by the Government of India in the year 2009 under Section-3 of the Environment Protection Act, 1986.
- **Clean Ganga Fund:** In 2014, it was formed for cleaning up of the Ganga, setting up of waste treatment plants, and conservation of biotic diversity of the river.
- **Bhuvan-Ganga Web App:** It ensures involvement of the public in monitoring of pollution entering into the river Ganga.
- **Ban on Waste Disposal:** In 2017, the **National Green Tribunal** banned the disposal of any waste in the Ganga.

**National Milk Day: 26<sup>th</sup> November**

**Why in News**

Recently, the Ministry of Animal Husbandry & Dairying has celebrated the **National Milk Day (NMD)** on 26<sup>th</sup> Nov.

- **National Gopal Ratna Awards** were conferred to the winners of the respective stakeholders of Dairy sector and also launched **IVF (In Vitro Fertilization)** Lab at Dhamrod, Gujarat and Hessarghatta, Karnataka.
- Every year, the **first day of June** is observed as **World Milk Day.**

**Key Points**

- **About:**
  - NMD is celebrated to commemorate the birth Anniversary of **Dr. Verghese Kurien (Milk Man of India).**

- NMD 2021 commemorates the **100<sup>th</sup> birth anniversary of Dr. Kurien.**
  - The day celebrates **the importance of milk in a person’s life.** And to promote the **benefits related to the milk & milk industry and to create awareness among people about the importance of milk and milk products.**
- **Dr. Verghese Kurien (1921-2012):**
  - He is known as the **‘Father of White Revolution in India’.**
  - He is famous for his **‘Operation Flood’**, which is known as the **world’s largest agricultural program.**
  - He established 30 institutions that are **run by various farmers and workers.**
  - He also played a key role in the **establishment and success of Amul Brand.**
  - Because of his efforts only, India **became the largest producer of milk in 1998,** surpassing the U.S.
  - He also helped manage the **Delhi Milk Scheme and corrected the prices.** He also helped India **become self-sufficient in edible oils.**
  - He was honoured with several awards, including the **Ramon Magsaysay Award (1963), Krishi Ratna (1986) and World Food Prize (1989).**
  - He is also the recipient of India’s highest civilian awards- **Padma Shri (1965), Padma Bhushan (1966) and Padma Vibhushan (1999).**
- **Operation Flood:**
  - **About:**
    - It was launched on 13<sup>th</sup> January, 1970. It was the world’s largest dairy development programme.
    - Within 30 years, the operation **helped double milk available per person in India,** making dairy farming India’s largest self-sustainable rural employment generator.
    - The operation gave **farmers direct control over the resources they create, helping them direct their own development.** This was achieved not only by mass production, but by production by the masses. It is also now known as the **“White Revolution”.**
  - **Phases of the White Revolution:**
    - **Phase I (1970-1980):** This phase was financed by the sale of butter oil and skimmed milk powder donated by the **European Union** through the World Food Program.

### Indian Dairy Sector

#### ➤ About:

- India being the world's **largest milk producing country**, accounts for more than 22.0% of the world and 57% of Asia's total milk production.
- The milk production of India has grown **from 17 million tonnes in 1951 to 187.7 million tonnes in the year 2018-2019**.

#### ➤ Significance:

- Dairy is the only **agri-product in which around ~70-80% final market value** is shared with farmers and **it accounts for approximately one-third of rural household income** in India.
- It **improves farmer livelihoods, creates jobs, supports agricultural industrialization and commercialization, and enhances nutrition for the masses**.

#### ➤ Challenges:

- **Lack of proper packaging and labeling system** of milk and milk products.
- **Lack of Market Intelligence** to understand the mindset of entrepreneurs.
- Consumer perception/**Brand Building** is also a major challenge.
- **Cold chain (transportation)** and storage facilities are not effectively in operation.

#### ➤ Related Initiatives:

- **Gopal Ratna Awards:** They are National Awards for the Cattle and Dairy sector, the awards have been launched to promote the best herd of Indigenous Breed and practicing best management practices.
- **e-Gopala (Generation of wealth through Productive Livestock) App:** It is a comprehensive breed improvement marketplace and information portal for direct use of farmers.

- **National Action Plan on Dairy Development 2022:** It seeks to increase milk production and double the income of dairy farmers.
- **National Animal Disease Control Programme & National Artificial Insemination Programme:** It was launched to control and eradicate the Foot & Mouth Disease (FMD) and Brucellosis amongst the livestock in the country,
- **Pashu-Aadhar:** It is a unique ID on a digital platform for traceability for the animals.
- **Rashtriya Gokul Mission:** It was launched in 2019 for the setting up of 21 Gokul Grams as Integrated Cattle Development Centres.
  - **Phase II (1981 to 1985):** During this phase, the number of milk sheds increased from 18 to 136, milk outlets were expanded to about 290 urban markets, a self-sustaining system was set up that included 4,250,000 milk producers spread across 43,000 village cooperatives.
  - **Phase III (1985-1996):** This phase enabled the dairy cooperatives to expand and gave a finishing touch to the programme. It also strengthened the infrastructure required to procure and market increasing volumes of milk.
- **Objectives:**
  - Increase milk production ("a flood of milk").
  - Increase rural incomes.
  - Reasonable prices for consumers.
- **Significance:**
  - It helped dairy farmers **direct their own development, placing control of the resources** they create in their own hands.
  - It has helped **India become the largest producer of milk** in the world in 2016-17.
  - Currently, India is the world's largest milk producer, with 22% of global production.

# International Relations

## Highlight s

- 9<sup>th</sup> BRICS Science & Technology Ministers Meeting
- Indian Ocean Naval Symposium
- Kulbhushan Jadhav Case
- The Sydney Dialogue

- Biden-Xi Summit
- India-US Trade Policy Forum
- India First Responder In Indian Ocean Region

## 9<sup>th</sup> BRICS Science & Technology Ministers Meeting

### Why in News

Recently, India's Minister for Science & Technology chaired the 9<sup>th</sup> BRICS Science & Technology Ministers meeting.

- Earlier, the Prime Minister chaired the annual summit of the BRICS which was held virtually.
- 2021 is an important landmark year in BRICS Cooperation as the grouping completed 15 years.

### Key Points

- **Highlights of Address:**
  - **Global Innovation Index:** The member countries should work towards a rightful place for **BRICS (Brazil, Russia, India, China, and South Africa)** in the **Global Innovation Index**.
    - It can be achieved through further strengthening the cooperation in the field of **Science, Technology and Innovation (STI)**.
    - **BRICS Ranking in Global Innovation Index, 2021:** India (46), China (12), Russia (45), Brazil (57) and South Africa (61).
  - **Cooperation:** BRICS countries must come together and innovate cost effective, affordable, accessible, sustainable and scalable scientific solutions, as they face many similar and unique challenges.
- **BRICS Innovation Cooperation Action Plan (2021-24)**
  - **About:**
    - BRICS member countries have agreed to a **Science, Technology and Innovation (STI)-led BRICS Innovation Cooperation Action Plan**

(2021-24) proposed by India during the 12<sup>th</sup> meeting of the grouping's science & technology steering committee.

- It will **facilitate sharing of experiences** of each other's innovation ecosystem and networking of innovators and entrepreneurs.
- **Thematic areas included:**
  - Transient Astronomical Events and Deep Survey Science, **Antimicrobial Resistance (AMR)**, **Big Data Analytics**, Innovation and Entrepreneurship on Photonic, Nanophotonics, and Metamaterials for Addressing Biomedicine, Agriculture, Food Industry, Energy Harvesting Issues etc.
  - In accordance with the plan BRICS Ministers and their representatives endorsed the **BRICS Science, Technology and Innovation Calendar of Activities 2020-2021**.

### BRICS

- BRICS is an acronym for the grouping of the world's leading emerging economies, namely **Brazil, Russia, India, China, and South Africa**.
  - In 2001, the British Economist **Jim O'Neill** coined the term BRIC to describe the four emerging economies of Brazil, Russia, India, and China.
  - The grouping was formalised during the first meeting of **BRIC Foreign Ministers in 2006**.
  - South Africa was invited to join BRIC in Dec. 2010, after which the group adopted the acronym BRICS.
- It comprises 42% of the world's population, has 23% of the global **Gross Domestic Product (GDP)** and around 17% of the world trade.
- The **chairmanship of the forum is rotated annually** among the members, in accordance with the acronym B-R-I-C-S.

- The **BRICS Leaders' Summit** is convened annually.
- During the **Sixth BRICS Summit in Fortaleza (2014)** the leaders signed the Agreement establishing the **New Development Bank (NDB)**. They also signed the **BRICS Contingent Reserve Arrangement**.

## Indian Ocean Naval Symposium

### **Why in News**

The 7<sup>th</sup> edition of Indian Ocean Naval Symposium (IONS) Conclave of Chiefs is being hosted by the French Navy at Paris from 15<sup>th</sup>-16<sup>th</sup> Nov 21.

- The inaugural edition of IONS was held in Feb 2008 at New Delhi, with the Indian Navy as the Chair for two years. The IONS Chair is presently held in France.

### **Key Points**

- **About:**
  - The IONS is a **voluntary and inclusive initiative that brings together navies of Indian Ocean Region (IOR) littoral states** to increase maritime co-operation and enhance regional security.
  - It also serves to develop an effective response mechanism and humanitarian assistance and disaster relief (HADR) against **natural disasters**.
  - The **chairmanship of IONS** has been held by India (2008-10), UAE (2010-12), South Africa (2012-14), Australia (2014-16), Bangladesh (2016-18) and Islamic Republic of Iran (2018-21).

- France assumed the Chairmanship in June 2021 for a two-year tenure.
- **Members:**
  - IONS includes **24 member nations that touch or lie within the IOR**, and 8 observer nations.
  - The members have been geographically grouped into the following **four sub-regions**:
    - **South Asian Littorals:** Bangladesh, India, Maldives, Pakistan, Seychelles, Sri Lanka and United Kingdom (British Indian Ocean Territory)
    - **West Asian Littorals:** Iran, Oman, Saudi Arabia and United Arab Emirates
    - **East African Littorals:** France (Reunion), Kenya, Mauritius, Mozambique, South Africa, and Tanzania.
    - **South East Asian and Australian Littorals:** Australia, Indonesia, Malaysia, Myanmar, Singapore, Thailand and Timor-Leste.
- **Significance For India:**
  - IONS fits into **India's three-fold ambitions in the region**:
    - Strengthening and **deepening the relations** with the Indian Ocean littoral states;
    - Establishing its leadership potential and **aspirations of being a net-security provider**; and
    - Fulfilling India's vision of a **rules-based and stable maritime order** in the IOR.
  - It will help India to **consolidate its sphere of influence from the Straits of Malacca to Hormuz**.
  - IONS can be used to **counterbalance the increasing presence of China** in the region.
- **Other Important Groupings/Initiatives Associated with IOR:**
  - **Indian Ocean Rim Association:** The **Indian Ocean Rim Association (IORA)** was established in 1997.
    - It is aimed at strengthening regional cooperation and sustainable development within the Indian Ocean region.
  - **Indian Ocean Commission:** Recently, India has been approved as an **observer of the Indian Ocean Commission**, the inter-governmental organization that coordinates maritime governance in the south-western Indian Ocean.
  - **Security and Growth for All in the Region (SAGAR):** It was **launched in 2015**.

- Through SAGAR, India seeks to deepen economic and security cooperation with its maritime neighbours and assist in building their maritime security capabilities.
- **Information Fusion Centre for the Indian Ocean Region (IFC-IOR):** It was set up by India in 2018, as an **information-sharing hub of maritime data.**
- **Asia Africa Growth Corridor:** The idea of **Asia Africa Growth Corridor (AAGC)** emerged in the joint declaration issued by India and Japan in 2016.
  - The AAGC is raised on four pillars of Development and Cooperation Projects, Quality Infrastructure and Institutional Connectivity, Enhancing Capacities and Skills and People-to-People partnership.
- **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation:** It is a sub-regional organization that came into being in **1997 through the Bangkok Declaration.**
  - It mainly aims to create an enabling environment for rapid economic development; accelerate social progress; and promote collaboration on matters of common interest in the IOR.

## Kulbhushan Jadhav Case

### **Why in News**

Recently, **Pakistan's Parliament has enacted a law to give Indian death-row prisoner Kulbhushan Jadhav the right to file a review appeal** against his conviction by a military court.

- The bill was enacted to implement an order of the **International Court of Justice (ICJ).**
- However, India points out that the law has several **"shortcomings"**, and that steps are needed to implement the ICJ's order "in letter and spirit".

### **Key Points**

- **Kulbhushan Jadhav Case:**
  - **Arrest:** A 51-year-old **retired Indian Navy officer,** Jadhav was **sentenced to death** by a Pakistani military court on **charges of espionage and terrorism** in April 2017.
    - In December 2017, Jadhav's wife and mother were allowed to meet him across a glass partition,

with India contesting Pakistan's claim that this was consular access at ICJ.

- **Denial of Consular Access:** India approached the ICJ against Pakistan for **denial of consular access (Vienna Convention)** to Jadhav and challenging the death sentence.
- **ICJ Ruling:** In 2019, the ICJ ruled that Pakistan was obliged under international laws to provide by means of its own choosing **"effective review and reconsideration"** of Jadhav's conviction.
- **Pakistan's Response:** In the wake of the ICJ order, the Pakistan government had promulgated a special ordinance to allow Jadhav to file a review.
  - Pakistan's Parliament has passed the **International Court of Justice (Review and Reconsideration) Bill, 2021** aimed to fulfill the obligation under the verdict of the ICJ.
- **Shortcomings in the Law:**
  - **No Clear Road Map:** India believes the Bill reiterates a 2019 ordinance passed by Pakistan, without creating a machinery to facilitate an effective review and reconsideration in Kulbhushan Jadhav's case.
  - **Extraordinary Power to Municipal Court:** It invites municipal courts in Pakistan to decide whether or not any prejudice has been caused to Jadhav on account of the failure to provide consular access.
    - This is clearly a breach of the basic tenet, that municipal courts cannot be the arbiter of whether a State has fulfilled its obligations under international law.
    - It further invites a municipal court to sit in appeal.
- **Implications of 'Effective Review and Reconsideration' for India:**
  - Effective review and reconsideration is a phrase which is different from 'review' as one understands in a domestic course.
  - It **includes giving consular access** and helping Jadhav in preparing his defence.
  - It means that **Pakistan has to disclose the charges and also the evidence** which it has been absolutely opaque about uptill now.
  - Pakistan would also **have to disclose the circumstances in which Jadhav's confession** was extracted by the military.
  - It implies that **Jadhav will have a right to defend** whichever forum or court hears his case.

### International Court of Justice

- ICJ is a **principal judicial organization** of the United Nations (UN).
- It was established in 1945 by a **UN Charter** and began working in 1946 as the successor to the **Permanent Court of International Justice**.
- It settles legal disputes between member countries and gives advisory opinions to authorized UN Organs and Specialized Agencies.
- It is seated in the **Peace Palace of Hague, Netherlands**.

### Vienna Convention

- The **Vienna Convention on Consular Relations** is an international treaty that defines consular relations between independent states.
  - A consul (who is not a diplomat), is a representative of a foreign state in a host country, who works for the interests of his countrymen.
- **Article 36 of the Vienna Convention** states that foreign nationals who are arrested or detained in the host country must be given notice without delay of their right to have their embassy or consulate notified of that arrest.

## The Sydney Dialogue

### Why in News

Recently, the Prime Minister delivered the **keynote at the inaugural Sydney Dialogue** via video conferencing.

- He spoke on the theme of **India's technology evolution and revolution**.

### Key Points

- **Highlights of the Address:**
  - The international order should **ensure cryptocurrencies do not end up in the wrong hands**.
    - Citing the unregulated nature of the crypto market, recently, the PM called for taking progressive and forward-looking steps.
  - **India's space sector is open to private investment** and the agriculture sector is reaping the benefits of the digital revolution.
    - In 2020, the government opened **Indian National Space Promotion and Authorization Centre (IN-SPACe)** to provide a level playing field for private companies to use Indian space infrastructure.

- Highlighted the **leaps in India's digital revolution** that has redefined politics, economy and society.
  - However, the digital age is **raising new questions on sovereignty**, governance, ethics, law, rights and security.

### ➤ Five Important Transitions listed by India:

- One, the **world's most extensive public information infrastructure** being built in India.
  - **Over 1.3 billion Indians have a unique digital identity (Aadhaar)**, six hundred thousand villages will soon be connected with broadband and the world's most efficient payment infrastructure, the **Unified Payments Interface (UPI)**.
- Two, **use of digital technology for governance**, inclusion, empowerment, connectivity, delivery of benefits and welfare.
  - **Examples: Pradhan Mantri Jan-Dhan Yojana (PMJDY), Common Services Centres (CSC) etc.**
- Three, **India has the world's third largest and fastest growing Startup Ecosystem**.
- Four, **India's industry and services sectors**, even agriculture, are undergoing massive digital transformation.
  - **Example: Government e-Marketplace (GeM), agri-startups, etc.**
- Five, there is a large effort to prepare India for the future.
  - **Investing in developing indigenous capabilities** in telecom technology such as **5G and 6G**.
  - India is **one of the leading nations in artificial intelligence** and machine learning, especially in human-centred and ethical use of artificial intelligence.
  - Developing strong capabilities in **Cloud platforms and cloud computing**.

### Sydney Dialogue

- It is an **initiative of the Australian Strategic Policy Institute**.
- It is an **annual summit of cyber and critical technologies** to discuss the fallout of the digital domain on the law and order situation in the world.

### Other Such Initiatives

#### ➤ Eastern Economic Forum:

- EEF was established by the **decree of the President of the Russian Federation in the year 2015**.

- It serves as a platform for the discussion of key issues in the world economy, regional integration, and the development of new industrial and technological sectors, as well as of the global challenges facing Russia and other nations.

➤ **Future Investment Initiative:**

- The **Future Investment Initiative (FII)** is widely described as “**Davos in the desert**”. It is **Saudi Arabia’s flagship investment conference**.
- The informal name derives from the World Economic Forum’s annual meeting that is held in Davos, Switzerland, where world leaders discuss agendas for pressing international issues.

## Biden-Xi Summit

### **Why in News**

Recently, President Joe Biden of the United States and Chinese President Xi Jinping met for the **first virtual bilateral meeting**. The meeting ended with the clear divergences in the positions taken by the two sides.

- US-China confrontation is on multiple fronts including ideological and cultural **hegemonic rivalry, trade wars** which has often been called the **New Cold War**.

### **Key Points**

➤ **US’ Reservations Against China:**

- **Human Rights Violations:** US raised concerns about the human rights violation practices in **Xinjiang (Uighur Muslims), Tibet, and Hong Kong**.
- **Trade War:** US’ **trade deficit** with China was around USD 375 billion for 2017. Due to this, former US President Donald Trump imposed import duties on Chinese exports to the US.
  - The US president held that the need is to protect American workers and industries from China’s unfair trade and economic practices.
  - The US Treasury Department has declared China as a **currency manipulator**.
- **Free and Open Indo-Pacific:** **China’s assertiveness in South China Sea**, claiming the majority of sea as its territory, has prompted the US to reiterate the importance of freedom of navigation and safe overflight to the region’s prosperity.

- **Taiwan:** China and **Taiwan** separated amid civil war in 1949 and China considers Taiwan part of its territory to be taken control of by force if necessary. However, Taiwan’s leaders say that Taiwan is a sovereign state.

- The US remains committed to the ‘**One China’ policy**. However, it “strongly opposes unilateral efforts to change the status quo or undermine peace and stability across the **Taiwan Strait**”.

➤ **China’s Reservations Against US:**

- **Alliances and Groupings:** China has raised reservations regarding the alliances and groupings led by the US. China held that these groupings created “divisions” in the world.

- This was a reference to the **Quad grouping**, which includes US, India, Australia and Japan and the **AUKUS deal** among Australia, UK and US to deliver nuclear-powered submarines to Australia.

- Moreover, the US has recently proposed to expand **G7 to G-11** without including China in it.

- **Competition for Dominating World Finances:** To counter the US-dominated **International Monetary Fund, World Bank** and **World Trade Organization**, China has come out with alternative financial institutions like **Asia Infrastructure Investment Bank, and New Development Bank**.

➤ **US-India-China Relations:**

- **US Helping India address disputes with China:** US aims to support India via military, diplomatic and intelligence channels to help address continental challenges such as the **border dispute with China**.
- **US Supports India’s reservations against Belt Road Initiative:** US seeks the transparent infrastructure-debt practices in the countries facing debt due to Chinese financing under **Belt Road Initiative**.
  - **Build Back Better World (B3W)** is an international infrastructure investment initiative announced by the Group of Seven (G-7) richest democracies in June 2021.
  - The B3W initiative is being seen as the US’ initiative to counter China’s Belt and Road Initiative (BRI).
- **Balancing China:** The US is in favour of strong India, in cooperation with like-minded countries, which would act as a counterbalance to China in the **strategic Indo-Pacific region**.

