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# Current Affairs (CONSOLIDATION)

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(PART – II)**

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# Contents

<b>Polity and Governance .....</b>	<b>1</b>
● Gurkha Rights in Assam .....	1
● Bodoland Statehood Movement .....	2
● Vehicle Scrapping in India.....	3
● Commission for Air Quality Management in the NCR .....	4
● First 'Har Ghar Jal' State: Goa.....	5
● Ghar Tak Fibre Scheme: Bihar .....	6
● Guidelines for Digital Media Regulation.....	7
● Assam-Mizoram Border Dispute .....	8
● Maharashtra Denies Consent to CBI.....	9
● Ayushman Sahakar Scheme.....	10
● Rationalisation of Autonomous Institutions.....	11
● Mobile Application for Geo Tagging: PMKSY.....	12
● Birth Anniversary of APJ Abdul Kalam .....	13
● Draft Personal Data Protection Bill, 2019.....	15
● SOP for Adoption of Integrity Pact Amended: CVC .....	16
● India's First Seaplane Project.....	17
● In-House Procedure Against Judges of Higher Judiciary.....	18
● Live Streaming of Court Proceedings.....	19
● Amendment Related to Land in Jammu and Kashmir .....	20
● Kumhar Sashaktikaran Yojana .....	21
● ASER Survey 2020.....	21
● Maritime Vision 2030 .....	23
● Model Code of Conduct: EC.....	23
● Kisan Suryodaya Yojana: Gujarat.....	25
● Deworming in India .....	25
● ESI Scheme Extended to Arunachal Pradesh .....	27
● Institution of Eminence Scheme.....	27
● DRIP Phase II and Phase III .....	28
● Merger of Schools in Odisha: SATH Project.....	29
● Sexual Harassment and the Code on Wages .....	30
● Mandatory Jute Bag Packaging.....	31
● SERB-POWER Scheme.....	32
● National Unity Day 2020.....	33
● World Polio Day 2020 .....	34
● World Food Day.....	35
<b>Economic Scenario .....</b>	<b>37</b>
● GST Compensation: Centre to Borrow on Behalf of States .....	37
● RBI's Annual Report on State Finances.....	38
● Forex Reserves.....	39
● Heeng Cultivation Project in India .....	40

● Fertiliser Subsidy .....	40
● International Day for the Eradication of Poverty 2020 .....	41
● Expansion of Production-Linked Incentive Scheme.....	42
● Credit Suisse Global Wealth Report .....	43
● Antitrust Case Against Google: USA .....	44
● Economic Performance Comparison Between India and China .....	45
● CPI-IW Base Year Revised to 2016.....	47
● Multimodal Logistics Park in Assam .....	48
● Compound Interest Waiver on Moratorium Loans .....	49
● World Economic Outlook: IMF .....	50
● India-Australia Circular Economy Hackathon .....	51
● Depreciation of Rupee.....	53
● Quarterly Periodic Labour Force Survey.....	53

## **International Relations.....55**

● Geneva Conventions.....	55
● Uranium Supply From Australia to India .....	56
● 65th Anniversary of Bandung Conference: NAM .....	56
● Pro-Democracy Protests in Thailand .....	57
● Israel and Bahrain Diplomatic Ties .....	58
● Taiwan Insecurity of China .....	59
● G-20 Anti-Corruption Working Group Meeting.....	60
● Extending New START Treaty .....	62
● India Invited to Join the Blue Dot Network .....	62
● Australia to Join Malabar Exercise.....	62
● Second Meeting of India-Central Asia Dialogue .....	63
● India-USA 2+2 Dialogue 2020.....	64
● Sudan and Israel to Normalise Relations.....	65
● India in Support of France .....	66
● Pakistan on FATF Grey List.....	67
● Chair of ILO Governing Body: India .....	68