- Due to this, India and the US have signed four fundamental defence agreements:
  - **The General Security of Military Information Agreement (GSOMIA-2002).**
  - **The Logistics Exchange Memorandum of Agreement (LEMOA-2016).**
  - **The Communication Compatibility and Security Agreement (COMCASA-2018).**
  - **The Basic Exchange and Cooperation Agreement (BECA-2020)**

## India-US Trade Policy Forum

### **Why in News**

Recently, after a gap of four years, the **Trade Policy Forum (TPF)** was convened between the United States and India. The Forum resolved to take economic ties between the two countries to the **'next high level'** and exchanged views on **'potential targeted tariff reductions'**.

### **Key Points**

- **Aim:** To activate working groups of the TPF on **agriculture, non-agriculture goods, services, investment, and intellectual property** to meet frequently and address issues of mutual concern in a mutually beneficial manner.
  - The idea is to deliver tangible benefits to both countries by resolving outstanding market access issues.
- **Highlights of the forum:**
  - **Mutual Market Access:** The Forum has decided to forge an agreement to **facilitate U.S. market access from India, and reciprocate with similar**

**access** in the Indian market to many agriculture and animal products.

- **Restoration of the GSP:** India has sought restoration of the **GSP (Generalized System of Preferences)** benefits by the U.S.
- **Totalisation Agreement:** The Forum also agreed on the significance of negotiating a **Social Security Totalization Agreement** in the interest of workers from both sides.
  - A Totalization Agreement is a convention between two countries **preventing duplicate social security contributions** for the same income.
  - It would allow workers from both countries to move their retirement savings, the lack of which particularly affects Indian IT workers in the U.S.
- **Towards Rules-based Global Trading System:** India and the U.S. also discussed engagement in various multilateral trade bodies including the **World Trade Organisation (WTO)** and the **G20** for achieving a shared vision of a transparent, rules-based global trading system among market economies and democracies.
  - The Forum also decided to find mutually agreed solutions on outstanding **WTO disputes between the two countries.**
- **Ethanol Supply:** The U.S. indicated an interest in supplying **ethanol** to India for its goal of **20% ethanol blending** with petrol by 2025.
- **Pharma Cooperation:** The two sides **decided to partner with allies in developing a secure pharmaceutical manufacturing base** and de-risk global supply chains in such critical sectors like health.
- **Services Front:** The Forum discussed ways in which legal, nursing and accountancy services can facilitate growth in trade and investment, and sought to work together on **electronic payment services** and the **digital economy.**
- **Collaboration in Critical Technologies:** Both countries recognise the importance of **critical and emerging technologies** like **cyberspace**, semiconductors, **Artificial Intelligence, 5G**, and future generation telecommunications technology.
- **Climate Change:** Both countries exchanged views on approaches to increase the utilization of renewable energy to achieve **net-zero emissions**, as agreed in the **India – US Climate and Clean Energy Agenda 2030 Partnership.**

## India First Responder In Indian Ocean Region

### Why in News

Recently, the **Defence Minister of India** addressed the **5<sup>th</sup> World Congress on Disaster Management (WCDM)** held in New Delhi.

- At the congress the Raksha Mantri asserted that, time and again India has proved itself to be “**first responder**” in the **Indian Ocean Region (IOR)**.
- The emerging concept of India as a “first responder” reflects the **country’s growing capability and increasing willingness to assume the role of a leading power**.

### World Congress on Disaster Management

- It is a unique **initiative of Disaster management initiatives and convergence society** to bring researchers, policy makers and practitioners from around the world in the same platform to discuss various challenging issues of disaster risk management.
- Its mission is **to promote interaction of science, policy and practices to enhance understanding of risks and advance actions** for reducing risks and building resilience to disasters.

### Key Points

#### ➤ India, As First Responder:

- **Underlying Vision:** India’s vision for the Indian Ocean encapsulated by the concept of **SAGAR (Security and Growth for All in the Region)**. SAGAR has both distinct and inter-related elements such as:
  - Deepening **economic and security cooperation** among the littoral states.
  - **Enhancing capacities** to safeguard land and maritime territories.
  - Working towards **sustainable regional development**.
  - **Blue Economy** and promoting collective action to deal with non-traditional threats like natural disasters, piracy and terrorism.
- **Enabling Factors:** India’s unique position in the **Indian Ocean Region**, complemented by a capability of the Armed Forces, enables it to contribute significantly in **Humanitarian Assistance and Disaster Relief (HADR)** situations.

- By contributing its resources to prevent or mitigate regional and international crises, **India is demonstrating its commitment as a responsible actor in the international order**.
- **Need: Challenging geo-political landscape** and the traditional and non-traditional threats including natural calamities like **Covid-19** faced by the world.
  - Whether it is a **natural catastrophe, or a sudden financial shock**, the repercussions are often massive, with regional and global implications.
  - By taking the lead, India tries providing a public good to the **international order**, supporting smaller or less capable states in dire need of assistance.

#### ➤ Manifestation of India As First Responder:

- **HADR Operations:** India has been regularly conducting exercises to deepen the HADR cooperation and coordination with its **neighbours and friendly countries** with a focus on sharing expertise and building capabilities.
  - The Indian government and military forces have played a critical role in supporting neighbouring countries in relief operations like the **2004 tsunami, 2015 Nepal Earthquake, etc.**
- **Building Disaster Resilience:** India taking lead and offering expertise of **Disaster Resilient Infrastructure (DRI)** to its friendly countries .
  - **Coalition for Disaster Resilient Infrastructure (CDRI)** was first proposed by India during the 2016 Asian Ministerial Conference on Disaster Risk Reduction held in New Delhi.
- **Expatriate Evacuation Operations: Operation Rahat** in Yemen in 2015 when India rescued and evacuated over 6,700 persons, including over 1,940 citizens of more than 40 other countries.
- **Non-Traditional Security Challenges:**The Indian Navy has emerged as the Indian Ocean’s default first responder to non-traditional security challenges.
  - **To combat piracy in the Gulf of Aden since 2008**, it deployed almost thirty warships that have escorted more than 1500 ships and thwarted around thirty piracy attempts.
- **Post-Conflict Relief And Rehabilitation:** India has often taken the lead in supporting countries going through post-conflict processes which require expert resources and significant funding.

- **For Example**, India provided help to Afghanistan and Sri Lanka for post conflict recovery.
- **Refugee Flows:** Whenever people fear for their lives in South Asia, they often look up to India first. **India has consistently provided an emergency safe haven for refugee** and minority populations from across South Asia.

### **Way Forward**

- **Leveraging Cutting-Edge Technologies:** Emerging **cutting-edge technologies** in the fields of space, communication, bio-engineering, bio-medics and **artificial intelligence** can revolutionise the way the risks of disasters are assessed and communicated through early warning.

- **Post Pandemic Assessment:** A comprehensive assessment of the impact of the pandemic on the implementation of **2030 Sustainable Development Goals** is needed.
  - The new framework should emphasise on the need to incorporate new ideas in global and national strategies for the implementation of the goals.
- **Studying And Augmenting First Respondent Tradition:** The first respondent tradition must be further studied and promoted, because it reflects India's deep commitment to assume a driving role in the international order.
  - And it will also have to be endowed with adequate resources and capabilities for India to move even quicker and farther beyond its borders.



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# Science and Technology

## Highlights

- *Omicron: New Corona Variant*
- *Antimicrobial Resistance*
- *Tundra Satellite System: Russia*
- *Havana Syndrome*
- *IRNSS-NavIC: ISRO*
- *Tsirkon Hypersonic Missile: Russia*
- *Fastest Spinning White Dwarf: J0240+1952*
- *Multisystem Inflammatory Syndrome in Children*

## Omicron: New Corona Variant

### Why in News

The **World Health Organization** has declared the recently-discovered B.1.1.529 strain of **Covid-19**, to be a **variant of concern**.

- The virus was first detected in **Southern Africa** and it is **renamed Omicron**.

### Key Points

- **About:**
  - Omicron is placed in the **most-troubling category of Covid-19 variants**, along with the **globally-dominant Delta** plus its weaker rivals Alpha, Beta and Gamma.
  - This variant has a **large number of mutations**. Some of them are cause for serious concern because they may allow the new variant to evade immunity obtained from a past infection or via a vaccine.
    - However, there are no reliable estimates of just how much more transmissible the Omicron variant is compared to previous strains of the virus.

- Apart from South Africa, Omicron has been detected in **Israel in people coming from Malawi; Botswana; Belgium and Hong Kong**.

### ➤ Nomenclature:

- The WHO has decided to name the variants **after the letters of the Greek alphabet**, to avoid the **countries that first detected them being stigmatised**.
- WHO selected the name Omicron, **instead of Nu or Xi**, the two letters between Mu and Omicron. This is because:
  - Xi happens to be a popular **surname in China** (avoiding 'causing offence to any cultural, social, national, regional, professional or ethnic groups).
  - Nu could have been confused with the **word 'new'**.

### ➤ Situation In India:

- Seroprevalence studies indicate that a **large proportion of the population has already been exposed to the virus** providing some level of protection to subsequent infections.
  - Further, the immunisation campaign has gained momentum.
  - Approximately 44% of Indian adults have been fully vaccinated and 82% have received at least one dose.
- Scientists believe that prior infection followed by one or two doses of vaccination may have a **larger protective effect** than two doses of the vaccination alone.

### **Variants of Concern**

- A variant for which there is evidence of an **increase in transmissibility, more severe disease** (e.g., increased hospitalizations or deaths), **significant reduction in**

**neutralization by antibodies** generated during previous infection or vaccination, **reduced effectiveness of treatments or vaccines**, or diagnostic detection failures.

- The new Variants could kick off **new wave(s) of epidemic transmission.**
- The WHO currently lists **5 variants of concern:**
  - **Omicron (B.1.1.529)**, identified in southern Africa in November 2021
  - **Delta (B.1.617.2)**, which emerged in India in late 2020 and spread around the world
  - **Gamma (P.1)**, which emerged in Brazil in late 2020
  - **Beta (B.1.351)**, which emerged in South Africa in early 2020
  - **Alpha (B.1.1.7)**, which merged in Britain in late 2020.

a population, it is sometimes referred to as a **New Strain of the virus.**

- All strains are variants, but not all variants are strains.

## Antimicrobial Resistance

### *Why in News*

Recently, the Ministry of Animal Husbandry and Dairying has organized a workshop on the National Action Plan to combat **Antimicrobial Resistance (AMR)**, while celebrating **World Antimicrobial Awareness Week (WAAW - November 18-24)**.

- This year's **theme** of WAAW was **"Spread awareness,**



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### Variants of Interest

- A variant **with specific genetic markers** that have been associated with changes to receptor binding, reduced neutralization by antibodies generated against previous infection or vaccination, reduced efficacy of treatments, potential diagnostic impact, or predicted increase in transmissibility or disease severity.
- There are currently two:
  - **Mu (B.1.621)**, which emerged in Colombia in early 2021.
  - **Lambda (C.37)**, which emerged in Peru in late 2020.

### Mutation, Variant and Strain

- When a virus replicates it doesn't always manage to produce an exact copy of itself.
- This means that, over time, the virus may start to differ slightly in terms of its genetic sequence.
- Any changes to the viral genetic sequence during this process is known as a **Mutation**.

- Viruses with new mutations are sometimes called **Variants**. Variants can differ by one or multiple mutations.
- When a new variant has different functional properties to the original virus and becomes established in

stop resistance”.

- During WAAW an International Colour Campaign, ‘**Go Blue**’ campaign, was launched by the AMR **tripartite organisations (World Health Organization, Food and Agriculture Organization** of the United Nations and the **World organisation for Animal Health)** to help spread awareness about AMR.

### Key Points

- **About:**
  - It is the resistance acquired by any **microorganism (bacteria, viruses, fungi, parasite, etc.) against antimicrobial drugs** (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections.
  - As a result, standard treatments become ineffective, infections persist and may spread to others.
  - Microorganisms that develop antimicrobial resistance are sometimes **referred to as “superbugs”**.
  - The **WHO** has declared AMR as **one of the top 10 global health threats**.
- **Reasons for Spread of AMR:**
  - Contamination around **pharmaceutical manufacturing sites** where untreated waste releases large amounts of active antimicrobials into the environment.
  - Many factors have accelerated the threat of AMR worldwide, including **overuse and misuse of medicines in humans**, livestock and agriculture, as well as poor access to clean water, sanitation and hygiene.

➤ **Concern:**

- **Increased Cost of Healthcare:**
  - AMR is already **responsible for up to 7,00,000 deaths a year**. It also **increases the cost of healthcare with lengthier stays in hospitals**, additional tests and use of more expensive drugs.
- **Undermining Progress:**
  - AMR is **undermining a century of progress in medicine**; infections that were previously treatable and curable with our drugs are becoming (or at risk of becoming) incurable (as medicines are not working against infections).
- **Infections and Surgeries Becoming Risky:**
  - Even common infections are becoming risky and a problem. Surgeries are becoming risky and the cause of all this is found **in the behaviour of human beings who are misusing or overusing antimicrobials**.
- **Inadequate Incentives for New Antibiotics:**
  - No new classes of antibiotics **have made it to the market in the last three decades**, largely on account of inadequate incentives for their development and production.
- **Headed Towards Antibiotic Apocalypse:**
  - Without urgent action, **we are heading to antibiotic apocalypse – a future without antibiotics**, with bacteria becoming **completely resistant to treatment** and when common infections and minor injuries could once again kill.

 ➤ **AMR in India:**

- India, with its combination of **large population**, rising incomes that facilitate purchase of antibiotics, high burden of infectious diseases and easy over-the-counter access to antibiotics, is an important locus for the generation of resistance genes (such genes help bacteria in surviving on being exposed to antibiotics).
- The multi-drug resistance determinant, **New Delhi Metallo-beta-lactamase-1 (NDM-1)**, emerged from this region to spread globally.
  - Africa, Europe and other parts of Asia have also been affected by multi-drug resistant typhoid originating from South Asia.
- In India, over **56,000 newborn deaths each year due to sepsis** are caused by organisms that are resistant to first line antibiotics.

 ➤ **Measures Taken to Address AMR:**

- **National Programme on AMR containment:**
  - The Surveillance Network has been strengthened by establishing labs in State Medical College.
- **National Action Plan on AMR:**
  - It focuses on **One Health approach** with the aim of involving various stakeholder ministries/ departments.
- **AMR Surveillance and Research Network (AMRSN):**
  - It was launched in 2013, to generate evidence and capture trends and patterns of drug resistant infections in the country.
- **Antibiotic Stewardship Program:**
  - ICMR has initiated antibiotic stewardship program (AMSP) on a pilot project across India **to control misuse and overuse of antibiotics in hospital wards and ICUs**.
- **Integrated One Health Surveillance Network for AMR:**
  - To assess the preparedness of Indian Veterinary laboratories to participate in integrated AMR surveillance network.
- **Others:**
  - India has undertaken many activities like **Mission Indradhanush** — to address low vaccination coverage — strengthened micro-planning and additional mechanisms to improve monitoring and accountability.
  - The **Ministry of Health & Family Welfare (MoHFW)** identified AMR as one of the top 10 priorities for the ministry's collaborative work with the World Health Organisation (WHO).

## **Tundra Satellite System: Russia**

### **Why in News**

Recently, Russia has successfully placed into **orbit a military satellite**. The satellite is believed to be a **Tundra Satellite**, part of **Russia's early warning anti-missile system named Kupol or dome**.

### **Key Points**

 ➤ **About:**

- Tundra satellite system is a **constellation of Missile Early Warning Satellites** established by Russia between 2015 and 2020.

- It carries a secure emergency communications payload to be used in case of a **nuclear war**.
- It is a series of satellites that are the next generation of Russian early warning satellites to replace the early warning satellites of the **Oko-1 system**.
  - This final **Oko (Eye) satellite (missile defence early warning program)** reportedly stopped operating in mid 2014, leaving Russia relying on ground-based missile detection systems.
- They are part of the **EKS or Unified Space System (USS-Also sometimes referred as Kupol or dome)**, which will also include several satellites in geostationary orbit.
  - Unveiled in 2019, Kupol is designed to detect launches of **ballistic missiles** and track them to their landing site, **though its exact configuration is unknown**.
- **Anti-Missile Defence Systems With India:**
  - **S-400 TRIUMF:**
    - **About:**
      - India has **S-400 TRIUMF**, which also caters to the three threats (rockets, missiles and cruise missiles). But they have a much longer range.
      - It has a much larger air defence bubble to knock off threats.
      - It is a mobile, **surface-to-air missile system (SAM)** designed by Russia.
    - **Range & Effectiveness:**
      - The system can engage all types of aerial targets within the range of 400km, at an altitude of up to 30km.
      - The system can track 100 airborne targets and engage six of them simultaneously.
  - **Prithvi Air Defence and Advance Air Defence:**
    - **About:**
      - It is a double-tiered system consisting of two land and sea-based interceptor missiles, namely the **Prithvi Air Defence (PAD)** missile for high altitude interception, and the **Advanced Air Defence (AAD) Missile** for lower altitude interception.
    - **Range:**
      - It is able to **intercept** any incoming missile launched **5,000 kilometres** away. The system also includes an overlapping network of early warning and tracking radars, as well as command and control posts.
- **Ashwin Advanced Air Defence Interceptor Missile:**
  - **About:**
    - It is also an indigenously produced Advanced Air Defence (AAD) interceptor missile developed by **Defence Research and Development Organisation (DRDO)**.
    - It is the advanced version of the low altitude supersonic ballistic interceptor missile.
    - The missile also has its own mobile launcher, secure data link for interception, independent tracking and homing capabilities and sophisticated radars.
  - **Range:**
    - It uses an endo-spheric (within the Earth's atmosphere) interceptor that knocks out ballistic missiles at a maximum altitude of 60,000 to 100,000 feet, and across a range between 90 and 125 miles.
- **Other Anti-Missile Defense System:**
  - **Iron Dome: Israel**
  - **Terminal High Altitude Area Defense (THAAD): US**

## Havana Syndrome

### Why in News

Recently, the **US Federal Bureau of Investigation (FBI)** has said that dealing with the issue of **Havana Syndrome** is a top priority and that it will keep investigating the cause and how to protect staff.

### Key Points

- **About:**
  - **In late 2016**, a few diplomats from the USA and their employees had **reported certain usual symptoms** during their stay in Havana, Cuba.
  - They **experienced some odd physical sensations** and heard peculiar sounds, after which they started feeling sick.
  - The US had even **accused Cuba of carrying out sonic attacks**. But Cuba denied the accusations of the sonic attacks and refused awareness of any such illness or syndrome.
  - Ever since many bodies and institutions have been researching the cause of the Havana syndrome and many plausible factors have been discovered till date.

- The **symptoms of the syndrome include** Nausea, Severe headaches, Fatigue, Dizziness, Sleep problems, Hearing loss.
  - A few of those who had been affected more faced chronic issues like vestibular processing and cognitive problems.
- In 2020, a **report** by the National Academies of Sciences (NAS), US **found directed microwave radiation to be the plausible cause** of the Havana syndrome.

➤ **Microwave Weapons:**

- **Direct Energy Weapon (DEW):**
  - They are a **type of direct energy weapons**, which aim highly focused energy in the form of sonic, laser, or microwaves, at a target.
  - They release **electromagnetic radiation** which causes sensations in the human body.
    - **Electromagnetic radiation** heating the water in the human body makes a person feel dizziness and nausea.
- **Countries with Microwave Weapons:**
  - **A number of countries** are thought to have developed these weapons to target both humans and electronic systems.
  - China had first put on display its microwave weapon, **called Poly WB-1**, at an air show in 2014.
  - The US has also developed a **prototype microwave-style weapon**, which it calls the **“Active Denial System”**, which is the first non-lethal, directed-energy, counter-personnel system with an extended range greater than currently fielded non-lethal weapons.
- **India’s Plans for Directed Energy Weapons:**
  - Recently, the **Defence Research and Development Organisation (DRDO)** has announced its plans to develop (DEWs) using high-energy lasers and microwaves.
  - **Development of DEWs** is seen as particularly important in the context of India’s worsening security environment, especially its ties with China.
- **Concerns:**
  - These weapons are a **cause of concern** as they can affect both machines and human beings.
  - They can **cause long-term damages** without leaving a single mark on the human body.