## **Science and Technology.....70**

● Saviour Sibling .....	70
● Atomic Hydrogen Content of Galaxies .....	71
● OSIRIS-REx Mission: NASA .....	72
● COVIRAP: A Quick Covid-19 Test .....	72
● Monoclonal Antibodies for Covid-19.....	73
● NAG Missile: Anti Tank Guided Missile.....	74
● PLACID Trials.....	75
● Earth Observation Satellite EOS-01: ISRO.....	75
● Superconductivity at Room Temperature .....	76
● Computation Analysis of Indian Genes.....	77
● CSIR-CMERI's Municipal Solid Waste Processing Facility .....	78

## **Environment and Ecology.....80**

● Increased Emissions of N <sub>2</sub> O .....	80
● Right of Passage of Animals.....	81

● Bioremediation Mechanism for Oil Spills .....	82
● Skinks of India.....	83
● Dolphins in Pearl River Estuary.....	84
● International Snow Leopard Day .....	85
● State of Global Air 2020: HEI .....	86
● Dashboard for Monitoring Air Quality.....	87
● Seagrass.....	88
● South Asian Flash Flood Guidance System .....	89
● Two New Ramsar Sites .....	90
● Shivalik Elephant Reserve: Uttarakhand.....	91
● Translocation of Corals in Mumbai.....	92
● Habitat Loss of Himalayan Brown Bear .....	93
<b>History .....</b>	<b>95</b>
● Sir Syed's Day.....	95
<b>Art &amp; Culture .....</b>	<b>96</b>
● Kala Sanskriti Vikas Yojana .....	96
<b>Geography .....</b>	<b>97</b>
● Wheat Variety MACS 6478 .....	97
● Tsunami Early Warning System in India .....	97
● Tectonically Active Zone of Himalayas .....	98
● Typhoon Molave: Vietnam .....	99
<b>Social Issues .....</b>	<b>101</b>
● Global Hunger Index 2020.....	101
● SC on Crimes and Violence Against Women.....	102
● India and Sex Ratio .....	103
● Report on Food Consumption: WWF .....	104
● New Abortion Laws in Poland.....	105
● Child Care Leaves for Single Male Parent.....	106
<b>Security .....</b>	<b>107</b>
● Naval Version of BrahMos Tested .....	107
● INS Kavaratti .....	107
● Integrated Theatre Command .....	108
● 59th Raising Day of the ITBP.....	109
● 36th NSG Raising Day .....	109
<b>Miscellaneous .....</b>	<b>110</b>
● Frontier Technologies Cloud Innovation Center.....	110
● Electronic Exchange of Customs Data .....	110
● India International Science Festival 2020 .....	111
● Nazca Lines: Peru.....	111
● Indira Rasoi Yojana: Rajasthan .....	112
● Kochi-Muziris Biennale .....	112
● International Press Institute .....	113



# Polity and Governance

## Highlights

- Gurkha Rights in Assam
- Bodoland Statehood Movement
- Vehicle Scrapping in India
- Commission for Air Quality Management in the NCR
- First 'Har Ghar Jal' State: Goa
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- Guidelines for Digital Media Regulation
- Assam-Mizoram Border Dispute
- Maharashtra Denies Consent to CBI
- Ayushman Sahakar Scheme
- Rationalisation of Autonomous Institutions
- Mobile Application for Geo Tagging: PMKSY
- Birth Anniversary of APJ Abdul Kalam
- Draft Personal Data Protection Bill, 2019
- SOP for Adoption of Integrity Pact Amended: CVC
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- Live Streaming of Court Proceedings
- Amendment Related to Land in Jammu and Kashmir
- Kumhar Sashaktikaran Yojana
- ASER Survey 2020
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- SERB-POWER Scheme
- National Unity Day 2020
- World Polio Day 2020
- World Food Day

## Gurkha Rights in Assam

### Why in News

The Gurkha community in Assam has sought gazette notification ensuring that the safeguards according to **Clause 6 of the 1985 Assam Accord** are also extended to Gurkha people of Assam.

### Key Points

- The demand for the safeguards by Gurkha community further intensified with the **recommendations of the high-level committee formed under the Chairmanship of Biplab Kumar Sharma** by the Union Home Ministry on **Clause 6 of Assam Accord**.
  - The committee recommended that **all Gurkhas of Assam are not indigenous Assamese people** as per the definition of Assamese people.