## **IRNSS-NaVIC: ISRO**

### **Why in News**

Recently, the Vice President has suggested **ISRO (Indian Space Research Organization)** make **Indian regional navigation satellite system-Navigation in Indian Constellation (NaVIC)** for global use.

### **Key Points**

➤ **Background:**

- In 2006, the project was approved by the Government of India and was expected to be completed and implemented by 2015-16.
- The constellations’ first satellite (IRNSS-1A) was launched on 1<sup>st</sup> July 2013 and the seventh and final satellite (IRNSS-1G) was launched on 28<sup>th</sup> April 2016.
  - With the last launch of the constellation’s satellite (IRNSS-1G), **IRNSS was renamed Navigation Indian Constellation (NaVIC)** by India’s Prime Minister.

➤ **About:**

- Presently, IRNSS **consists of eight satellites**, three satellites in geostationary orbit and five satellites in **geosynchronous orbit**.
  - IRNSS-1I is **expected to replace IRNSS-1A**, which was rendered ineffective after its three rubidium atomic clocks failed.
- The main objective is **to provide reliable position, navigation and timing services** over India and its neighbourhood.
  - It works just like the established and popular US Global Positioning System (GPS) but **within a 1,500-km radius over the sub-continent**.
  - Technically satellite systems with more satellites provide more accurate positioning information.
    - However, compared to GPS (24 satellites) which has a position accuracy of 20-30 metres, the NavIC is able to pinpoint location to an estimated accuracy of under 20 metres.
- It has been **certified by the 3<sup>rd</sup> Generation Partnership Project (3GPP)**, a global body for coordinating mobile telephony standards.
- It was **recognised by the International Maritime Organization (IMO)** as a part of the World Wide Radio Navigation System (WWRNS) for operation in the Indian Ocean Region in 2020.
- ISRO is working to build the next generation of IRNSS satellites with indigenous atomic clocks and enhancements to navigation services.
- **Potential Uses:**
  - Terrestrial, aerial and marine navigation;
  - Disaster management;
  - Vehicle tracking and fleet management (especially for mining and transportation sector);
  - Integration with mobile phones;
  - Precise timing (as for ATMs and power grids);
  - Mapping and geodetic data capture.
- **Significance:**
  - It gives real time information for 2 services i.e **standard positioning service open for civilian use** and **Restricted service which may be encrypted for authorised users** like for military.
  - India became **one of the 5 countries having their own navigation system** like GPS of USA, GLONASS of Russia, Galileo of Europe and BeiDou of China. So India's dependence on other countries for navigation purposes reduces.
- It will **help scientific & technological** advancement in India. It is important for the **country's sovereignty** and strategic requirements.
- In April 2019, the **government made NavIC-based vehicle trackers mandatory** for all commercial vehicles in the country in accordance with the Nirbhaya case verdict.
- Also, Qualcomm Technologies has **unveiled mobile chipsets** supporting NavIC
- Further with extensive coverage, one of the stated future uses of the project includes **sharing of the project with the SAARC nations**. This will help in integrating the regional navigation system further and a diplomatic goodwill gesture from India towards countries of the region.

#### **GPS Aided Geo Augmented Navigation (GAGAN)**

- This is a **Satellite Based Augmentation System (SBAS)** implemented jointly with Airport Authority of India (AAI).
- The system will be **interoperable with other international SBAS systems and provide seamless navigation across regional boundaries**.
  - The GAGAN Signal-In-Space (SIS) is available **through GSAT-8 and GSAT-10**.
- **Objectives:**
  - To provide Satellite-based Navigation services with accuracy and integrity required for civil aviation applications.
  - To provide better Air Traffic Management over Indian Airspace.

## **Tsirkon**

### **Hypersonic Missile: Russia**

#### ***Why in News***

Recently, Russia has fired its **Tsirkon (Zircon) Hypersonic Cruise Missile** from a warship in the north of the country.

- Earlier, it was reported that **China tested a nuclear-capable hypersonic glide vehicle** that circled the globe before speeding towards its target.

#### ***Key Points***

- **About:**

- The **Tsirkon Cruise Missile will join Avangard glide vehicles and the air-launched Kinzhal (Dagger) missiles** in Russia's hypersonic arsenal.
  - Cruise missiles differ from **ballistic missiles** in that they fly towards their target at lower altitudes, remaining within the Earth's atmosphere throughout their trajectory.
- It is one of the several missiles being developed in Russia that will arm up Russian submarines, frigates, and cruisers.
- **Hypersonic Weapons are much harder to track and intercept** than traditional projectiles because they can travel **more than five times the speed of sound** and maneuver in mid-flight.
- **Hypersonic Technology:**
  - **Speed:** 5 or more times the Mach or speed of sound.
  - **Mach Number:** It describes an aircraft's speed compared with the speed of sound in air, with Mach 1 equating to the speed of sound i.e. 343 metre per second.
  - **Technology Used:** Most hypersonic vehicles primarily use the **scramjet technology**, which is a type of Air Breathing propulsion System.
    - This is extremely complex technology, which also needs to be able to handle high temperatures, making the hypersonic systems extremely costly.
  - **Types:**
    - **Hypersonic cruise missiles:** These are the ones that use rocket or jet propellant through their flight and are regarded as being just faster versions of existing cruise missiles.
    - **Hypersonic Glide Vehicle (HGV):** These missiles first go up into the atmosphere on a conventional rocket before being launched towards their target.
- **Development of Hypersonic Technology in India:**
  - India, too, is working on hypersonic technologies.
    - As far as space assets are concerned, India has already proved its capabilities through the test of **ASAT under Mission Shakti**.
  - Hypersonic technology has been developed and tested by both **DRDO (Defence research and Development Organisation)** and **ISRO (Indian Space Research Organisation)**.
  - Recently, DRDO has successfully flight-tested the **Hypersonic Technology Demonstrator Vehicle**

(HSTDV), with a capability to travel at 6 times the speed of sound.

- Also, a **Hypersonic Wind Tunnel (HWT)** test facility of the DRDO was inaugurated in Hyderabad. It is a pressure vacuum-driven, enclosed free jet facility that simulates Mach 5 to 12.

## **Fastest Spinning White Dwarf: J0240+1952**

### **Why in News**

Recently, a team of astronomers has confirmed the **fastest spinning white dwarf** (named J0240+1952) that completes a **full rotation once every 25 seconds**.

### **Key Points**

- **About:**
  - It is part of a **binary star system**; under the **influence of the magnetic propeller system**, its immense gravity is pulling material from its larger companion star in the form of plasma.
  - Under the **magnetic propeller system, the white dwarf attracts plasma from the binary star system. However**, the magnetic field of white dwarf acts as a **protective barrier**, causing most of the falling plasma to be propelled away from the white dwarf.
- **White Dwarf:**
  - White dwarfs are **stars that have burned up all of the hydrogen** they once used as nuclear fuel.
    - Such stars have very high density.
    - A typical white dwarf is half the size of our Sun and has a surface **gravity 100,000 times that of Earth**.

- Stars like our sun fuse hydrogen in their cores into helium through nuclear fusion reactions.
- Fusion in a star's core produces heat and outward pressure (they bloat up as enormous red giants), but this pressure is kept in balance by the inward push of gravity generated by a star's mass.
- When the hydrogen, used as fuel, vanishes and fusion slows, gravity causes the star to collapse in on itself into white dwarfs.
- **Black Dwarf:** Eventually—over tens or even hundreds of billions of years—a white dwarf cools until it becomes a black dwarf, which emits no energy. Because the universe's oldest stars are only 10 billion to 20 billion years old there are no known black dwarfs
  - It must be noted that not all white dwarfs cool and transform into black dwarfs.
- Those white dwarfs which have enough mass reach a level called the **Chandrasekhar Limit**.
- At this point the pressure at its center becomes so great that the star will detonate in a **thermonuclear supernova**.

#### Chandrasekhar Limit

- Chandrasekhar Limit is the **maximum mass theoretically possible** for a stable white dwarf star.
- A limit which mandates that **no white dwarf** (a collapsed, degenerate star) can be more massive than about **1.4 times the mass of the Sun**.
- Any degenerate object more massive must inevitably collapse into a neutron star or black hole.
- The limit is named after the **Nobel laureate Subrahmanyan Chandrasekhar**, who first proposed the idea in 1931.
- He was awarded the **Nobel Prize in Physics** in 1983 for his work on the physical processes involved in the structure and evolution of stars.

## Multisystem Inflammatory Syndrome in Children

### Why in News

Recently, the **World Health Organization (WHO)** has released fresh guidelines for treating children who developed **Multisystem Inflammatory Syndrome (MIS-C)** after being exposed to **Covid-19 infection**.

### Key Points

- **About:**
  - MIS-C is a condition where **various organs of the body are affected by inflammation**. The patient develops heart problems, the severity of which may determine the line of treatment.
  - It is a **rare but severe hyperinflammatory condition** in children and adolescents that **typically occurs 2-6 weeks after a Covid-19 infection**.
  - It is a potentially deadly condition where different body parts can become inflamed, including the **heart, lungs, kidneys, brain, skin, eyes, or gastrointestinal organs**.
  - Children with MIS-C may have a fever and **various symptoms**, including abdominal (gut) pain, vomiting, diarrhea, neck pain, rash, bloodshot eyes, or feeling extra tired.
- **MIS-C with Neurological Complications:**
  - In a recent study, **young people with the MIS-C syndrome have shown neurological issues** which were life-threatening such as strokes or severe encephalopathy (any brain disease that alters brain function or structure).
  - **Neurological symptoms** include hallucinations, confusion, speech impairments, and problems with balance and coordination.
  - The new findings strengthen the theory that the **syndrome is related to a surge of inflammation triggered by an immune response** to the virus.
- **Causes of MIS-C:**
  - As the Syndrome is less researched, there are **varied theories** as to what causes MIS-C.
  - While some researchers believe that **MIS-C is a delayed response to the coronavirus** which in turn causes massive inflammation in the body and as a result damages organs.

- Others believe that it can also **be a result of the children's immune response making antibodies against the virus.**
- There may be a **genetic component as not every child develops MIS-C** and the presenting symptoms are so varied.

➤ **WHO Guidelines for Treatment:**

- It is suggested to use **corticosteroids in addition to the standard of care for Kawasaki disease** (conditional recommendation, very low certainty) in hospitalised **children (0-18 years of age).**
  - Commonly referred to as steroids, **corticosteroids are a type of anti-inflammatory drug.**
  - Corticosteroids along with supportive care resulted in a more effective treatment than either **intravenous immunoglobulin plus supportive care** or supportive care alone.
  - The treatment was also found to be effective

in treating children with **Kawasaki disease** in association to **Covid-19.**

- Not to use corticosteroids in the treatment of patients **with non-severe Covid-19 as the treatment brought no benefits,** and could even prove harmful.

**Kawasaki Disease**

- It is an **acute inflammatory disease of the blood vessels** and usually occurs in children below the age of five.
- The inflammation in the coronary arteries that are responsible for supplying blood to the heart **results in enlargement or in the formation of aneurysms** (swelling of the wall of an artery), leading to heart attacks.
- **Symptoms:** Fever, rashes, redness of the cornea, red and cracked lips, a red tongue and lymph node enlargement of the neck.

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# Environment and Ecology

## Highlights

- Depletion of Groundwater
- Ganga Connect Exhibition: UK
- SAFAR
- Amazon Deforestation

## Depletion of Groundwater

### Why in News

Recently, an analysis of water level data done by the **Central Ground Water Board (CGWB)** indicates that about **33% of the wells monitored have registered decline in ground water levels in the range of 0 – 2 metres.**

- Moreover, a **decline of more than 4.0 m** has also been observed in a **few pockets of metro cities** like New Delhi, Chennai, Indore, Madurai, Vijayawada, Ghaziabad, Kanpur, and Lucknow, etc.
- CGWB is periodically **monitoring the ground water levels** throughout the Country including metro cities on a regional scale, through a network of monitoring wells.

### Key Points

- **About Groundwater Extraction in India:**
  - The **UNESCO World Water Development Report, 2018** states that India is the largest extractor of groundwater in the world.
  - The contribution of groundwater to national **gross domestic product** is never measured.
  - According to the CGWB, with **230 billion metre cube of groundwater drawn out each year** for irrigating agriculture lands in India, many parts of the country are experiencing rapid depletion of groundwater.
    - The total estimated groundwater depletion in India is in the range of 122–199 billion metre cube.
- **Reason for Groundwater Extraction:**
  - **Green Revolution:** Green Revolution enabled water intensive crops to be grown in drought prone/ water deficit regions, leading to over extraction of groundwater.

- Frequent pumping of water from the ground without waiting for its replenishment leads to quick depletion.
- Further, Subsidies on electricity and high **MSP (Minimum Support Price)** for water intensive crops.
- **Industries Requirement:** Water contamination as in the case of **pollution by landfills, septic tanks, leaky underground gas tanks**, and from overuse of fertilizers and pesticides leading to damage and depletion of groundwater resources.
- **Inadequate Regulation:** Inadequate regulation of groundwater encourages the exhaustion of groundwater resources without any penalty.
  - In India, **construction of irrigation wells does not require any clearance** and no records are maintained of abandoned wells.
  - Several hundred wells are constructed in India every day and even more are abandoned when they run dry.
- **Federal Issue: Water being a State subject**, initiatives on water management including water conservation and water harvesting and making available adequate drinkable water to citizens in the Country is primarily States' responsibility.
  - However, important measures including funding of various projects are taken by the Central Government.

### **Steps taken by the Central Government to Control Groundwater Depletion:**

- **Jal Shakti Abhiyan:** Government of India launched **Jal Shakti Abhiyan (JSA)** in 2019, intended to improve water availability including groundwater conditions in the water stressed blocks of **256 districts in India.**

- **Master Plan for Artificial Recharge to Groundwater - 2020:** CGWB in consultation with the state governments has prepared **The Master Plan - 2020**.
  - It envisages construction of about 1.42 crore Rain water harvesting and artificial recharge structures in the Country to harness **185 Billion Cubic Metre (BCM)**.
  - In addition, the government has also launched the **'Catch the Rain'** campaign to promote rainwater harvesting.
- **National Water Policy (2012):** The policy advocates rainwater harvesting and conservation of water and highlights the need for augmenting the availability of water through direct use of rainfall.
  - It also advocates conservation of river, river bodies and infrastructure should be undertaken in a scientifically planned manner through community participation.
- **Atal Bhujal Yojana: Atal Bhujal Yojana (ABHY)** scheme (co-funded by **World Bank** funding, for sustainable management of ground water with community participation is being taken up in the identified over-exploited and water stressed areas.
- **Convergent Approach:** Central Government supports construction of water harvesting and conservation works primarily through **Mahatma Gandhi National Rural Employment Guarantee Scheme** and **Pradhan Mantri Krishi Sinchayee Yojana – Watershed Development Component**.
- **Aquifer Mapping and Management Programme: The** CGWB has taken up **Aquifer Mapping and Management Programme**.
  - The program is aimed to delineate aquifer disposition and their characterization for preparation of aquifer/ area specific groundwater management plans with community participation.
- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT):** The Mission focuses on development of basic urban infrastructure in the **AMRUT** cities, such as water supply, sewerage & septage management, storm water drainage, green spaces & parks, and non-motorized urban transport.
- **Various State Government Initiative:** A number of States have done notable work in the field of water conservation/harvesting for sustainable management of water resources. For example,
  - **Mukhyamantri Jal Swavlamban Abhiyan'** in Rajasthan,

- **'Jalyukt Shibir'** in Maharashtra,
- **'Sujalam Sufalam Abhiyan'** in Gujarat,
- **'Mission Kakatiya'** in Telangana,
- **Neeru Chettu'** in Andhra Pradesh,
- **Jal Jeevan Hariyali** in Bihar,
- **'Jal Hi Jeevan'** in Haryana

## Ganga Connect Exhibition: UK

### *Why in News*

Recently, the **Ganga Connect exhibition** concluded in London on 25<sup>th</sup> November 2021.

- It was inaugurated in Glasgow, Scotland after the successful culmination of **COP-26 (Conference of parties)** on 12<sup>th</sup> November 2021.
- **10 key strategic initiatives** were announced during the exhibition

### *Key Points*

#### ➤ **About:**

- It is a global exhibition **that will showcase multiple facets of the river basin and connect with interested parties**.
- It has been a major effort of the **National Mission for Clean Ganga**, the High Commission of India and **C-Ganga (Centre for Ganga River Basin Management and Studies)** to engage with the international community of scientists, technology companies, policy makers, industry, investors and finance professionals.

#### ➤ **Objective:**

- To showcase the level of development in the **Ganga River basin** to a global community of environmental stakeholders.

#### ➤ **Significance:**

##### ○ **Creating Awareness:**

- It is significant from the point of view of **preserving and protecting Ganga** and its ecosystem and creating widespread awareness about the river basin.
- It demonstrates the **deep spiritual and philosophical connect** that Indians have with the river.

##### ○ **Understanding Ecosystem:**

- The Ganga Connect exhibition offers a **clear and deep understanding** of the size, magnitude and complexity of the **Ganga riverine ecosystem**.

- **Enables Engagement:**
  - It **enables engagement with interested parties** and the diaspora who want to get involved in the rejuvenation, restoration and conservation of the river system.
- **Development of Environmental Solution:**
  - It **emphasizes** on river Ganga as a major lab for global technology and the scientific community to **develop cutting-edge environmental solutions.**

#### Key Initiatives Announced

- **Ganga Connect UK Community Engagement Chapters:**
  - The chapters established are: **Scotland – Ganga Connect, Wales – Ganga Connect, Midlands – Ganga Connect, London – Ganga Connect.**
  - Each chapter will have conveners who will connect various interest groups with the NamamiGange-programme including scientists, technology companies, investors and community members.
- **Twining of Rivers:**
  - It has been announced to share knowledge, best practices and experiences of river basin management including community engagement programmes.
- **Scotland – India Water Partnership:**
  - This partnership builds upon the MOU (Memorandum of Understanding) of **National Mission for Clean Ganga** and Government of Scotland MOU of 2017.
  - It will channel the high level of interest amongst **Scottish entities specialising in water into entering the Indian market and the Namami Gange programme** will act as a major platform for Scottish entities to enter the Indian market.
- **Impact Project using Arth Ganga Framework:**
  - It will be developed on the model of rejuvenation and economic development of the **River Clyde in Glasgow.** It will include many aspects such as **sustainable tourism, river front development, sustainable transport and other activities.**
  - It will **create significant livelihood opportunities and bring new economic activities** but in a manner that creates a model approach of environmentally sustainable development.
- **Ganga Finance and Investments Forum:**

- A number of investors and finance companies have come together to establish the Ganga Finance and Investments Forum (GFIF) to develop state of the art **financial instruments** such as **river bonds, blue bonds, impact and outcome bonds, credit enhancement and guarantee instruments.**
- It will also provide ongoing **support to NMCG and the Namami Gange programme** for continuous funding and project finance for various initiatives.
- **Environment Technology Verification (ETV) programme:**
  - Three innovative technologies are selected and on-boarded onto the ETV programme:
  - This takes the total number of companies in the ETV programme to over 40 of which 14 are from the UK.
- **Tech & Innovation Financing:**
  - To support the successful candidates a partnership with OPG Power Ventures, a company listed on the **AIM (Alternative Investment Fund)** segment of the London Stock Exchange, is being established that will create up to a Rs 30 crore facility to **fund technologies and innovations.**
- **UK-India Scientific Collaboration:**
  - A number of scientists and research institutions have agreed to come together to form a **knowledge pool for exchange of scientific and technological ideas** leading to development of collaborative research.
- **Collaboration bridge between India and the UK:**
  - Scientists and academics from various institutions have agreed to establish a collaboration bridge between India and the UK **to work meticulously on river rejuvenation and conservation.**
- **Global Youth for Ganga:**
  - It will **engage in interdisciplinary discussions, raising worldwide awareness, and encouraging engagement in the Clean Ganga Mission,** bringing together young students, researchers and professionals across the globe.
  - The aim is to make Clean Ganga a reality and also to inspire the rest of the world to take similar initiatives in their states down to the very grassroot level.

➤ **Clean Ganga Charity:**

- The charity set up process has been expedited and it will be set up soon with a view to start mobilising communities and friends of Ganga in the coming months.

## SAFAR

### **Why in News**

Recently, **SAFAR (System of Air Quality and Weather Forecast and Research)** has studied post Diwali Air Pollution in the **four Indian Cities** (Delhi, Ahmedabad, Mumbai and Pune).

- Air pollution during the Diwali period in 2021 was higher compared to 2020 in the three metropolitan cities of **Delhi, Ahmedabad and Mumbai, whereas Pune was the only city among the four** which had lower pollution levels.
- High PM in Delhi during the Diwali period is **due to high local emissions**, combined with the **biomass burning effect**.

### **Key Point**

➤ **About:**

- SAFAR is a national initiative introduced by the **Ministry of Earth Sciences (MoES)** to measure the air quality of a metropolitan city, by measuring the overall pollution level and the location-specific air quality of the city.
- It is an integral part of **India's first Air Quality Early Warning System** operational in Delhi.
- It monitors all weather parameters like **temperature, rainfall, humidity, wind speed, and wind direction, UV radiation, and solar radiation**.
- The **World Meteorological Organization** has recognized SAFAR as a prototype activity on the basis of the high-quality control and standards maintained in its implementation.

➤ **Pollutants Monitored:**

- **PM2.5, PM10**, Ozone, Carbon Monoxide (CO), Nitrogen Oxides (NOx), Sulfur Dioxide (SO2), Benzene, Toluene, Xylene, and Mercury.

➤ **Developed By:**

- The system is indigenously developed by the **Indian Institute of Tropical Meteorology (IITM)**, Pune

and is operationalized by the **India Meteorological Department (IMD)**.

- IITM has a giant true color LED (Light Emitting Diode) display that gives out a **real-time Air Quality Index (AQI) on a 24x7 basis** with color-coding (along with 72 hours advance forecast).

➤ **Objectives:**

- To **increase awareness among the general public regarding the air quality** in their city so that appropriate mitigation measures and systematic action can be taken up.
- To help the policy-makers develop **mitigation strategies keeping in mind the nation's economic development**.

➤ **Significance:**

- It will **benefit cost savings** to several other sectors like agriculture, **aviation, infrastructure, disaster management, tourism**, etc. which directly or indirectly gets affected by air quality and weather.

### **Air Quality Index (AQI)**

- It is an index for reporting daily air quality. It displays the **changes in air pollution in the atmosphere**.
- It focuses on **health effects one might experience within a few hours or days after breathing polluted air**.
- AQI keeps a tab on **8 major air pollutants in the atmosphere namely**,
  - **Ground-level ozone**,
  - PM10,
  - PM2.5,
  - Carbon monoxide,
  - Sulfur dioxide,
  - Nitrogen dioxide,
  - Ammonia,
  - Lead,
- Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in India.

## Amazon Deforestation

### **Why in News**

Recently, it was found that the **area deforested in Brazil's Amazon** reached a 15-year high after a 22% jump from the prior year (2020).

- Earlier, a study showed that **Amazon Forests have started emitting Carbon dioxide (CO<sub>2</sub>)** instead of absorbing it.
- Over time, global climate change and more deforestation will likely **lead to increased temperatures and changing rain patterns** in the Amazon, which will undoubtedly affect the region’s forests, water availability, biodiversity, agriculture, and human health.

### **Key Points**

#### ➤ **Drivers of Deforestation in the Amazon:**

- **Cattle Ranching:**
  - One of the **leading causes of deforestation** in the Amazon Rainforest is linked to beef consumption.
  - **Vast areas of forest are cleared by cutting down trees** and burning the forest down in order to create pasture land for grazing cattle.
  - **Brazil is a major supplier of beef to countries** like the United States and China, exporting 1.82 million tons in 2019 alone.
- **Small-Scale Agriculture:**
  - It has long been touted as a major driver of deforestation in the Amazon Rainforest.
  - As with ranching, **small-scale agriculture requires the forest** to be “slashed and burned” to clear the ground for crops and grazing of various types.
- **Fires:**
  - Unlike other types of forests, the Amazon did not evolve to burn.
  - And in the Amazon basin, **fires can actually be spurred by deforestation**. As their name suggests, rainforests contain high levels of moisture, which helps buffer them from fire.

- **Industrial Agriculture Operations:**
  - **Industrial agriculture operations are becoming increasingly common** in the Amazon Rainforest.
- **Other Reasons:**
  - **Mining operations**, for sought-after minerals such as gold, account for further damage to the Amazon forest.
  - **Increased government incentives** in the form of loans and infrastructure spending, including roads and dams.

#### ➤ **Amazon Rainforests:**

- These are the **world’s largest tropical rainforest** occupying the drainage basin of the Amazon River and its tributaries in northern South America.
  - **Tropical forests are closed-canopy forests** growing within 28 degrees north or south of the equator.
  - They are **very wet places**, receiving more than 200 cm rainfall per year, either seasonally or throughout the year.
  - **Temperatures are uniformly high** - between 20°C and 35°C.
  - Such forests are found in Asia, Australia, Africa, South America, Central America, Mexico and on many of the Pacific Islands.
- The Amazon is a vast biome that **spans eight rapidly developing countries**—Brazil, Bolivia,

Peru, Ecuador, Colombia, Venezuela, Guyana, and Suriname—and French Guiana, an overseas territory of France.

- The **Amazon rainforests cover about 80% of the Amazon basin** and they are **home to nearly a fifth of the world's land species** and is also home to about 30 million people including hundreds of indigenous groups and several isolated tribes.
  - The **Amazon basin is huge** with an area covering over 6 million square kilometres, it is nearly twice the size of India.
  - The basin produces about **20% of the world's flow of freshwater** into the oceans.
- **Comprising about 40% of Brazil's total area**, it is bounded by the Guiana Highlands to the north,

the Andes Mountains to the west, the Brazilian central plateau to the south, and the Atlantic Ocean to the east.

➤ **Initiatives to tackle Deforestation:**

- Brazil was among a **number of nations who promised to end and reverse deforestation** by 2030 during the **COP26 climate summit**.
- **LEAF (Lowering Emissions by Accelerating Forest Finance) Coalition** was announced at the Leaders Summit on Climate, 2021.
- **REDD+ initiatives:** It is one of the **climate change mitigation options** in developing countries for conservation of forest carbon stock, sustainable management of forests and reducing emissions from deforestation and forest degradation.



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# History

## Highlights

- Great Ancient Kings: Alexander & Chandragupta

## Great Ancient Kings: Alexander & Chandragupta

### Why in News

Recently, Uttar Pradesh Chief Minister said that **Chandragupta Maurya** had defeated **Alexander** and yet, it is the latter whom historians have chosen to call **great**.

- Alexander was referred to as great by early historians. Similarly in Indian history, 'great' has been used for the emperors **Ashoka, Rajaraja and Rajendra Chola, and Akbar**, among others.
- However, later historians have **moved their focus** away from the political triumphs of individual rulers **to the society, economy, art and architecture** of their times.

### Key Points

- Reason for Greatness of Kings:

- Alexander:

- Because of his **stupendous military conquests** which amazed European writers and chroniclers of the ancient world.
- He had established, **before he turned 30 years of age, the largest empire (323 B.C.) the world had seen until then**, which stretched across modern western and central Asia all the way from Greece to India's northwestern frontier.

- Chandragupta Maurya:

- He was the **architect of the Mauryan empire (321 B.C - 185 B.C) that controlled the plains of both the Indus and the Ganga**, and which stretched until the eastern and western oceans.
  - With Pataliputra at its imperial centre, the **Mauryan Empire for the first time unified most of South Asia**.
- He **laid the foundations of an extensive and efficient system of centralised administration**

**and tax-collection** that formed the bases of his empire.

- **Trade and agriculture were reformed and regulated** with the building of infrastructure and standardisation of weights and measures, and provisions were made for a large standing army.
- **Chola Emperors:**
  - The Chola emperors **Rajaraja I (985-1014) and Rajendra I (1014-1044)** built **strong navies** that conquered the Maldives, and reached Sri Lanka and several countries of Southeast Asia across the Bay of Bengal.
- **Ghenghis Khan & Others:**
  - Ghenghis Khan (1162-1227) stamped his **authority over a bigger swathe of Asia and Europe**, and other conquerors such as Tamerlane, Atilla the Hun, and Charlemagne, as well as Ashoka, Akbar, and Aurangzeb built their own very large empires.

### Alexander (356-323 BC)

- About:

- Alexander was **born in 356 BC at Pella in ancient Greece**, and succeeded his father, king Phillip II, to the throne at the age of 20.
  - Over the next 10 years, Alexander led campaigns across large parts of West Asia and North Africa.
- In **330 BC, he defeated Darius III in the decisive battle of Gaugamela**, and after a long campaign in Bactria in the region of the Amu Darya north of today's Afghanistan, he crossed the Hindu Kush and entered the Kabul valley.

- Indian Campaign:

- In **326/327 BC, Alexander crossed the Indus**, the farthest frontier of the old Persian empire, and began his Indian campaign that lasted about two years.

- The king of Taxila surrendered to Alexander, but **beyond the Jhelum he was challenged by the legendary warrior** whom Greek sources have identified as **Porus**.
- In the **battle of Hydaspes** that followed, Alexander won, but following his famous interview with Porus — during which the wounded king is said to have demanded that the invading emperor treat him “as befits a king” — was impressed enough to return to the captive Porus his kingdom, and to **leave him in charge of Punjab when the Greek army ultimately retreated**.
- **Retreat:**
  - After the defeat of Porus, Alexander wished to march on into the heartland of the Gangetic basin — but **upon reaching the Beas, the last of the five rivers of Punjab, his generals refused to go further**.
  - Alexander was forced to turn back, and **he followed the Indus southward to its delta, where he sent part of his army to Mesopotamia by sea**, while leading the other part overland along the Makran coast.
  - He reached Susa in Persia in 324 BC, and in the following year, died in the ancient city of Babylon, to the south of today’s Baghdad.
  - His aborted Indian campaign notwithstanding, **Alexander is believed to have died undefeated in any battle** — seemingly fulfilling the prophecies that he would conquer the entire world.
  - At the time Alexander turned back from the threshold of India, his army was tired and homesick, they had wearied of fighting in the heavy Indian

monsoon, and it is possible they were **intimidated by stories of two great armies** that lay in wait for them ahead:

- That of the **Nandas of Magadha** (c. 362 BC-321 BC), comprising, according to Greek writers, at least 20,000 cavalry, 200,000 infantry, and 3,000 war elephants.
- And the **Gangaridai empire** corresponds to what is today West Bengal and parts of Bangladesh.

### **Chandragupta and Alexander**

- Historians estimate the year of **Chandragupta’s rise to power in a band stretching from 324 BC to 313 BC**; however, it is generally accepted that he ascended the throne in 321 BC and died in 297 BC.
  - Even **accepting the least recent year for his accession would, however, place him after Alexander had left India** — and just before the Greek emperor’s death in Babylon.
- Greek sources suggest that Chandragupta may have been in communication with Alexander during the latter’s Indian campaign.
  - **AL Basham’s The Wonder That Was India** notes that “classical sources speak of a young Indian named Sandrocottus — identical with the Chandragupta Maurya of Indian sources.
  - **Plutarch** states that **Sandrocottus advised Alexander to advance beyond the Beas and attack the Nanda emperor**, who was so unpopular that his people would rise in support of an invader.
  - The **Latin historian Justin** adds that later **Sandrocottus offended Alexander** by the boldness of his speech and after many adventures succeeded in expelling the Greek forces and gaining the throne of India.
  - Based on these accounts, **Basham concluded that “it is reasonable to believe that the emperor Chandragupta Maurya, who rose to power soon after Alexander’s invasion, had at least heard of the conqueror, and perhaps derived inspiration from his exploits”**.

### **Chandragupta**

- **About:**
  - Greek and Indian sources agree that **Chandragupta overthrew the unpopular last king of the Nandas, Dhana Nanda**, and occupied his capital, Pataliputra.

- **Chandragupta** is said to have been a **protege of the Brahmin philosopher Kautilya** who, having been insulted by the Nanda king, bore a grudge against him.
- **Chanakya, also known as Kautilya and Vishnugupta**, to whom is attributed the legendary **Arthashastra**, the pioneering Indian treatise on political science, statecraft, military strategy, and economy.
- Buddhist texts say **Chandragupta Maurya belonged to the kshatriya Moriya clan associated with the Shakyas**.
  - Brahmanical texts, however, refer to the **Mauryas as shudras and heretics**.
- **Guided by the guile and strategy of Kautilya** and by his own great military prowess, **Chandragupta went about fulfilling his imperial ambitions**.
- **Movement to North-West:**
  - He moved north-west to occupy the power vacuum left by the retreat of Alexander's army.
  - These areas fell to him rapidly, **until he reached the Indus. Here he paused as the Greek Seleucus Nicator** — the successor to Alexander — had fortified his hold on the area.
    - Consequently, "Chandragupta moved to central India for a while, but 305 BC saw him back in the north-west, **involved in a campaign against Selucus**", in which he was successful.
  - By the **peace treaty that was negotiated in 303 BC, some Seleucid territories that today would cover eastern Afghanistan, Balochistan, and Makran were ceded to the Maurya**.
  - Some matrimonial alliances followed as well, and during the campaign and afterward, there was considerable **cultural contact between the Mauryans and the Greeks**.
  - With the treaty of 303 BC, **the routes and nodal points of the north-west region shifted from Persian-Hellenistic to Mauryan control**.

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# Geography

## Highlights

- Earthquake
- Weather Forecasting

## Earthquake

### Why in News

Recently, a shallow and strong **earthquake** of magnitude 6.1 struck the Myanmar-India border region early.

### Key Points

#### ➤ Earthquake:

- An earthquake in simple words is the **shaking of the earth**. It is a natural event. It is **caused due to release of energy**, which generates waves that travel in all directions.
- The vibrations called **seismic waves** are generated from earthquakes that travel through the Earth and are recorded on instruments called seismographs.
- The location below the earth's surface where the earthquake starts is called the **hypocenter**, and the location directly above it on the surface of the earth is called the **epicenter**.
- **Types of Earthquake:** Fault Zones, Tectonic Earthquakes, Volcanic Earthquake, Human Induced Earthquakes.

#### ➤ Distribution of Earthquake:

- The **world's greatest earthquake belt**, the **circum-Pacific seismic belt**, is found along the rim of the **Pacific Ocean**, where about 81% of our planet's largest earthquakes occur. It has earned the nickname "**Ring of Fire**".
  - The **belt exists along boundaries of tectonic plates**, where plates of mostly oceanic crust are sinking (or subducting) beneath another plate. Earthquakes in these subduction zones are caused by slip between plates and rupture within plates.
- The **Alpide earthquake belt (mid Continental belt)** extends from Java to Sumatra through the Himalayas, the Mediterranean, and out into the Atlantic.
  - This belt accounts for about 17% of the world's largest earthquakes, including some of the most destructive.
- The **third prominent belt follows** the submerged mid-Atlantic Ridge. The ridge marks where two tectonic plates are spreading apart (a divergent plate boundary).
  - Most of the **mid-Atlantic Ridge** is deep underwater and far from human development.

### Seismic Hazard Map of India

- India is one of the **highly earthquake affected countries** because of the presence of technically active young fold mountains - Himalaya.
- India has been divided into **four seismic zones (II, III, IV, and V)** based on scientific inputs relating to seismicity, earthquakes that occurred in the past and tectonic setup of the region.
- Previously, **earthquake zones were divided into five zones** with respect to the severity of the earthquakes but the **Bureau of Indian Standards (BIS)** grouped the country into four seismic zones by unifying the first two zones.

- **BIS is the official agency** for publishing the seismic hazard maps and codes.
- **Seismic Zone II:**
  - Area with **minor damage earthquakes** corresponding to intensities V to VI of MM scale (MM-Modified Mercalli Intensity scale).
- **Seismic Zone III:**
  - **Moderate damage corresponding** to intensity VII of MM scale.
- **Seismic Zone IV:**
  - **Major damage corresponding** to intensity VII and higher of MM scale.
- **Seismic Zone V:**
  - **Area determined by pro seismically of certain major fault systems** and is seismically the most active region.
  - **Earthquake zone V** is the most vulnerable to earthquakes, where historically some of the country's most powerful shocks have occurred.
  - **Earthquakes with magnitudes** in excess of 7.0 have occurred in these areas, and have had intensities higher than IX.

**Sangla in Himachal Pradesh.** Due to its altitude and remoteness, it is considered **one of the toughest treks in the Himalayas (Uttarakhand).**

### **Key Points**

- **Weather Forecasting:**
  - It is the **prediction of the weather through application of the principles of physics**, supplemented by a variety of statistical and empirical techniques.
  - In addition to predictions of atmospheric phenomena themselves, weather forecasting **includes predictions of changes on Earth's surface caused by atmospheric conditions** - e.g., snow and ice cover, storm tides, and floods.
- **Need:**
  - **For Military:** During the war the military can plan their battles by featuring in the expected weather condition to maximize the chance of winning the war.
  - **For Minimizing Losses:** It enables people to plan and take precautions against various natural calamities such as floods and typhoons so as to minimize their effects.
  - **For Farmers:** Enables farmers to adjust their farming activities to suit the expected weather condition.
  - **For Transport:** Weather forecasting greatly influences transport, especially in air and water. Aircraft take-off and landing can be affected by weather whereas storms and strong winds greatly affect water travel.
  - **For Tourists:** It can help to guide and encourage tourists to visit certain areas.
- **Weather Forecasting Methods:**
  - Weather forecasters rely on a massive chunk of data to design computer models and simulations that help predict an incoming change in the weather.

## **Weather Forecasting**

### ***Why in News***

Recently, **21 trekkers died at the Lamkhaga Pass trek in four mountaineering and trekking expeditions** which once again puts the spotlight on the importance of right **weather forecasting**.

- Lamkhaga Pass is a **high altitude pass in Garhwal Himalayas (Uttarakhand) which connects with**

- **India Meteorological Department (IMD)** uses the **INSAT series of satellites** hovering in the **geosynchronous orbit** along with the **Real-Time Analysis of Products and Information Dissemination (RAPID)**, a weather data explorer application, that acts as a gateway and provides quick interactive visualisation along with 4-Dimensional analysis capabilities.
- The forecasters use **data generated by the satellites** around cloud motion, cloud top temperature, water vapour content that help in rainfall estimation, weather forecasting, and provide the genesis of **cyclones** and their direction.
- Apart from tracking satellite data, **IMD collaborates with ISRO for ground-based observations** from the **Automatic Weather Stations (AWS)**, the Global Telecommunication System (GTS) that measure temperature, sunshine, wind direction, speed and humidity.
  - Meanwhile, the Agro-meteorological Tower (AGROMET) and **Doppler Weather Radar (DWR) systems** augment the observations.
- **In 2021, IMD adopted a new strategy** for issuing monthly and seasonal operational forecasts for the southwest monsoon rainfall by modifying the existing two-stage forecasting strategy.
  - The new strategy is **based on the existing statistical forecasting system and the newly developed Multi-Model Ensemble (MME)-based forecasting system.**
- The MME approach uses the coupled global climate models (CGCMs) from different global climate prediction and research centres, including IMD's Monsoon Mission Climate Forecasting System (MMCFs) model.
- All these technological strides have been possible **since the National Monsoon Mission (NMM) was initiated in 2012** with a budgetary allocation of Rs 551 crore and the broad objective to set up a dynamical prediction system for seasonal forecast and to improve the monsoon forecasting skills in the country.
- **Issues Related to Weather Forecasting:**
  - The weather forecasts at times go wrong **due to the unpredictability of changes in ocean currents** that are responsible for affecting global weather systems.
    - For India, the **Bay of Bengal** acts as the buffer that affects the weather across the country.
  - The dynamic models of weather forecasting are **based on certain assumptions and it is not possible to incorporate all components of nature** accurately in the dynamical models and that is the first reason why sometimes forecasts can go wrong.
    - A dynamic weather prediction model **involves 3D mathematical simulation of the atmosphere** on a computer.
  - The errors in forecasts can also crop up **due to errors in the initial input given to the models.**

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## Social Issues

### Highlight s

- National Multidimensional Poverty Index: NITI Ayog
- Global Nutrition Report, 2021
- Report on 'Health Care Equity in Urban India'
- Campaign on SafaiMitra Suraksha Challenge
- Women Participation in STEM
- Women Related Data: NFHS 5
- India's Declining Total Fertility Rate
- Threat to Gender Equality due to Covid-19: UNESCO Study
- Covid-19 Impact on Learning: ASER 2021
- Internal Displacement
- Covid-19 Blow to Diabetes Care

## National Multidimensional Poverty Index: NITI Ayog

### Why in News

Recently, **NITI Aayog** has released the **Multi-dimensional Poverty Index (MPI)**.

- Earlier, **Global Multidimensional Poverty Index 2021** was released by the **United Nations Development Programme (UNDP)** and the **Oxford Poverty & Human Development Initiative (OPHI)**.