- **Clause 6** of the Accord envisages **constitutional, legislative and administrative safeguards** for protecting, preserving and promoting the culture, social, linguistic identity and heritage of the **Assamese people**.
- **Biplab Kumar Sharma Committee Recommendation:**
  - **Definition of Assamese:** The report **proposes 1<sup>st</sup> January 1951 as the cut-off date** for any Indian citizen residing in Assam **to be defined as an Assamese** for the purpose of implementing **Clause 6**.
  - **Reservation for Assamese:** It seeks reservation for Assamese in Parliament, state assembly, local bodies. It recommended creating an Upper House (Legislative Council of Assam) whose seats will be reserved for the 'Assamese people'.
    - The report also seeks **quotas in government jobs**.
  - **Regulation of Outsiders:** The report recommends regulation of entry of people from other states

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into Assam, which include the implementation of an **Inner Line Permit (ILP)** regime in the state.

- The ILP is a system in which a special permit is required by people from other regions of India to visit the state.
- Currently the ILP is applicable in **Manipur, Arunachal Pradesh, Nagaland and Mizoram.**

○ **Other Rights:** The report also talks about issues related to land and land rights, linguistic, cultural and social rights and protection of the state's resources and biodiversity.

○ **Concern:** The committee report did not mention anything about the constitutional, legislative and administrative safeguards of local Gurkhas.

- This means the **exclusion from the rights under the Clause 6 of the Accord.**

➤ **Government Assurance:**

- The Gurkhas in Assam are "one of the old communities".
- The government would treat them "at par with other indigenous communities and protect their constitutional rights while implementing Clause 6".

➤ **Gurkhas in Assam:**

- There are currently 25 lakh Gurkhas in Assam.
- The Gurkhas were permanently settled in the **Scheduled Areas** in the last part of the **18<sup>th</sup> century** as **grazers and cultivators.**
- They fought for Assam against the **Burmese invaders** in **1826** resulting in the **Treaty of Yandaboo.**

**Assam Accord**

- It was a **tripartite accord** signed between the **Government of India, State Government of Assam and the leaders of the Assam Movement** in 1985.
- **The Accord** ended the anti-foreigners Assam Agitation from 1979-1985.
  - The signing of the Accord **led to the conclusion of a six-year agitation** that was launched by the All Assam Students' Union (AASU) in 1979, **demanding the identification and deportation of illegal immigrants** from Assam.
  - It sets a **cut-off** of midnight of **24<sup>th</sup> March 1971**, for the detection of **illegal foreigners in Assam.**
    - However, the **demand** was for detection and deportation of migrants who had illegally entered Assam after **1951.**

- It was a peace treaty that resulted in the end of the First Anglo Burmese War. This treaty was signed on 24<sup>th</sup> February, 1826 after two years of the war between British and Burmese.

○ They were declared as **protected class** by the British in the tribal belts and blocks according to the **Assam Land and Revenue Regulation Act, 1886.**

## Bodoland Statehood Movement

### Why in News

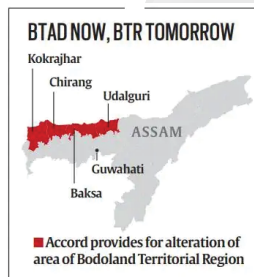
A new organisation (**All India Bodo People's National League for Bodoland Statehood**) has announced the revival of the Bodoland statehood movement ahead of the **elections to the Bodoland Territorial Council (BTC).**