### Key Points

#### ➤ About:

- The MPI **seeks to measure poverty** across its multiple dimensions and in effect complements existing poverty statistics based on per capita consumption expenditure.
- According to **Global MPI 2021**, India's rank is 66 out of 109 countries. The National MPI is aimed at **deconstructing the Global MPI** and creating a globally aligned and yet customised India MPI for drawing up comprehensive Reform Action Plans with the larger goal of improving India's position in the Global MPI rankings.
- It has **three equally weighted dimensions** – health, education, and standard of living.
  - These three dimensions are **represented by 12 indicators** such as nutrition, school attendance, years of schooling, drinking water, sanitation, housing, bank accounts among others.

#### ➤ Methodology & Data:

- The national MPI measure **uses the globally accepted and robust methodology** developed by the **Oxford Poverty and Human Development Initiative (OPHI)** and the **UNDP**.
- This baseline report of the **national MPI measure** is based on the reference period of 2015-16 of the **National Family Health Survey (NFHS-4)**.
  - **NFHS-4** data has been used to derive an idea of baseline multidimensional poverty **to know the situation on ground before the full rollout of various central government schemes**.
  - **NFHS-4 precedes the full roll out of (central government's) flagship schemes** on housing, drinking water, sanitation, electricity, cooking fuel, financial inclusion, and other major efforts

towards improving school attendance, nutrition, mother and child health, etc.

- However, it has to be noted here that the **NFHS-5 data suggests improvement** in access to clean cooking fuel, sanitation, and electricity which translates to reduction in deprivation.

➤ **Findings of the Index:**

- **Poverty Levels:**
  - **Bihar has the highest proportion of people** of the state's population followed by Jharkhand and Uttar Pradesh who are multidimensionally poor.
  - **Kerala registered the lowest population poverty levels**, followed by Puducherry, Lakshadweep, Goa and Sikkim.
- **Malnourished People:**
  - **Bihar also has the highest number of malnourished people** followed by Jharkhand, Madhya Pradesh, Uttar Pradesh, and Chhattisgarh.

➤ **Significance of the Index:**

- **Contribution towards Instituting Public Policy Tool:**
  - The development of the Index is an important contribution towards **instituting a public policy tool** which monitors multidimensional poverty, informs evidence-based and focused interventions, thereby ensuring that **no one is left behind**.
- **Presents Overall Picture of Poverty:**
  - This presents an overall picture of poverty in the country, while also **enabling closer and more in-depth analyses of areas of interest such as regions – state or districts**, and specific sectors and complements the existing monetary poverty statistics.
- **Help Achieving SDGs Goals:**
  - It is a **contribution towards measuring progress** towards target 1.2 of the **Sustainable Development Goals (SDGs)** which aims at reducing "at

least by half the proportion of men, women and children of all ages living in poverty in all its dimensions.

➤ **Related Government Initiatives:**

- **National Rural Livelihood Mission (NRLM)**
- **The Mahatma Gandhi National Rural Employment Guarantee Act 2005 (MNREGA)**
- **Pradhan Mantri Awaas Yojana-Gramin (PMAY-G)**
- **Public Distribution System (PDS)**
- **Pradhan Mantri Awas Yojana (PMAY)**
- **Jal Jeevan Mission (JJM)**
- **Swachh Bharat Mission (SBM)**
- **Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya)**
- **Pradhan Mantri Ujjwala Yojana (PMUY)**

## Global Nutrition Report, 2021

### *Why in News*

According to the recently released **Global Nutrition Report (GNR, 2021)**, India has made no progress on anaemia and childhood wasting.

### **Global Nutrition Targets**

- In 2012, the **World Health Assembly** (the decision-making body of the World Health Organisation) identified six nutrition targets to be met by 2025. These are:
  - **Reduce stunting** by 40% in children under 5.
  - **Reduce the prevalence of anaemia** by 50% among women in the age group of 19-49 years.
  - Ensure **30% reduction in low-birth weight**.
  - Ensure **no increase in childhood overweight**.
  - **Increase** the rate of exclusive **breastfeeding** in the first six months up to at least 50%
  - Reduce and maintain childhood wasting to less than 5%.

### **Key Points**

➤ **Major Findings:**

- **Global Nutrition Targets:**
  - At the current rate of progress, the **global nutrition targets will not be achieved by 2025** globally and in most countries worldwide.

○ **Variation in Data Availability:**

- There is **substantial variation in data availability and progress towards the global nutrition targets across 194 countries.**

- Only seven countries are on track to meet four of the six maternal, infant and young child nutrition targets by 2025, while no country is 'on track' to halt the rise in adult obesity or achieve a 30% relative reduction in salt/sodium intake.

○ **Impact of Covid-19:**

- The **Covid-19 pandemic is impeding progress** towards achieving the global nutrition targets.
  - An estimated additional **155 million people have been pushed into extreme poverty globally**, while people with diet-related chronic diseases experience worse Covid-19 outcomes.

○ **Little Progress in Improving Diets:**

- The previous decade has **seen little progress in improving diets**, and a quarter of all deaths among adults are attributable to poor diets.

○ **Greenhouse Gas Emissions Globally:**

- Food production currently **generates more than a third of all greenhouse gas emissions globally**, and uses substantial and rising amounts of environmental resources.

○ **Sustainable Development Goals:**

- No region is on track to meet the **Sustainable Development Goals** aimed at limiting health and environmental burdens related to diets and the food system.

➤ **India Specific Data:**

○ **Anaemic Indian Women:**

- Over **half of Indian women** in the age group 15-49 years are **anaemic**.
- There has been a rise in **anaemic Indian women** since 2016 from 52.6% to 53% in 2020.

○ **Childhood Wasting:**

- Over 17% of Indian children under 5 years of age are affected.
- **India is also among 23 countries** that have made no progress or are worsening on reducing 'childhood wasting'.
  - **Wasting refers to** children whose weight is low-for-their height.

○ **Child Stunting:**

- Over 34% of children under 5 years of age are still affected.
- **India is among 53 countries** 'on course' to meet the target for stunting.
  - Stunting is defined as **low height-for-age**.

○ **Childhood Overweight:**

- The country is **among 105 countries** that are 'on course' to meet the target for 'childhood overweight'.

○ **India Meeting Targets:**

- India is **meeting 7 of the 13 global nutrition targets** which include sodium intake, raised blood pressure (both men and women), obesity (both men and women) and diabetes (both men and women).

**Global Nutrition Report**

- It was conceived following the first **Nutrition for Growth Initiative Summit (N4G)** in 2013.
- The first report was **published in 2014**.
- It acts as a **report card on the world's nutrition**—globally, regionally, and country by country—and on efforts to improve it.
- It is a **multi-stakeholder initiative**, consisting of a Stakeholder Group, Independent Expert Group and Report Secretariat.

➤ **Suggestions:**

○ **Increase Finance:**

- There **needs to be a step-change in efforts and financial investments** to end poor diets and malnutrition.

**○ Holistic Approach:**

- Poor diets and malnutrition should be **addressed holistically and sustainably** to create a healthy future for all.

**○ Accountability and Monitoring:**

- Better data, greater **accountability and systematic monitoring** are key to identify the progress needed.

- Close to **30% of people living in urban areas are poor.**

**○ Chaotic Urban Health Governance:**

- The report, besides **finding disproportionate disease burden on the poor**, also pointed to a **chaotic urban health governance**, where the multiplicity of healthcare providers both within and outside the government without coordination are challenges to urban health governance.

**○ Heavy Financial Burden on the Poor:**

- A **heavy financial burden on the poor**, and **less investment in healthcare by urban local bodies** is also a major challenge.

**➤ Suggestions:**

- Strengthen **community participation** and governance.
- **Build a comprehensive and dynamic database** on the health and nutrition status, including comorbidities of the diverse, vulnerable populations; strengthening healthcare provisioning through the **National Urban Health Mission**, especially for primary healthcare services.
- Put in place policy measures to **reduce the financial burden of the poor.**
- A better mechanism for **coordinated public healthcare services** and **better governed private healthcare institutions.**
- The Covid-19 pandemic has **brought to attention the need for a robust and resourced healthcare system.** Addressing this now will benefit the most vulnerable and offer critical services to city dwellers across income groups.

## **Report on ‘Health Care Equity in Urban India’**

### **Why in News**

According to a recent report, **life expectancy among the poorest is lower by 9.1 years and 6.2 years** among men and women, respectively, compared to the richest in urban areas.

### **Key Points**

**➤ About the Report:**

- The report **explores health vulnerabilities and inequalities in cities** in India.
- It also **looks at the availability, accessibility and cost of healthcare facilities**, and possibilities in future-proofing services in the next decade.
- It was **released recently by Azim Premji University** in collaboration with 17 regional NGOs across India.

**➤ Findings of the Report:**
**○ Number of Urban People:**

- A **third of India’s people now live in urban areas**, with this segment seeing a rapid growth from about 18% (1960) to 34% (in 2019).

**Status of India’s Healthcare**

- India’s healthcare system **has been battling various issues**, including the low number of institutions and less-than-adequate human resources for quite a while now.
- Essentially, a **three-tier structure** defined the Indian healthcare system — primary, secondary and tertiary care services.
  - The **Indian Public Health Standards (IPHS)** states that the delivery of primary health care is provided to the rural population through sub-centre, primary health centre (PHC), and community health centre (CHC), while secondary care is delivered through district and sub-district hospitals.

- On the other hand, tertiary care is extended at regional/central level institutions or super speciality hospitals.

- While there is an urgency to focus on all the three levels of primary, secondary and tertiary healthcare, it is imperative that the government look towards improving primary health care as a public good.

#### Initiatives for Public Health Sector

- **Emergency Response and Health Systems Preparedness Package:**
  - Under the **National Health Mission (NHM)**, technical and financial support is provided to the States/UTs to strengthen the public healthcare system at public healthcare facilities.
- **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY):**
  - Launched on 23<sup>rd</sup> September 2018, Ayushman Bharat PM-JAY is the largest Government funded health assurance/insurance scheme in the world.
  - PM-JAY is a centrally sponsored scheme.
- **Pradhan Mantri Swasthya Suraksha Yojana (PMSSY):**
  - PMSSY was announced in 2003 with **objectives of correcting regional imbalances** in the availability of affordable/reliable tertiary healthcare services and also to augment facilities for quality medical education in the country.

#### World Toilet Day

- In 2013, the **United Nations General Assembly officially designated 19<sup>th</sup> November as World Toilet Day**. It is coordinated by **UN-Water** in collaboration with governments and partners.
- It aims to **break the stigma around sanitation** as the silence around the issue of toilets and sanitation has deadly consequences.
- The **theme for the year 2021** is about **valuing toilets**.

- **A total of 246 cities are participating in SSC** which is being conducted across the country. The **state capitals, urban local bodies and smart cities will be eligible** to participate.

- **Cities will be awarded in three sub-categories** – with a population of more than 10 lakhs, 3-10 lakhs and upto 3 lakhs, with a total prize money of Rs. 52 crore.

- It is one of the government efforts to **combat manual scavenging**.

- **SafaiMitra Suraksha Challenge (SSC):**

- SSC was **launched on 19<sup>th</sup> November 2020** on the occasion of World Toilet Day.

- SSC is aimed to **encourage cities to mechanise their sewer and septic tank cleaning operations** in order to prevent deaths and fatalities of sanitation workers from 'hazardous entry'.

- The Government launched this "challenge" for all states to **make sewer-cleaning mechanised by April 2021** — if any human needs to enter a sewer line in case of unavoidable emergency, proper gear and oxygen tanks, etc., are to be provided.

- **Initiatives Taken:**

- Under SSC, **National Safai Karamcharis Finance & Development Corporation (NSKFDC)**, Ministry of Social Justice and Empowerment, supported by MoHUA are **organizing Loan Melas** across the country.

- The aim is to help Safaimitras avail loans under the **Swachhata Udyami Yojana (SUY)** for procurement of sewer/ septic tank cleaning machine/ equipment for mechanized cleaning.

- **Skill development training of Safaimitras** have also been conducted through the support of the Ministry of Social Justice and Empowerment via NSKFDC in 115 cities.

## Campaign on SafaiMitra Suraksha Challenge

### Why in News

Recently, the **Ministry of Housing and Urban Affairs (MoHUA)** has launched a **week-long awareness campaign on SafaiMitra Suraksha Challenge (SSC)** as part of the '**World Toilet Day**' (19<sup>th</sup> November) celebrations, to run up to the 'Swachh Amrit Diwas'.

- The **Swachh Amrit Diwas** is an award ceremony to recognize the role and efforts of the states, cities, ULBs (Urban Local Bodies) and Cantonment Board in **Swachh Survekshan 2021**, and Garbage Free Star Rating certification on 20<sup>th</sup> November 2021.

### Key Points

- **About:**

- **Call Centre and Helpline number** have been operationalized in 345 cities for safe cleaning of septic tanks/sewers and registering complaints on hazardous cleaning.
- 31 states/UTs have established a **Responsible Sanitation Authority (RSA)** and 210 cities are having the **Sanitation Response Units (SRU)**.
- All 246 participating cities have already notified a **ban on single-use plastic (SUP)**.

### Manual Scavenging

- **About:**
  - Manual scavenging is **defined as** “the removal of human excrement from public streets and dry latrines, cleaning septic tanks, gutters and sewers”.
  - The practise of manual scavenging is **linked to India’s caste system** where so-called lower castes were expected to perform this job.
  - Officially, the **number of manual scavengers dropped** to 42,303 in 2018 from 7,70,338 in 2008. The survey of manual scavengers in 2018 was conducted by the NSKFDC.
- **Related Initiatives:**
  - **The Prohibition of Employment as Manual Scavengers and their Rehabilitation (Amendment) Bill, 2020:**
    - It prohibits construction or maintenance of insanitary latrines, and employment of any person for manual scavenging or hazardous cleaning of sewers and septic tanks.
  - **The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013:**
    - The act seeks to reinforce the prohibition of manual scavenging in all forms and ensures the rehabilitation of manual scavengers.
  - **Prevention of Atrocities Act:**
    - It delineates **specific crimes against Scheduled Castes and Scheduled Tribes**.
  - **National Commission of Safai Karamcharis:**
    - The Commission is acting as a **non-statutory body of the Ministry of Social Justice and Empowerment** whose tenure is extended from time to time through Government Resolutions.
  - **Swachh Bharat Mission:**
    - Swachh Bharat Abhiyan is a national campaign launched by the Government on 2<sup>nd</sup> October,

2014 to clean the streets, roads and build social infrastructure of the country.

## Women Participation in STEM

### Why in News

Recently, India-Israel Women in **Science, Technology, Engineering and Mathematics (STEM)** conference was held.

- The **need for introducing flexible work times and gender-neutral pays** to enhance women participation in STEM was highlighted.

### STEM

- **About**
  - The STEM acronym was **introduced in 2001** by scientific administrators at the U.S. National Science Foundation (NSF).
  - The organization previously **used the acronym SMET** when referring to the career fields in those disciplines or a curriculum that integrated knowledge and skills from those fields.
  - It is a **curriculum based on the idea of educating students** in 4 specific disciplines — science, technology, engineering and mathematics — in an interdisciplinary and applied approach.
  - **India is one of the countries** that produce the **highest number of scientists and engineers**, the growth of STEM has picked up significantly over the last few years.
    - **Under Article 51A of the Constitution of India**, it is a duty of every citizen of India to develop the scientific temper, humanism and the spirit of inquiry and reform.
- **Significance:**
  - A **robust STEM education creates** critical thinkers, problem-solvers, and next-generation innovators.
  - According to the **National Science Foundation**, it is predicted that 80% of the jobs created in the next decade will require some form of math and science skills.

### Key Points

- **Participation of Women in STEM:**
  - About **43% of STEM graduates in India** are women, which is the highest in the world, but their share in STEM jobs in India is a mere 14%.

- In Indian STEM, the **primary concern** has never been with the **number of women graduates**, but with the proportion of those who ultimately land STEM jobs.
- S&T has **translated into the economic sphere** and institutions are structured so, Science & Technology (S&T) could **become a changemaker in society** by introducing flexible work times, and gender-neutral pays to enhance women participation in STEM.
- Greater women’s participation in the tech sector will **make women more strong and influential**, giving a boost to their socio-economic situation in the society.
- **Reasons for the Low Participation:**
  - **Stereotypes:** The paucity of women in STEM is **not merely due to skill inadequacy**, but also a result of **assigned stereotypical gender roles**.
  - **Patriarchy:** There are **patriarchal attitudes in hiring practices** or awarding fellowships and grants etc.
  - **Society:** Lack of role models, pressures to conform to societal norms and trappings of domesticity.
  - **Stress:** Stressors related to marriage, childbirth etc.
  - **Household Responsibility:** Responsibility **related to running of households and elder care**.
  - **Physical Safety:** Physical safety during the commute to work.
  - **Harassment:** Sexual and other types of harassment in workplaces, etc.
- **Initiatives to Promote Women Participation:**
  - **Vigyan Jyoti Scheme:**
    - It is launched by the **Department of Science & Technology (DST)**.
    - It is intended to **create a level-playing field** for the meritorious girls in high school to pursue Science, Technology, Engineering, and Mathematics (STEM) in their higher education.
    - It also **offers exposure for girl students from the rural background** to help to plan their journey from school to a job of their choice in the field of science.
  - **GATI Scheme:**
    - The **Gender Advancement for Transforming Institutions (GATI)** will develop a comprehensive Charter and a framework for assessing Gender Equality in STEM.
- **Knowledge Involvement Research Advancement through Nurturing (KIRAN):**
  - Launched in 2014-15, the scheme provides opportunities for women scientists in moving up the academic and administrative ladder.
  - **One of the programmes under the KIRAN scheme — ‘Women Scientist Scheme’ —** provides career opportunities to unemployed women scientists and technologists, especially those who had a break in their career.

## Women Related Data: NFHS 5

### *Why in News*

Recently, the latest data from the **National Family Health Survey (NFHS 2019-21)** has been released.

- Earlier in 2020, the **first-phase data of the NFHS-5 2019-20** was released by the Ministry of Health and Family Welfare, which provided data on various issues related to women in india.

### *Key Points*

- **Prevalence of Child Marriage:**
  - The share of **women aged 20-24** who married before turning 18 has **declined from 27% to 23% in the last five years**.
  - **Child marriage** is a key determinant of high fertility, poor maternal and child health, and lower social status of women.

- **West Bengal and Bihar**, with around 41% such women each, had the highest prevalence of girl child marriage.
- The maximum reduction in the proportion of underage marriages was observed in **Rajasthan, Madhya Pradesh, and Haryana**.
- **Rampant Anaemia:**
  - As many as **57% women aged 15-49 were anaemic in 2019-21**, compared to 53% in 2015-16, while the same for men rose from 22.7% to 25%.
  - The most formidable increase—**8.5% was observed for children** aged 6-59 months (67.1%).
  - **Among larger states**, West Bengal and Kerala reported the **highest and lowest prevalence**, respectively, of anaemic women.
  - **Child anaemia rates worsened** the most in Assam, Mizoram, Chhattisgarh, and Odisha.
- **Improving Amenities:**
  - All states, except Manipur, Meghalaya, Assam and Jharkhand, had **over 90% population** with access to improved drinking water sources.
  - Bihar, Jharkhand etc states had almost doubled the access since 2015-16, but most **fell below the 75% mark**.
- **Women who own House:**
  - The **number of women who own a house or land in Delhi**, either alone or jointly, has **significantly dipped** over the past five years.
  - While the percentage of women who had a house or land registered in their name in 2015-16 was around 35%, it dipped to 22.7% in 2020-21.
- **Women who have a Bank Account:**
  - It has **gone up 8%** and women who have a mobile phone that they use is **up by 7%**.
- **Access to Internet:**
  - The percentage of women who have **ever used the internet was around 64%** as compared to 85% men. This data was **not available in the previous survey**.
- **Participation in the Household Participation:**
  - It has gone up from around 74% in 2015-16 to 92% now. The **participation of married women in household decisions** includes health care for self, making major household purchases, and visits to her family or relatives, etc.
- **Out-of-Pocket Expenditure:**
  - It went from Rs 8,518 to Rs 2,548 in five years. Average out-of-pocket expenditure has **seen a significant improvement** in the per delivery in a public health facility.
- **Rise in Obesity:**
  - Obesity among both men and women has risen. While **41.3% of women are now overweight or obese, this figure is 38% for men**.
  - The rise in the percentage of men who are overweight or obese, however, has been faster in men than in women.
- **High Malnutrition:**
  - The share of under-five children who were stunted (too short for age), wasted (low weight for height), or underweight has declined.
  - However, **every third child still suffers** from chronic undernourishment, and every fifth child is acutely malnourished.
    - **Stunting:** Meghalaya had the prevalence, followed by Bihar while Rajasthan, Madhya Pradesh, Jharkhand recorded declines of 5-7% since 2015-16.
    - **Wasting:** Bihar had the highest prevalence of underweight children, followed closely by Gujarat.

#### **National Family Health Survey (NFHS)**

- The **National Family Health Survey (NFHS)** is a large-scale, multi-round survey conducted in a representative sample of households throughout India.
- The **Ministry of Health and Family Welfare (MoHFW)**, Government of India has designated the International Institute for Population Sciences (IIPS) Mumbai, as the nodal agency for providing coordination and technical guidance for the survey.
  - IIPS collaborates with a number of Field Organizations (FO) for survey implementation.
- The survey **provides state and national information** for India on:
  - Fertility, Infant and child mortality, the practice of family planning, Maternal and child health, Reproductive health, Nutrition, Anaemia, Utilization and quality of health and family planning services
- Each successive round of the NFHS has had two specific goals:

- To **provide essential data on health and family welfare** needed by the Ministry of Health and Family Welfare and other agencies for policy and programme purposes.
- To **provide information on important emerging health** and family welfare issues.
- The funding for different rounds of NFHS has been provided by USAID, the Bill and Melinda Gates Foundation, **UNICEF, UNFPA, and MoHFW** (Government of India).

## India's Declining Total Fertility Rate

### **Why in News**

Recently, the latest data from the **National Family Health Survey (NFHS 2019-21)** has been released.

- The data shows a **declining trend** regarding **Total Fertility Rate** (TFR: the average number of children per woman).

### **Key Points**

#### ➤ **About TFR:**

- **Total fertility rate (TFR)** in simple terms refers to the **total number of children born or likely to be born to a woman in her lifetime** if she were subject to the prevailing rate of age-specific fertility in the population.
- TFR of about **2.1 children per woman** is called **Replacement-level fertility**. TFR **lower than 2.1** children per woman — indicates that a **generation is not producing enough children to replace itself,**

eventually leading to an outright reduction in population.

- This value represents the average number of children a woman would need to have to **reproduce herself by bearing a daughter** who survives to childbearing age.
- **Declining Trend of TFR:**
  - Due to the **sustained family planning programme** spanning decades, the TFR), has declined further from 2.2 reported in 2015-16 to **2.0 at the all-India level**.
    - The **TFR is at 1.6 in urban areas and 2.1 in rural India**.
    - The total fertility rate, was as high as **6 or more in 1950s**
  - It is a very huge development because of maternal and child health improvement.
- **Reasons for Decline in TFR:**
  - **Women Empowerment:** The latest data also show significant **progress** on several indicators **related to fertility, family planning, age at marriage and women's empowerment** — all of which have contributed to the decrease in TFR.
  - **Contraceptives:** Also, there has been a significant increase in current use of any modern contraceptive method.
    - **Contraceptive Prevalence Rate** has increased substantially from 54% to 67% at the all-India level.
  - **Reversible Spacing:** Introduction of new **reversible spacing (gaps between children) methods**, wage compensation systems to undergo sterilisation, and the promotion of small family norms also worked well over the years.
  - **Government Efforts:** India has for long been working on population control. In fact, **India was the first country to launch a national-level family planning programme** and the encouraging results that we see now are due to sustained, concerted efforts put together by the Centre, and the state governments
- **Significance of Declining TFR:**
  - **Population Stabilisation:** TFR of 2 is a "definite indicator" of **stability of population in the long term in the country**. A TFR of 2.1 is something a country wants to achieve.

**Related Government Initiatives:**

- **Prime Minister’s Appeal:** During his **Independence Day Speech** in 2019, the Prime Minister appealed to the country that population control was a form of patriotism.
- **Mission Parivar Vikas:** The Government has launched Mission Parivar Vikas in 2017 for **substantially increasing access to contraceptives** and family planning services in 146 high fertility districts with TFR of 3 and above in seven high focus states.
- **National Family Planning Indemnity Scheme (NFPIS) :** This scheme was launched in the year 2005 under this scheme **clients are insured in the eventualities of death, complication and failure following sterilization.**
- **Compensation scheme for Sterilization Acceptors:** Under the scheme, the Ministry of Health and Family Welfare provides compensation for loss of wages to the beneficiary and also to the service provider (& team) for conducting sterilizations from the year 2014.
  - A fall to 2 means India has achieved the goal of population stabilisation.
  - It essentially means that India need not worry too much about a very large population being a challenge to our development.
- **Accelerated Economic Growth:** The younger population profile for the next 2-3 decades will provide an **opportunity for accelerated economic growth.**
  - However, in order to leverage this great opportunity for accelerated development, **India should invest in public health and education with skills.**
- **Delayed Peak Population:** This also means we will possibly still become the most populous country in the world — it was expected somewhere between 2024-2028 — but it will now be delayed.
- **Worrying Trends:**
  - **Increasing Female Sterilization:** The survey reveals that the uptake of female sterilisation has gone up to 38% against 36% in 2015-16.
    - The **increase in female sterilisation shows that the onus of family planning remains with women**, with men not participating in the process and “shrugging responsibility”.

- **Declining Sex Ratio:** India needs to give huge stress on declining sex ratios and the **discrimination towards girls** so that people don’t have a high number of children in the hope of having a boy.
- **Concerns of Lower TFR:** TFR **lower than 2.1** children per woman — indicates that a **generation is not producing enough children to replace itself**, eventually leading to an outright reduction in population.
  - Thus, TFR lower than 2 (as it is the case in urban areas in India) has its own set of problems. For example, Declining population will lead to an increase in the population of old aged people, as is happening in China.

**Threat to Gender Equality due to Covid-19: UNESCO Study**

**Why in News**

- Recently **UNESCO** released a new study, ‘when schools shut’, exposing the gendered impact of **Covid-19** school closures on learning, health and well-being.
- It was released on the occasion of the 2021 **International Day of the Girl Child** (11<sup>th</sup> October).

**International Day of the Girl Child**

- **History:**
  - In 1995, at the **World Conference on Women in Beijing**, the need for an event focused on young and vulnerable girls was identified.
  - The initiative began as a **non-government international plan of action** to address the challenge faced by young women.
  - A resolution to declare 11<sup>th</sup> October as the **International Day of the Girls Child** was adopted by the **UN General Assembly** in 2011.
  - In 2020, this marked 25 years of the adoption of the **Beijing declaration.**
- **Aim:**
  - It is celebrated for **empowering and amplifying the voices of young girls** around the world.
- **Theme for 2021:**
  - **‘Digital generation’. Our generation’.**

**Key Points**

➤ **About the Study:**

- The global study titled **“When schools shut: Gendered impacts of Covid-19 school closures”** brings to the fore that girls and boys, young women and men were affected differently by school closures, depending on the context.
- At the **peak of the Covid-19 pandemic**, 1.6 billion students in 190 countries were affected by school closures.

➤ **Areas of Gendered Impacts:**

- **Household Demands:**
  - In poorer contexts, **girls’ time to learn was constrained by increased household chores**. Boys’ participation in learning was limited by income-generating activities.
- **Digital Divide:**
  - Girls faced **difficulties in engaging in digital remote learning modalities** in many contexts because of limited access to internet-enabled devices, a lack of digital skills and cultural norms restricting their use of technological devices.
    - The study pointed out that **digital gender-divide was already a concern** before the Covid-19 crisis.
- **Rate of School Return:**
  - **Limited data available to date about school return rates** also show gender disparities.
    - A study conducted in four counties in Kenya found that 16% of girls and 8% of boys aged 15 to 19 failed to re-enrol during the two months following school reopening in early 2021.
- **Impact on Health:**
  - School closures have **impacted children’s health**, notably their mental health, well-being and protection.
    - **Girls reported more stress, anxiety and depression** than boys in 15 countries across the world. LGBTQI learners reported high levels of isolation and anxiety.

➤ **Suggestions:**

- **Factor Gender in Policies and Programmes:**
  - The study calls on the **education community to factor gender in policies and programmes to tackle declining participation** and low return-to-school rates in vulnerable communities, including through cash transfers and specific support to pregnant girls and adolescent mothers.

○ **Track Trends and Expand Interventions:**

- Continued efforts are needed to **track trends and expand interventions to bring an end to child marriages** as well as early and forced marriages, practices which rob girls of their right to education and health and reduce their long-term prospects.

○ **No-Tech and Low-Tech Remote Learning Solutions:**

- A strong **need for no-tech and low-tech remote learning solutions**, measures to enable schools to provide comprehensive psychosocial support and to monitor participation through sex-disaggregated data, among other necessary measures is needed.

## **Covid-19 Impact on Learning: ASER 2021**

### **Why in News**

Recently, the **16<sup>th</sup> edition of the Annual Status of Education Report (ASER 2021) survey was released**. The survey **analysed the impact of Covid-19 on learning**.

- It shows an increase in dependence on private tuitions and an absence of ready access to smartphones.
- Specific attention is needed to help make up for learning losses, especially in the lowest classes.

### **Annual Status of Education Report (ASER) Survey**

- The ASER survey, which is facilitated by Pratham Education Foundation, is the oldest survey of its kind in the country.
- It is well regarded for the range of insights it provides on levels of foundational learning at the elementary level.
- It uses **Census 2011** as the sampling frame and continues to be an important national source of information about children’s foundational skills across the country.
- **ASER 2018** surveyed children in the age group of 3 to 16 years and included almost all rural districts in India and generated estimates of foundational reading and arithmetic abilities of children in the age group 5 to 16 years.
- **ASER 2019** reported on the pre-schooling or schooling status of children in the age group 4 to 8 years in 26 rural districts, focused on the “early years” and

laid emphasis on “developing problem-solving faculties and building a memory of children, and not content knowledge”.

- **ASER 2020** is the first ever phone-based ASER survey and it was conducted in September 2020, the sixth month of national school closures.

### Key Points

- **Increasing Enrollment in Government School:**
  - There was an **unprecedented jump in government school students**, and a **10-year low in private school enrolments**.
  - A clear shift from private to government schools — from 64.3% in 2018 to 65.8% in 2020, to 70.3% in 2021.
  - A fall in private school enrolment from 28.8% in 2020 to 24.4% in 2021.
- **Tuition-dependent:**
  - It has reported a **growing dependency on private tuition classes**.
  - Students, especially those from poor families, are dependent more than ever on private tuition.
- **Digital Divide:**
  - There exists a **stark digital divide**, which carries the risk of severely affecting the learning abilities of primary grade students.
  - Almost a third of all children in Classes I and II did not have a smartphone available at home.
- **Problems with New Entrants:**
  - From having no experience of pre-primary class or anganwadis to the lack of access to digital devices, the pandemic has left the youngest entrants in India’s formal education system **particularly vulnerable**.
  - 1 in 3 children in Classes I and II have never attended an in-person class.
  - Students who entered the school system after the pandemic will require time to settle down, get ready for the **formal education system**.
- **Learning Gap:**
  - 65.4% teachers flagged the problem of children being “unable to catch up” as one of their biggest challenges.
  - This is also a warning that their learning outcomes are set to be affected unless addressed with urgency.
- During the recent **National Achievement Survey (NAS)** of the central government, teachers and field investigators across the country reported that **primary grade kids struggled to make sense of questions to test basic comprehension and numerical skills**.
- **Positive Trend:** The report captured a **decline in the proportion of children not currently enrolled in the 15-16 age group**. This is one of the sections which faces the highest risk of dropping out.
  - In 2010, the proportion of 15-16-year-olds who were out of school was 16.1%.
  - Driven by the government’s push to universalise secondary education, this number has been steadily declining and stood at 12.1% in 2018. The decline continued in 2020 to 9.9% and to 6.6% in 2021.
- **Related Government Initiatives:**
  - **SWAYAM**
  - **NEAT**
  - **National Knowledge Network, (NKN)**
  - **PRAGYATA Guidelines**
  - **National Programme on Technology Enhanced Learning**

## Internal Displacement

### **Why in News**

According to a report (**Mid-Year Trends 2021 Report**) by the **United Nations High Commissioner for Refugees (UNHCR)**, **nearly 51 million people were internally displaced across 33 countries** due to conflict and violence in the first six months of 2021.

- The **combination of conflict, Covid-19, Poverty, Food insecurity and the Climate emergency** has compounded the humanitarian plight of the displaced, most of whom are hosted in developing regions.
- **Africa is the region that is most vulnerable** in terms of the numbers of displaced persons.

### **Key Points**

#### ➤ **Internal Displacement (Meaning):**

- Internal displacement describes the **situation of people who have been forced to leave their homes but have not left their country.**
- **Factors of Displacement:** Millions of people are uprooted from their homes or places of habitual residence each year **in the context of conflict, violence, development projects, disasters and climate change** and remain displaced within their countries' borders.
- **Components:** Internal displacement is based on **two components:**
  - The person's movement is **coerced or involuntary** (to distinguish them from economic and other voluntary migrants);
  - The person stays within **internationally recognised state borders** (to distinguish them from refugees).
- **Difference from Refugee:** According to the **1951 Refugee Convention**, a "refugee" is a person

who has been persecuted and forced to leave his native country.

- A precondition of being considered a refugee is that a **person crosses an international border.** Unlike refugees, internally displaced people are **not the subject of any international convention.**
- At the international level, **no single agency or organisation** has been designated as the global lead on protection and assistance of internally displaced persons.
- However, there are **United Nations Guiding Principles on Internal Displacement.**
- **Challenges Faced by Internally Displacement Persons (IDPs):** IDPs can live under threat of **physical attack, sexual- or gender-based violence, and run the risk of being separated from family members.**
  - They are frequently deprived of adequate shelter, food and health services, and often lose their property, land or their access to livelihoods.

#### ➤ **Internal Displacement in India:**

- **Extent:** Estimating the number of IDPs in India is problematic, as regular monitoring is not possible in such a huge country which lacks a central authority responsible for coordinating data from central and state governments.
  - Nearly five million people were displaced in India in 2019 - the highest in the world so far - according to '**The Global Report on Internal Displacement (GRID 2020)**'.
- **Policy Framework:** India has **no national policy and legal institutional framework to deal with either refugees or IDPs.**
  - India **has not ratified the 1951 Convention and 1967 Protocol** and does not permit UNHCR access to most refugee groups.
  - In the absence of a permanent institutional structure to oversee refugee issues, the granting of refugee status has been at the discretion of the political authorities.
- **Factors of Internal Displacement in India:**
  - **Secessionist Movements:** Since independence, north-east India has witnessed two major armed conflicts – the **Naga movement** and **Assam movement.**
    - Jammu & Kashmir's war between state forces and militants, had led to mass exodus of the **Kashmiri Pandits.**

- **Identity-based Autonomy Movements:** Identity-based autonomy movements, such as in **Bodoland, Punjab, Gorkhaland and Ladakh**, have also led to violence and displacement.
- **Localized Violence:** Internal displacement has also arisen from **caste disputes** (as in Bihar and Uttar Pradesh), **religious fundamentalism** and the **'son-of-the soil policy** (aggressive denial of residency and employment rights to non-indigenous groups).
- **Environmental and Development-induced Displacement:** In order to achieve rapid economic growth, India has invested in industrial projects, dams, roads, mines, power plants and new cities which have been made possible only through massive acquisition of land and subsequent displacement of people.

## Covid-19 Blow to Diabetes Care

### **Why in News**

Recently, the **World Health Organization (WHO)** warned that the **number of diabetes cases in Africa is predicted to rise to 55 million by 2045**, an increase of 134% from 2021.

- The **rate of deaths due to the novel coronavirus disease (Covid-19) in the continent is significantly higher** in patients with diabetes.
- **World Diabetes Day** is celebrated every year on **14<sup>th</sup> November**.

### **Key Points**

- **Diabetes:**
  - Diabetes is a **Non-Communicable Disease (NCD)** that occurs either when the **pancreas does not produce enough insulin** or when the **body cannot effectively use the insulin** it produces.
  - **Insulin is a peptide hormone secreted by Pancreas** which helps in maintaining normal blood glucose levels by facilitating cellular glucose uptake, regulating carbohydrate, lipid and protein metabolism and promoting cell division and growth.
- It is **classified into two types:**
  - **Type 1 Diabetes:** It occurs when the **pancreas fails to produce sufficient insulin**.

- **Type 2 Diabetes:** Type 2 diabetes is the **most common type of diabetes**. In this condition the body does not use insulin properly. This is **called insulin resistance**. The main reason for the occurrence of type 2 diabetes is **due to obesity and lack of exercise**.

### ➤ **Diabetes Burden:**

- **In India:**
  - Diabetes is a growing challenge in India with an estimated **8.7% diabetic population** in the age group of 20 and 70 years.
  - The **International Diabetes Federation Diabetes Atlas**, in 2019, placed India among the top 10 countries for people with diabetes.
  - The **rising prevalence of diabetes** and other noncommunicable diseases is driven by a combination of factors - rapid urbanization, sedentary lifestyles, unhealthy diets, tobacco use, and increasing life expectancy.
- **Around the World:**
  - Today, **approximately 6% of the world's population** – more than 420 million people – live with either **type 1 or type 2 diabetes**.
  - It is the **only major non-communicable disease** for which the risk of dying early is going up, rather than down.
  - It has emerged as **one of the major comorbid conditions** linked to severe Covid-19 infections.
  - An estimated **24 million people** are living with diabetes in Africa in 2021.

### ➤ **Related Initiatives:**

- The **World Health Organization (WHO)** launched the **Global Diabetes Compact**, which has the vision of reducing the risk of diabetes, and ensuring that all people who are diagnosed with diabetes have access to equitable, comprehensive, affordable and quality treatment and care.
- **India's National Non-Communicable Disease (NCD)** Target is to prevent the rise in obesity and diabetes prevalence.
- Launched in 2010, **National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)** aims to provide support for diagnosis and cost-effective treatment at various levels of health care.



## Art & Culture

### Highlights

- Puri Heritage Corridor Project
- Reopening Kartarpur Corridor

## Puri Heritage Corridor Project

### Why in News

The **Odisha Government** is expected to soon lay the foundation stone of the **Puri heritage corridor**, which is being developed at a cost of Rs 800 crore.

- The project is a part of the **Augmentation of Basic Amenities and Development of Heritage and Architecture (ABADHA) scheme** for developing Puri as a world-class heritage city.

### Key Points

#### ➤ About:

- Conceived in 2016, the Puri Heritage Corridor Project was unveiled in December 2019 to transform the holy town of Puri into an international place of heritage.
- The project **includes redeveloping major portions of the holy town** and in the vicinity of the **Jagannath temple** for visitors and tourists.
- The project **will include** Shree Jagannath Temple Administration (SJTA) building redevelopment, a 600-capacity Srimandir reception centre, Jagannath cultural centre, Badadanda heritage streetscape, beachfront development, Puri lake, Musa river revival plan, etc.

#### ➤ Jagannath Temple:

- **Construction:**
  - It is believed to have been constructed **in the 12<sup>th</sup> century by King Anatavarman Chodaganga Deva of the Eastern Ganga Dynasty.**
- **Mythology:**
  - Jagannath Puri temple is called '**Yamanika Tirtha**' where, according to the Hindu beliefs, the power of 'Yama', the god of death, has been nullified due to the presence of Lord Jagannath.

#### ○ Architecture:

- This temple was called the "**White Pagoda**" and is a part of **Char Dham pilgrimages** (Badrinath, Dwaraka, Puri, Rameswaram).
- There are four gates to the temple- Eastern 'Singhdwara' which is the main gate with two crouching lions, Southern 'Ashwadwara', Western 'Vyaghra Dwara' and Northern 'Hastidwara'. There is a carving of each form at each gate.
- In front of the entrance stands the Aruna stambha or sun pillar, which was originally at the Sun Temple in Konark.

#### ○ Festival: The World famous **Rath Yatra (Car Festival)** & Bahuda Yatra.

#### ➤ Other Important Monuments in Odisha:

- **Konark Sun Temple (UNESCO World Heritage Site)**
- **Tara Tarini Temple**
- **Lingaraj Temple**
- Udaygiri and Khandagiri Caves

## Reopening Kartarpur Corridor

### Why in News

The **government is considering reopening the Kartarpur Sahib Gurudwara corridor to Pakistan** to allow

Sikh pilgrims to cross over, more than 20 months after it was shut down due to the **Covid-19 pandemic**.

- Government is considering opening the route by 19<sup>th</sup> November (2021), the **birth anniversary of the Sikh founder Guru Nanak, known as Gurburab or “Prakash Parv”**.

### Key Points

- **About:**
  - The corridor is **one of the rare new initiatives between India and Pakistan** amidst ties that have been in a downward spiral in 2019 after the Pulwama attack, Balakot strikes and the decision to amend **Article 370** on Jammu and Kashmir, which led to the recall of diplomats on both sides and cancellation of all trade relations.
  - The project is also unique **as visa-free “Human corridors” of this sort are normally used for emergency situations:** refugees fleeing violence or humanitarian disasters, not for pilgrimages.