### Key Points

- **About Bodos:** These are the **single largest community** among the notified **Scheduled Tribes** in Assam. Part of the larger umbrella of **Bodo-Kachari**, the Bodos constitute about **5-6% of Assam's population.**
- **About Bodo Statehood Movement:**
  - **1967-68:** First organised demand for a Bodo state came under the banner of the political party Plains Tribals Council of Assam.
  - **1986:** The armed group Bodo Security Force arose, which subsequently renamed itself '**National Democratic Front of Bodoland (NDFB)**', an organisation that is known to be involved in attacks, killings, and extortions. It later split into factions.
  - **1987:** All Bodo Students Union (ABSU) renewed the demand.
    - A fallout of the Assam Movement (1979-85), whose culmination - the **Assam Accord** - addressed the demands of protection and safeguards for the "Assamese people", leading the Bodos to launch a movement to protect their own identity.
  - **1990s:** Indian security forces launched extensive operations against the NDFB, causing the latter to flee to bordering Bhutan.
    - In Bhutan, the group faced stiff counter-insurgency operations by the Indian Army and the Royal Bhutan Army in the early 2000s.
- **Government Interventions:**

Note:

- **1993 Bodo Accord:** The ABSU-led movement from 1987 culminated in a 1993 Bodo Accord, which paved the way for a Bodoland Autonomous Council (BAC), but ABSU withdrew its agreement and renewed its demand for a separate state.
- **2003 Bodo Accord:** In 2003, the second Bodo Accord was signed by the extremist group Bodo Liberation Tiger Force (BLTF), the Centre and the state. This led to the Bodoland Territorial Council (BTC).
  - BTC is an autonomous body under the **Sixth Schedule** of the Constitution.
  - The area under the jurisdiction of BTC was called the Bodo Territorial Autonomous District (BTAD).
- **2020 Accord:** The Central government signed a **tripartite agreement** with the state government and different Bodo groups, including four factions of the National Democratic Front of Bodoland (NDFB), for a “permanent” solution to the Bodo issue. **Some features:**
  - It provides for “alteration of area of BTAD” and “provisions for Bodos outside BTAD”
  - The BTAD was renamed Bodoland Territorial Region (BTR).
  - It provides for more legislative, executive, administrative and financial powers to BTC.
  - Provision for rehabilitation of surrendered militants of NDFB and bringing a special development package of Rs. 1,500 crore for the region.
- **Present Revival of the Bodoland Statehood Movement:**
  - According to the new organisation, the new (2020) accord has been a betrayal of the Bodo people. Besides being an inferior accord, it prescribes a reduction of the area currently under the BTC.
  - The accord has a provision for excluding from the BTR villages with more than 50% non-Bodos and including villages with more than 50% Bodo people left out of the BTC map after the 2003 accord.



**vehicles: Towards effective scrappage policy and infrastructure”,** which suggests **parameters of an effective vehicle scrapping policy** for India.

- CSE is a **non-profit, public interest research and advocacy organisation** based in New Delhi.

### Key Points

- **About the Policy:**
  - The **Ministry of Road Transport and Highways** has formulated a note for the Cabinet on the creation of an **ecosystem for voluntary and environment-friendly phasing out of unfit and old polluting vehicles.**
  - The proposed policy **awaits for Cabinet’s approval** and once approved, will be **applicable on all vehicles.**
- **Concerns on Vehicles:**
  - India will have **over two crore old vehicles nearing the end of their lives by 2025.** These, along with other unfit vehicles, will cause **huge pollution and environmental damage.**
- **Existing Initiatives:**
  - **Bharat Stage VI (BS-VI) Emissions Standards:**
    - It provides an opportunity to renew the fleet with significantly cleaner vehicles as BS-VI heavy-duty vehicles are **designed to emit 35 times lesser particulates** compared to BS-I vehicles.
  - **Electric Vehicle (EV) Incentives:**
    - In August 2020, Delhi government notified the **Electric Vehicles Policy 2020**, which lays the maximum emphasis on replacement of two-wheelers, public transport and shared vehicles and goods-carriers instead of private four-wheelers, with EVs.
  - **National Clean Air Programme:**
    - Under it, polluted cities have **included old vehicle phase-out** as part of their **clean air action.**
- **Suggestion by the Report:**
  - **Safe disposal and material recovery** should be the **critical parameters** of an effective vehicle scrapping policy.
  - The policy must **leverage the opportunities to maximise emissions gains** from the replacement of end-of-life vehicles and **recover material from the wasted clunkers** (dilapidated vehicle or machine) **for reuse and recycling.**