### ➤ **Kartarpur Corridor:**

- The Kartarpur corridor connects the Darbar Sahib Gurdwara in **Narowal district of Pakistan with the Dera Baba Nanak shrine in Gurdaspur district** in India’s Punjab province.
- The corridor was built **to commemorate 550<sup>th</sup> birth anniversary celebrations of Guru Nanak Dev**, founder of Sikhism on 12<sup>th</sup> November 2019.

### **Guru Nanak**

- Guru Nanak Dev Jayanti is observed **on the full-moon day in the month of Katak** to celebrate the birth of Guru Nanak Dev (1469-1539).
- He advocated the **‘Nirguna’ form of bhakti**. He rejected **sacrifices, ritual baths, image worship**, austerities and the scriptures of both Hindus and Muslims.
- He **set up rules for congregational worship (sangat)** involving collective recitation.
- He appointed one of his disciples, Angad, to succeed him as the preceptor (guru), and this practice was followed for nearly 200 years.
- The **fifth preceptor, Guru Arjan, compiled Baba Guru Nanak’s hymns** along with those of his four successors and also other religious poets, like Baba Farid, Ravidas (also known as Raidas) and Kabir, in the Adi Granth Sahib.
  - These hymns, called ‘Gurbani’, are composed in many languages.
- Kartarpur gurudwara is the revered shrine about 4 km across the border where Guru Nanak Dev spent the last 18 years of his life.



# Security

## Highlight s

- Smart Policing Index 2021

## Smart Policing Index 2021

### Why in News

According to a nationwide survey conducted by Indian Police Foundation (IPF), police in Bihar and Uttar Pradesh scored the lowest among all States when it came to perception of “sensitivity”.

- Earlier, the National Human Rights Commission (NHRC) had asked the Union Ministry of Home Affairs (MHA) and the State Governments to set up Police Complaints Authorities as per the judgment in *Prakash Singh vs. Union of India, 2006*.

### Key Points

- **SMART Policing:**
  - The SMART Policing idea was envisioned, articulated and introduced by the Indian PM at the Conference of DGPs of State and Central Police Organizations, held at Guwahati, in the year 2014.
  - It envisaged systemic changes to transform the Indian Police to be: Strict and Sensitive, Modern and Mobile, Alert and Accountable, Reliable and Responsive, Techno-savvy and Trained (SMART).
  - The strategy combined the development of physical infrastructure, technology adoption, a focus on the critical soft skills and attitudes, as well as a deep commitment to the values of professional excellence and service to the people, considered essential to take the Indian Police to the next level.
- **SMART Policing Index:**
  - The purpose of the IPF survey was to gather information on citizens’ perceptions about the impact of the SMART policing initiative.
    - Indian Police Foundation (IPF) is a Delhi-based think tank set up by eminent citizens including serving and retired police officers, civil servants,

academics and lawyers etc – for each individual state or Union territory.

### Related Government Initiative

- The ranking of police stations across the country is an annual exercise by the Ministry of Home Affairs (MHA), with the stations judged on the basis of parameters like crime rate, investigation and disposal of cases, infrastructure, and delivery of public service, among other features.
  - About 20% of the total points are also based on feedback about the police station from citizens.
- For the year 2021, Sadar Bazar police station in the Capital (Delhi) was the best police station across the country this year.
- Two other police stations – Gangapur in Odisha and Bhattu Kalan in Haryana – were ranked second and third on the list.

### Police Reforms

- Police reforms aim to transform the values, culture, policies and practices of police organizations.
- It envisages police to perform their duties with respect for democratic values, human rights and the rule of law.
- It also aims to improve how the police interact with other parts of the security sector, such as the courts and departments of corrections, or executive, parliamentary or independent authorities with management or oversight responsibilities.
- Police come under the state list of schedule 7 of the Indian constitution.

- The survey had 10 sets of questionnaires, which included:

- **Six indices of “Competence-Based Indicators”** dealing with issues such as police sensitivity, accessibility, responsiveness and technology adoption among others;
  - **Three indices of “Value-Based indicators”** dealing with integrity of the police; and
  - **One index of “Trust”**.
- The **SMART scores** are set **on a scale of 1 to10** and are indicative of the levels of citizen satisfaction, a score of 10 being the highest level of satisfaction.
- **Findings of SMART Policing Index 2021:**
- Despite being attacked for insufficient sensitivity,

declining public confidence and growing concerns about the quality of policing, a majority of citizens **(a weighted average of 66.93%)** believes that the police are doing their job well and **strongly support the police**.

- **Southern states and some in the Northeast fared better** on most policing indices compared to states in the north.
- The **top five states with the highest score on overall policing** are Andhra Pradesh, Telangana, Assam, Kerala and Sikkim.
- **From bottom upwards** are Bihar, Uttar Pradesh, Chhattisgarh, Jharkhand and Punjab.



## Miscellaneous

### Highlight s

- Project SWADESH
- 37<sup>th</sup> India-Indonesia CORPAT
- Bharat Gaurav Scheme
- 'Matosinhos Manifesto' to accelerate the use of Space in Europe
- Shakti: Advanced Electronic Warfare Suite
- Light Combat Helicopter
- 'Duare Ration' Scheme: WB
- Indira Gandhi Prize for Peace for 2021
- Gallantry Awards
- Project Samhati: Odisha
- SITMEX-2021
- Devasahayam Pillai
- Pochampally is One of the Best Tourism Villages: UNWTO
- Babasaheb Purandare
- Dosti Trilateral Exercise: India, Maldives and Sri Lanka

### Project SWADESH

#### Why in News

Recently, the **Department of Biotechnology (DBT)-National Brain Research Centre (DBT-NBRC)** has developed **Project SWADESH**, for managing Neurological disorders.

- NBRC is the only institute in India dedicated to **Neuroscience Research and Education.**

#### Key Points

- **About:**
  - It is the **first large-scale multimodal neuroimaging database** designed specifically for the Indian population with **big-data** architecture and analytics for various disease categories under one platform.
  - It proposes a **big-data architecture** that manages and **analyzes six modules**, namely **neurodegenerative** [AD, Mild Cognitive Impairment (MCI), and **Parkinson's disease** (PD)], neuropsychiatric (schizophrenia and bipolar disorder), neurodevelopmental (autism and **epilepsy**), **Covid-19**-related disorders, other disorders, and healthy subjects.
  - It is supported by **JAVA-based workflow environments and Python**. Backed by a dedicated storage system, it provides quality control, data analysis reports, and data backups.
    - **Python and Java** are both computer programming languages.

- **Significance:**

It will be useful in conducting multimodal brain studies to understand **Alzheimer's disease** and several neurological disorders.

- Its development will facilitate the **integration of multi-site data and collaborative research worldwide.**

#### Neurological Disorders

- **Meaning:**
  - Neurological disorders are **diseases of the central and peripheral nervous system.**
    - In other words, the brain, spinal cord, cranial nerves, peripheral nerves, nerve roots, autonomic nervous system, neuromuscular junction, and muscles.
- **Types:**
  - **Non-Communicable Neurological Disorders:** Stroke, Headache disorders, **Epilepsy, Cerebral palsy, Alzheimer's disease and other dementias**, Brain and central nervous system cancer, **Parkinson's**

disease, Multiple sclerosis, Motor neuron diseases, and other neurological disorders.

- Communicable Neurological Disorders: Encephalitis, Meningitis, Tetanus.

➤ **Injury-related Neurological Disorders:**

- Traumatic brain injuries, Spinal cord injuries.

➤ **Indian Scenario:**

- Neurological disorders **contribute 10% of the total disease burden in India.**
- There is a growing burden of **non-communicable neurological disorders** in the country, which is mainly attributable to the ageing of the population.
- The contribution of non-communicable neurological disorders to total DALYs (disability adjusted life-years) in India **doubled from 4% in 1990 to 8.2% in 2019**, and the contribution of **injury-related neurological disorders increased from 0.2% to 0.6%.**
  - Burden, high blood pressure, **air pollution**, dietary risks, high fasting plasma glucose, and high body-mass index are the leading contributors for Neurological Disorders in India.

## 37<sup>th</sup> India-Indonesia CORPAT

### Why in News

The 37<sup>th</sup> edition of **India-Indonesia Coordinated Patrol** (India-Indonesia CORPAT) between the Indian Navy and the Indonesian Navy is being conducted.

### Key Points

- **About:**
  - It will witness **participation of Maritime Patrol Aircraft from both Nations.**
  - It highlights the mutual trust, synergy and cooperation between the two friendly Navies.
  - To reinforce maritime links, the two navies have been carrying out CORPAT along their **International Maritime Boundary Line twice in a year** since 2002
- **Aim:**
  - It is aimed at keeping the **Indian Ocean Region safe and secure for commercial shipping, international trade** and conduct of legitimate maritime activities.

- CORPATs help build understanding and interoperability between navies, and facilitate institution of measures to prevent and suppress **Illegal Unreported Unregulated (IUU) fishing, drug trafficking, maritime terrorism, armed robbery and piracy.**

➤ **In Line with SAGAR:**

- As part of Government of India's vision of **SAGAR (Security And Growth for All in the Region)**, the Indian Navy has been proactively engaging with countries in the Indian Ocean Region for coordinated patrols, cooperation in **Exclusive Economic Zone (EEZ) surveillance, passage exercises** and bilateral/multilateral exercises.

- The main objective is towards **enhancing regional maritime security.**

➤ **Other Military Exercises with Indonesia:**

- **Samudra Shakti:** A bilateral maritime exercise.
- **Garuda Shakti:** A joint military exercise.

## Bharat

## Gaurav Scheme

### Why in News

Recently, the Indian Railways has announced the new scheme '**Bharat Gaurav**' to **tap the huge potential of tourism.**

### Key Points

➤ **About:**

- Under the scheme, now trains have a **third segment for tourism.** Till now, the Railways had passenger segments and goods segments.

- These trains are **not regular trains** that will run as per a timetable but will be more on the lines of the **Ramayana Express** being run by the IRCTC.
- It was announced under the **theme-based tourist circuit trains**. These trains will be **run, by both private players and IRCTC**, in theme-based circuits
  - **By theme-based tourism (circuits)**, the railways means trains like Guru Kripa that goes to all places related to **Guru Nanak** or a Ramayan-themed train to touch upon places related to **Lord Ram**.
- Anyone, from **societies, trusts, consortia** and even state governments can apply to take these trains and run them on special tourism circuits based on a theme.
  - Service Provider will offer all **inclusive packages** to tourists including rail travel, hotel accommodation, sightseeing arrangement, visit to historical/heritage sites, tour guides etc.
- **Benefits of such Scheme:**
  - These trains will **help realise India's rich cultural heritage** and magnificent historical places to the people of India and the world. They will also help in **tapping the vast tourism potential of India**.
- **Other Related Scheme:**
  - **Swadesh Darshan Scheme**
  - **PRASHAD Scheme**
  - **Buddhist Conclave**
  - **Dekho Apna Desh' Initiative**

#### Tourism in India

- Tourism in India is **important for the country's economy** and is growing rapidly.
- According to the **World Travel and Tourism Council**, the travel & tourism industry's contribution to the **Gross Domestic Product (GDP)** was USD 121.9 billion in 2020 and this is expected to reach USD 512 billion by 2028.
- In India, the industry's direct contribution to the GDP is **expected to record an annual growth rate of 10.35%** between 2019 and 2028.
- Also, the **Travel and Tourism Competitiveness Report 2019** ranked India **34<sup>th</sup> out of 140 countries overall**, showing India's efforts to improve in the field.

## 'Matosinhos Manifesto' to accelerate the use of Space in Europe

### Why in News

- The **European Space Agency (ESA) council** has approved a manifesto to accelerate the use of space in Europe.
- Basically, the council has adopted a **resolution that lays down a vision for the continent** in terms of maintaining and expanding its activities in space.
  - Other than this, the council recognised two "inspirators" to reinforce European leadership in science, technology development and inspiration: **an icy moon sample return mission and human space exploration**.

### Key Points

- **About the Resolution:** The resolution defines **three "accelerators"** to further advance Europe's space ambitions.
  - **Space for a Green Future:**
    - Space projects that **enable it to understand the current state** of the planet and help it get to **net-zero greenhouse gas emissions** by 2050. **Earth observation satellites** and their data are a key part of this.
  - **Rapid and Resilient Crisis Response:**
    - Space applications that **allow nations to manage more effectively** any crises that crop up.
      - **Examples: Severe flooding and wildfires** were seen in parts of Europe earlier this year (2021). Also, the latest report of the **Intergovernmental Panel on Climate Change (IPCC)** has flagged frequent weather events, such as heatwaves, extreme rainfalls and rising sea levels. Some of these factors may influence the way wildfires play out.
  - **Protection of Space Assets:**
    - **Russia's use of a missile** to destroy a satellite in orbit recently has highlighted the **need for new systems to safeguard** European astronauts and satellites from interference.
- **Significance:**
  - It will **tackle the urgent and unprecedented** societal, economic and security challenges faced by Europe and its citizens.

- The **large-scale nature and fast pace of the climate crisis** and other challenges means that no European nation will be able to effectively address them alone.
- **Space has enormous untapped potential** to help tackle these challenges, and an acceleration in developing European space capability is now urgently needed.

#### European Space Agency (ESA)

- The ESA is an **intergovernmental organisation that was formed in 1975 with the aim of developing Europe's space capabilities.**
- The organisation has **22 member states** — Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland and the United Kingdom. **Slovenia, Latvia and Lithuania are Associate Members.**
- **Related Projects:**
  - **Sentinel satellites**
  - **EnVision Mission to Venus**

## Shakti: Advanced Electronic Warfare Suite

### Why in News

The Prime Minister **handed over the Advanced Electronic Warfare (EW) Suite 'Shakti'** to the Indian Navy at a ceremony held as part of **Rashtra Raksha Samarpan Parv** on 19<sup>th</sup> November, 2021.

- Rashtra Raksha Samarpan Parv is part of the '**Azadi Ka Amrit Mahotsav**' celebration.
- The PM also handed over **indigenously-built Light Combat Helicopter (HAL's LCH)**, and two small drones ('SWITCH 1.0 UAV' and 'MR-20') built by Indian start-ups to the Air Force.

### Key Points

- **About:**
  - It will **provide an electronic layer of defence** against modern radars and anti-ship missiles to ensure electronic dominance and survivability in the maritime battlefield.

- This system will replace the earlier **generation EW Systems** of the Indian Navy.
- The system has been **integrated with the wideband Electronic Support Measures (ESM) and Electronic Counter Measure (ECM)** for the defence of Indian Navy Ships against missile attacks.
- It will **help in finding accurate direction** and interception of modern radars.
  - The system has a **built-in radar fingerprinting** and data recording replay feature for post-mission analysis.
- It will **enhance the capabilities of the Indian Navy** and termed it as a major milestone towards **Atmanirbhar Bharat** in areas of advanced defence technologies.

### Designed By:

- Defence Electronics Research Laboratory (DLRL) Hyderabad.
  - It is a laboratory of **Defence Research and Development Organisation (DRDO)** for Capital Warships of the Indian Navy for the interception, detection, classification, identification and jamming of conventional and modern Radars.

### Shakti System:

- **First Shakti system** has been **installed on-board INS Visakhapatnam** and is being installed on-board **Indigenous Aircraft Carrier, INS Vikrant.**
- Twelve Shakti Systems are under production at **Bharat Electronics Ltd (BEL)** supported by more than fifty **Micro, Small and Medium-sized Enterprises (MSMEs)** at a total cost of Rs. 1805 Crores.
- These systems are scheduled to be installed on-board capital warships under production, including **P-15B, P-17A** and **Talwar class** follow-on ships.

## Light Combat Helicopter

### Why in News

Recently, the Prime Minister handed over the **indigenously-built Light Combat Helicopter (HAL's LCH)**, two small drones ('SWITCH 1.0 UAV' and 'MR-20') built by Indian start-ups to the Air Force.

- LCH is a **truly 'Make in India' product** built with private industry participation.

### Key Points

- **About:**
  - LCH is a **new addition to Hindustan Aeronautics Limited (HAL's) helicopter division**. This twin-engine helicopter is a dedicated combat helicopter of 5 to 8-tonne class.
  - The LCH **incorporates advanced technologies and stealth features** for effective combat roles and is designed to carry out roles such as destruction of enemy air defence, counterinsurgency, search and rescue, anti-tank, Counter Surface Force Operations etc.
  - The LCH is the **only attack helicopter in the world** that can land and take off at an altitude of 5,000 m with a considerable load of weapons and fuel.
  - It is effective even in temperatures ranging from minus 50 degrees Celsius on snow peaks to 50 degrees Celsius in the desert.
  - LCH will eventually be **deployed along the Line of Actual Control with China**, in addition to the AH-64E Apache helicopters in service.
- **'SWITCH 1.0 UAV' and 'MR-20':**
  - **'SWITCH 1.0 UAV':**
    - SWITCH 1.0 UAV, with its peerless capabilities of 1.5 hours flight time and 15 kms range at more than 4500 m take-off altitude.
    - It has an **endurance of approximately 90 minutes** and will support the **Indian Army's most demanding surveillance operations** under harsh environments and high altitudes for day and night surveillance across India's borders.
  - **'MR-20':**
    - The **MR-20 hexacopter drones** have a capacity to ferry loads of up to 20kg.

- It will be used to ferry food, essential items, emergency medical aid, ammunition and weapons to troops deployed at heights in forwarding areas.

## 'Duare Ration' Scheme: WB

### Why in News

Recently, the **West Bengal** government launched the **'Duare Ration' (ration at doorstep) scheme for providing food grains under the Public Distribution System (PDS) at the doorstep** for the entire population of the State.

- A mobile application, "**Khadya Sathi: Amar Ration Mobile App**" to help people apply for ration cards, was also launched.

### Key Points

- Under the scheme, dealers would deliver ration at the doorstep of the beneficiaries.
- There are around **21000 rational dealers** in the state and the government would provide a subsidy of **Rs. 1 lakh to each dealer** to purchase a delivery vehicle.
- Ration dealers will also be allowed to recruit two assistants for which state would pay half their salaries.
- Each vehicle would be parked at a convenient location in a neighbourhood so that residents need not walk more than 500 metres to avail the ration.
- It is expected to **benefit around 10 crores of people of the state**.

### Public Distribution System

- It is a **government managed process** of ensuring that food, staples, grains and other necessities are being provided to the poorer sections of the society in India.
- **Food and some non-food items** are provided at a subsidised rate through a chain of **Fair Price Shops (FPS) or Ration Shops**.
- The system is managed by the **Ministry of Consumer Affairs, Food and Public Distribution**.
- The **state and the central governments work hand in hand** to provide food grains and other essential items at low prices for communities that are under and just above the poverty line.
  - The **Central Government** takes the responsibility to procure, preserve, transport and allocate the resources.

- The **State Government** ensures the setting up of a network of recognition and availability of these rations via cards and shops.
- The centre procures food grains from farmers at a **Minimum Support Price (MSP)** and sells it to states at **central issue prices**.
- Under the PDS, presently the commodities namely wheat, rice, sugar and kerosene are being allocated to the States/UTs for distribution.
- Some States/UTs also distribute additional items of mass consumption through the PDS outlets such as pulses, edible oils, iodized salt, spices, etc.
- The **National Food Security Act, (NFSA) 2013** legally entitles upto 75% of the rural population and 50% of the urban population to receive subsidized foodgrains under Targeted Public Distribution System.

## Indira Gandhi Prize for Peace for 2021

### **Why in News**

Recently, **Pratham**, a civil society organisation has been **conferred the Indira Gandhi Prize for Peace, Disarmament and Development for 2021**.

- Pratham is **dedicated to improving the quality of education** among underprivileged children in India and across the world.

### **Key Points**

- **About:**
  - The Indira Gandhi Prize for Peace, Disarmament and Development **was instituted in the memory of the former prime minister by a trust** (Indira Gandhi Memorial Trust) **in her name in 1986**.
  - It consists of a **monetary award of Rs. 25 lakh along with a citation**.
  - The award is given to **individuals or organisations** who work towards ensuring international peace and development, ensuring that scientific discoveries are used to further the scope of freedom and better humanity, and creating a new international economic order.
- **Pratham:**
  - **About: Set up in 1995**, Pratham began its work in slum areas by setting up community-based

pre-schools and by offering remedial education to students who lagged behind in their classes.

- Its **Annual Status of Education Report (ASER)**, based on surveying 6,00,000 rural Indian children, is now used as a model to assess education outcomes and learning deficiencies in 14 countries over three continents.
- To respond to the concerns raised by ASER, in 2007 **Pratham launched its flagship programme, Read India**, which aims to improve children's learning by strengthening basic reading and arithmetic.
- **Awarded For:** Pratham was **awarded for its pioneering work over more than a quarter century** in seeking to ensure that every child has access to quality education, for its innovative use of digital technology to deliver education, for its programmes to provide skills to young adults, for its regular evaluation of the quality of education, and for its timely response in enabling children to learn during the Covid-19 related school closures.

## Gallantry Awards

### **Why in News**

Recently, group Captain Abhinandan Varthaman was awarded **Vir Chakra** which is a wartime gallantry award, by the President of India.

- The gallantry awards are **announced twice in a year** — first on the occasion of the **Republic Day** and then on the occasion of the **Independence Day**.

### **Key Points**

- **Gallantry Awards in India (History):**
  - Post-Independence, **first three gallantry awards** namely Param Vir Chakra, Maha Vir Chakra and Vir Chakra were **instituted** by the government of India on **January 26<sup>th</sup> 1950** which were deemed to have effect from August 15<sup>th</sup>, 1947.

- Thereafter, other three gallantry awards — the **Ashoka Chakra Class-I, the Ashoka Chakra Class-II and the Ashoka Chakra Class-III** — were instituted in 1952, which were deemed to have effect from August 15, 1947.
- These awards were renamed as **Ashoka Chakra, Kirti Chakra and Shaurya Chakra** respectively in January 1967.
- **People Eligible for the Awards:**
  - **All officers of all ranks of the Army, Navy and the Air Force** or of any of the reserve forces, **territorial army** and any other lawfully constituted armed forces.
  - In addition to the above-mentioned **personnel, matrons, sisters, nurses, alongside the staff of the nursing services** and other services pertaining to hospitals and nursing and civilians, both male and females, serving regularly or temporarily under the orders, directions or supervision of any of the above-mentioned forces.
- **Wartime Highest Gallantry Awards:**
  - **Param Vir Chakra:**
    - It is **India's highest military decoration** awarded for displaying distinguished acts of valour during wartime whether on land, at sea or in the air.
  - **Maha Vir Chakra:**
    - It is the **second highest gallantry award** for acts of conspicuous gallantry in the presence of the enemy whether on land, at sea or in the air.
  - **Vir Chakra:**
    - It is the **country's third-highest wartime gallantry award** after Param Vir Chakra and Maha Vir Chakra.
- **Peacetime Highest Gallantry Awards:**
  - **Ashoka Chakra:**
    - It is the **highest military award during peacetime** for valour, courageous action or sacrifice.
    - It is **awarded for most conspicuous bravery** or some act of daring or pre-eminent act of valour or self-sacrifice otherwise than in the face of the enemy.
  - **Kirti Chakra:**
    - It is the **second highest peacetime gallantry award** and is **awarded for valour, courageous action or self-sacrifice** away from the field of battle.
- **Shaurya Chakra:**
  - It is awarded to the **personnel of the armed forces** for instances of extraordinary gallantry.
- **Other Awards:**
  - **Sena Medal:**
    - It is **awarded for acts of exceptional devotion** to duty or courage in the Army.
  - **Nao Sena Medal:**
    - It is awarded for **individual acts of exceptional devotion** to duty or courage in the Navy.
  - **Vayu Sena Medal:**
    - It is awarded for individual acts of exceptional devotion to duty or courage in the **Air Force**.

## Project Samhati: Odisha

### *Why in News*

The new **National Education Policy 2020** lays emphasis on imparting teaching in the mother tongue in primary classes. However, when seen from the context of the **diverse language-base of tribal people**, the task appears to be quite onerous.

- In this scenario, **Odisha's decade-long experiment** in multilingual education may come in handy to take up the challenge.
- The most important aspect of **Mother-Tongue Based Multi-Lingual Education (MTBMLE)** is that it helps save endangered tribal languages.

### *Key Points*

- The **ST and SC Development Department** of the Odisha government has started a project called '**Samhati**'.
  - It intends to address the language issues faced by tribal students in early grades or elementary classes.
  - Under this, the department plans to cover approximately **2.5 lakh students in 1,450 primary schools in the State**.
- **Implementing Agency:** The **Scheduled Castes and Scheduled Tribes Research and Training Institute (SCSTRI)** along with the Academy of Tribal Language and Culture (ATLC), Bhubaneswar are implementing the project.
- **Multilingual Learning:** Under Samhati, it has been decided that all teachers of primary level would be provided functional knowledge of tribal languages and ways of communicating with tribal students.

- Odisha's adivasi communities are as diverse as **21 spoken languages**. Out of the 21 languages, Santhali, the only language which has been included in the **eighth schedule of Constitution**.
  - It is taught in its own **ol chiki script** while the rest of tribal languages have Odia scripts.
- Only six tribal languages — Santali, Ho, Soura, Munda and Kui — **have a written script**.
- These students are a multilingual group unlike mono-lingual groups in regular schools.

## **SITMEX-2021**

### **Why in News**

Recently, the **third edition of the trilateral naval exercise Singapore-India-Thailand Maritime Exercise (SITMEX)** has been conducted in the **Andaman Sea** of the Indian Ocean.

### **Key Points**

- **About:**
  - It is **conducted annually**, and was **announced by India at Shangri-La Dialogue in June 2018**.
    - The International Institute for Strategic Studies (IISS) Shangri-La Dialogue is Asia's premier defence summit. It was launched in 2002.
  - The **first edition of SITMEX was hosted by the Indian Navy**, and was conducted off Port Blair in September 2019.
  - **Singapore hosted the second edition** of the exercise in November 2020. The **2021 edition of the exercise is being hosted by Thailand**.
  - It includes **a number of tactical training drills** such as naval manoeuvres and surface warfare exercises.
  - It **aims to** strengthen mutual confidence and develop common understanding and procedures towards enhancing the overall maritime security in the **Indo-Pacific region**.
    - The exercise is in line with **India's SAGAR (Security and Growth for All in the Region) vision**.
- **Other Military Exercises between India and Thailand:**
  - **MAITREE (Army)**
  - **SIAM BHARAT (Air Force)**
  - **Indo-Thai CORPAT (Navy)**, which was conducted recently.

- **Other Military Exercises between India and Singapore:**
  - **Bold Kurukshetra (Army)**
  - **Joint Military Training (Air Force)**
  - **SIMBEX (Navy)**

## **Devasahayam Pillai**

### **Why in News**

Devasahayam Pillai, an **18<sup>th</sup>-century Hindu convert to Christianity**, would be the **first Indian layman** (a non-ordained member of the Church) **to be made a saint**.

- Pope Francis will canonize Blessed Devasahayam Pillai, together with six other Blesseds, during a Canonization Mass in St Peter's Basilica in Vatican on 15<sup>th</sup> May, 2022.
- Vatican City is the **seat of the Roman Catholic Church**.

### **Key Points**

- He was **born on 23<sup>rd</sup> April 1712** in the village of Nattalam in **Tamil Nadu's Kanyakumari District**.
- **Known as Nilakanda Pillai before embracing Christianity**, he grew up in an upper caste family of temple priests.
- He went on to serve **in the court of Travancore's Maharaja Marthanda Varma**. It was here that he met **a Dutch naval commander**, who taught him about the Catholic faith.
- He **became a Catholic in 1745**. Pillai **took the Christian name Lazarus**, but later **came to be known as Devasahayam (God's help)**.
- He then **faced the wrath of the Travancore state**, which was against his conversion.
- **On 14<sup>th</sup> January, 1752**, just seven years after he became a Catholic, Devasahayam was **shot dead in the Aralvaimozhy forest**.

- Since then, he has widely been **considered a martyr by the Catholic community in South India**.
- His body is at Saint Francis Xavier Cathedral in the Diocese of Kottar (Tamil Nadu).
- The Church is of the view that **his preaching of equality of all people despite caste differences** eventually led to his martyrdom.
- He was **first approved for sainthood in February 2020 for “enduring increasing hardships”** after he decided to embrace Christianity.

#### Categorisation of Religion

##### ➤ About:

- The world’s primary religions fall into two categories:
  - **Abrahamic religions:** Christianity, Judaism, and Islam
  - **Indian religions:** Hinduism, Buddhism, Sikhism, and others.

##### ➤ Christianity:

- **Christianity is the largest**, with more than two billion followers.
- Christianity is based on the life and teachings of Jesus Christ and is approximately 2,000 years old.
- Its largest groups are the Roman Catholic Church, the Eastern Orthodox churches, and the Protestant churches, and its sacred text is the Bible.
- Over the centuries, Christianity grew in numbers as it spread around the world, often through missionaries and colonizers.

## **Pochampally is One of the Best Tourism Villages: UNWTO**

### **Why in News**

Recently, **Pochampally village in Telangana** was selected as one of the **Best Tourism Villages** by **United Nations World Tourism Organisation (UNWTO)**.

- The **award will be given** on the occasion of the **24<sup>th</sup> session of the UNWTO General Assembly in December 2021** in Madrid, Spain.
- The Union Ministry of Tourism has also drafted a **Rural Tourism Policy** which will not only promote tourism within our villages but also revitalise local arts and crafts and promote rural economy.

- Earlier, **Rudreswara Temple**, (also known as the Ramappa Temple) at Mulugu district, Telangana was inscribed on **UNESCO’s World Heritage list**.

### **Key Points**

#### ➤ **Pochampally Village:**

- Pochampally in **Nalgonda district** is often referred to as the **silk city of India** for the exquisite sarees that are woven through a unique style called **Ikat**.
    - This style, Pochampally Ikat, received a **Geographical Indicator (GI Status) in 2004**.
  - Pochampally’s **unique weaving styles and patterns received special focus through the Prime Minister’s mantra of Vocal 4 Local** as a part of **Atmanirbhar Bharat**.
    - In 2015, to recognise the **diversity of weaving techniques** and our rich handloom tradition, the Prime Minister inaugurated the first **National Handloom Day** on 7<sup>th</sup> August as a **tribute to the formal proclamation of the Swadeshi Movement** that was made in a meeting at the **Calcutta Town hall on the same day in 1905**.
  - Pochampally is **also known as Bhoodan Pochampally** to commemorate the **Bhoodan Movement** that was launched by **Acharya Vinobha Bhave** from this village on **18<sup>th</sup> April, 1951**.
    - Vinoba Bhave was the first international figure to receive the **Ramon Magsaysay Award** in 1958. He was awarded **Bharat Ratna** posthumously in 1983.
  - The Ministry of Tourism recommended three villages for the UNWTO Best Tourism Village entry from India. However Pochampally, was awarded as one of the best Tourism Villages by UNWTO.
    - These were **Kongthong in Meghalaya, Ladhpura Khas, Madhya Pradesh** and **Pochampally in Telangana**.
- #### ➤ **Best Tourism Villages Initiative:**
- It is a **Pilot initiative by UNWTO** to highlight those villages where tourism preserves cultures and traditions, celebrates diversity, provides opportunities and safeguards biodiversity.
  - It aims to **award those villages which are outstanding examples of rural destinations** and showcase good practises in line with its specified nine evaluation areas.

- It also aims to support villages to enhance their rural tourism potential through training and access to opportunities for improvement.

#### United Nations World Tourism Organisation

- It is the **United Nations Specialised Agency** responsible for the promotion of responsible, sustainable and universally accessible tourism.
- It was **established in 1975** with **headquarters at Madrid, Spain**.
- UNWTO encourages the implementation of the **Global Code of Ethics for Tourism**, to maximize tourism's socio-economic contribution while minimizing its possible negative impacts.

## Babasaheb Purandare

### *Why in News*

Babasaheb Purandare, a noted Historian and writer of India, has passed away recently.

### *Key Points*

- **About:**
  - Balwant Moreshwar Purandare, born on 29<sup>th</sup> July 1922 in Maharashtra, popularly known as Babasaheb Purandare.
  - He was an author and a historian and was known for his work on **Chhatrapati Shivaji Maharaj**.
  - He is famously entitled as **Shiv Shahir** i.e. '**Shivaji's poet**'.
- **His famous work:**
  - He is known as an eminent authority on the **Maratha King Chhatrapati Shivaji** and started writing on his life and achievements at a very young age. He **published a book called Thinagya** which translates to Sparks on Shivaji.

- Other works of Babasaheb include books titled **Raja Shiva Chatrapati** and **Kesari** along with the **book Narayanrao Peshwa**.
- Apart from this, he is best known for his **drama Jaanta Raja** which has been enacted in 5 languages, since 1985. It was originally written in Marathi.
  - For this drama, he also **received the Kalidas Samman from the Government of Madhya Pradesh** in 2007-08.
- **Awards & Honours:**
  - In 2019, he was awarded **Padma Vibhushan**, India's second-highest civilian award.
  - In 2015, he was awarded with **Maharashtra Bhushan Award**. It is Maharashtra's highest Civilian Award.

## Dosti Trilateral Exercise: India, Maldives and Sri Lanka

### *Why in News*

The 15<sup>th</sup> edition of the biennial trilateral coast guard exercise '**Dosti**' involving India, the Maldives and Sri Lanka is underway in the Maldives, which will conclude today.

- The year **2021 marks 30 years** since these exercises were first launched.

### *Key Points*

- **About:**
  - The exercise was **first initiated in 1991**, between the Indian and Maldives Coast Guard. Sri Lanka joined the exercise for the **first time in 2012**.
  - The Exercises carried out over the past ten years have **focused on exercises and drills on providing assistance in sea accidents**, eliminating sea pollution, and the Coast Guard's procedure and conduct during situations such as oil spills.
  - **Indian Coast Guard vessels Vajra and Apoorva** have been deployed for the exercise (2021).
- **Aim of the Exercise:**
  - To further **fortify the friendship, enhance mutual operational capability**, and exercise interoperability and to build cooperation between the Coast Guards of Maldives, India and Sri Lanka.

- **Recent Security Related Development:**
- In August this year (2021), India, Sri Lanka and the Maldives agreed to work on what are called the **“four pillars” of security cooperation.**
    - These involved the areas of marine security, human trafficking, counter-terrorism and cyber security.
- Earlier, the three countries agreed to **expand the scope of intelligence sharing.**
- **Exercise between India and Srilanka:**
    - **Exercise MITRA SHAKTI** (Military Exercise)
    - **SLINEX** (Naval exercise)
  - **Exercise between India and Maldives:**
    - **Exercise Ekuverin** (Military Exercise)



# OCS SELECTIONS OF 2018

1 SELECTION IN EVERY 2 SELECTION ARE FROM VANIK



**DEBASIS PANDA**



**RITUPARNA MOHAPATRA**



**AKASH KUMAR PANDA**



**SANTOSHINI DAS**



**NARAYANI P. PANDA**



**SHAKTI MOHAPATRA**



**SMARANIKA TULO**



**Sampat Ku. Dash**



**Sarada P. Panda**



**Sidhant Narayan**



**Akash Pattnaik**



**Priti R. Rath**



**Rajiv Das**



**Abhishek Sahu**



**Annanya Tripathy**



**Prasenjit Mishra**



**Debajyoti Panda**



**Avipsa Mohanty**



**Dillip Satapathy**



**Nibedita Parida**



**Rashmigrava Das**



**Asima Padhi**



**Om Prasad**



**Jyotibikash Dash**



**Narayan Behera**



**Suvasnigidha**



**Subrat Ku. Swain**



**Biswa Tripathy**



**Upasana Padhi**



**Bibhuti Satapathy**



**Avilash Purohit**



**Birendra Tripathy**



**Himanshu B. Pale**



**Sambit Ku. Majhi**



**Subhadra**



**Byomakesh**



**Bishnu Govind**



**Tanmaya Nayak**



**Ashutosh Matari**



**Anshuman Sarangi**



**Krishna Padhi**



**Madhusmita Nanda**



**Adarsh A. Tripathy**



**Soniashree Mallick**



**Om Prakash Paribaid**



**Azharuddin Khan**



**Rajesh Ku. Samal**



**Tattwomasi**



**Amit Biswal**



**Apurba R. Aich**



**Trisandhya Patra**



**Bani Satabdi Dash**



**Harekrushna Sahu**



**Nirmal Ku. Bhouh**



**Ajit Ku. Uttaray**



**Manoja Ku. Behura**



**Ananda Ch. Palei**



**Sushree Supriya**



**Dhiren Ku. Nayak**



**Nivedita Nayak**



**Biranchi N. Jagat**



**Sridhar Ku. Sethi**



**Ananta Ku. Nayak**



**Abhijit S. Swain**



**Gyanaranjan Majhi**



**John Major Dalai**



**Jyoti P. Sethi**



**Arjun Majhi**



**Subha P. Kanungo**



**Deepak Ku. Jena**



**Rashmirani Senapat**



**Subha Kanta Naik**



**Madhusmita Samal**



**Gitu Behera**



**Madhusmita Singh**



**Manaranjan Suna**



**Prachi**



**Tapan Ku. Malik**



**Manoj Ku. Behera**



**Manaswee Sethi**



**Bhabani Pradhan**



**Upanjali Majhi**



**Satyabrata Naik**



**Sagar Palo**



**Prasanti Pradhan**



**D. Satyabhusan**



**Prem Chand Jani**



**Mrutunjaya Sabar**



**Gouranga Ghosh**



**Meera Naik**



**Deepak Bara**



**Debasis Patra**



**Bhabesh Majhi**



**Vikas Mundari**



**Sandeep Singh**



**Prafulla Moduli**



**Smrutiranjana Tudu**



**Lalit Ku. Naik**



**Phalguni Sabar**



**Sunita Panda**

**And Many More Selections**



**VANIK-IAS**

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*Congratulations*

**OCS 2019**



**ASWINI KUMAR PANDA**

**TOTAL SELECTION TILL NOW**  
**76** OUT OF **153**

**50%** Selection from Vanik-IAS

1 Selection Out of each 2 is from Vanik-IAS



**RASHMIREKHA PATRA**



**SOUMYARANJAN PRADHAN**



**AYUSHI PATI**



**NIVEDITA NAYAK**



**AMARENDRA SWAIN**



**BISWA TRIPATHY**



**DEEPTIMOYEE PATRA**



**LAREN ROUTRAY**



**PRABHU PRASAD PANDA**



**BISWAJIT SAHOO**



**PRIYANKA PRIYADARSANI**



**SHIVANGI DASH**



**K. VENKATESWAR REDDY**



**THEPLIN SAHOO**



**SUCHISMEETA DAS**



**LITUSMITA MISHRA**



**PRIYABRATA PANDA**



**RANJAN KU. SAHOO**



**MILAN JAISWAL**



**SUMAN SUDHA**



**DEBABRATA MAHARANA**



**SIBA SANKAR SAHOO**



**SIDDHARTHA G. PARIDA**



**SAMARJIT TRIPATHY**



**MANASMITA MAHARANA**



**BYOMAKESH PRADHAN**



**SUDHANSU MOHAN SWAIN**



**ANUP PARAMGURU**



**PRABHU PRASAD PANDA**



**PRIYABRATA PALAKA**



**PRITISH PANDA**



**SAHEEN NAAZ**



**DEBI PRASANNA SARASWATA**



**SONIA SHREE MALLICK**



**SANGITA SEN**



**AISWARYA MISHRA**



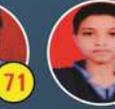
**SOMESH RANABIJULI**



**SONAM PRIYADARSANI**



**NIRMAL KUMAR BHOUL**



**HARAPRIYA PRUSTY**



**ATANU KUMAR PATRA**



**PRAVAKAR PRADHAN**



**SOMEN BISWAL**



**RUBINA NAHID**



**SMRUTI S. SAHU**



**SUROJ KUMAR NAIK BEHERA**



**DEBANANDA SAHOO**



**SWADHIN MISHRA**



**UMAKANTA SAHOO**



**ANSUMAN SARANGI**



**AMARESH NAYAK**



**DIPTIMAYEE SHARMA**



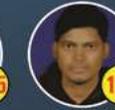
**ASIT RANJAN SWAIN**



**APURBA RANJAN AICH**



**GUPTESWAR MAHAPATRO**



**ASUTOSH MALLICK**



**CHANDRADASH MOHANANDIA**



**RUDRA MADHAV BEHERA**



**ADYASHA PRIYADARSHINEE BAL**



**TAPAN KUMAR TARAI**



**DIVYA RATNA DAS**



**JYOTI RANJAN BAG**



**MANOJ KUMAR BEHERA**



**PURANJANA GANTA**



**KAMRAJ TANTY**



**UMASHANKAR KOYA**



**PRADESH KU. DIGAL**



**BANAJA DAS**



**P. MANASMITA**



**KRISHNA KU. JENA**



**SANJEET KU. NAIK**



**YAMUNA RANI MURMU**



**PURNENDU SABAR**



**SNIGDHARANI DEVI**



**JOGINATH DAS**

**AND MANY MORE SELECTIONS**