## Vehicle Scrapping in India

### Why in News

Recently, the **Centre for Science and Environment (CSE)** has released a report titled “**What to do with old**

Note:



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- There is a **need to link economic recovery and fiscal stimulus with the replacement of older heavy-duty vehicles with BS-VI vehicles.**
- The scrappage scheme should **incentivise replacement with EVs for personal cars and two-wheelers.**
- Vehicles should not contain toxic metals like lead, mercury, cadmium or hexavalent chromium other than specified conditions.
- There should be efforts to **include Extended Producer Responsibility (EPR) and making the rules legally binding.**
- **Environmentally sound vehicle scrappage infrastructure should be scaled up** country-wide for safe disposal of waste and for material recovery for recycling like steel, aluminium and plastics.
- India needs a well-designed scrappage policy to **lower emissions, reduce environmental damages and recover material from clunkers** as part of post-Covid-19 efforts towards a green India.

## Commission for Air Quality Management in the NCR

### Why in News

Recently, the President of India has signed the “Commission for Air Quality Management in National Capital Region and Adjoining Areas Ordinance, 2020”.

- It sets up a **statutory authority, the Commission for Air Quality Management in the National Capital Region and Adjoining Areas.**

- Through it, the Centre has also **dissolved the Environment Pollution (Prevention and Control) Authority** for the NCR.
  - EPCA is a **central government committee** constituted in **1998** for the **National Capital Region (NCR)** in compliance with the **Supreme Court (SC)** order dated 7<sup>th</sup> January 1998.

### Key Points

- **Background:**
  - The **monitoring and management of air quality** in the Delhi NCR region have been **done by multiple bodies** including the **Central Pollution Control Board (CPCB)**, the **state pollution control boards**, the **state governments in the region**, including **Delhi, Haryana, Uttar Pradesh and Rajasthan**, and by the **EPCA** as well.
  - They, in turn, are **monitored by the Union Ministry of Environment and Forests and Climate Change (MoEFCC)**, and the **SC** itself, which monitors air pollution as per the judgment in **MC Mehta versus Union of India, 1988**.
  - The **Ordinance** seeks to create an **overarching body to consolidate all monitoring bodies**, and to bring them on one platform so that air quality management can be carried out in a more comprehensive, efficient, and time-bound manner.
- **Composition of the New Commission:**
  - It will be headed by a **full-time chairperson** who has been a **Secretary to the Government of India**, or a **Chief Secretary to a State government**.
    - The chairperson will **hold the post for three years or until s/he attains the age of 70 years.**
  - It will have **members from several Ministries** as well as representatives **from the stakeholder States.**
  - It will have **experts from the CPCB, Indian Space Research Organisation (ISRO) and Civil Society.**
- **Powers:**
  - In matters of air pollution and air quality management, the Commission will **supersede all existing bodies** such as the CPCB, and even the state governments involved. It will have the **powers to issue directions to the states.**
    - **CPCB and its State branches’** powers with regard to the **Environment Protection Act, 1986** continue and they will have the **powers** to implement provisions for air, water and land pollution.

Note:



- However, in case of dispute or a clash of jurisdictions, the Commission's writ will prevail specifically to matters concerning air pollution.
- The Commission will also coordinate efforts of state governments to curb air pollution and will lay down the parameters of air quality for the region.
- It will have powers to restrict the setting up of industries in vulnerable areas, and will be able to conduct site inspections of industrial units.
- If its directions are contravened, the Commission will have the power to impose a fine of up to Rs. 1 crore and imprisonment of up to 5 years.
- **NGT's Role:**
  - Only the National Green Tribunal (NGT), and not civil courts, is authorised to hear cases where the Commission is involved.

#### EPCA versus New Commission

- **Jurisdiction:**
  - The EPCA, which was set up in 1998, looked at the NCR only.
  - The purview of the new Commission extends to adjoining areas as well.
- **Statutory Status:**
  - EPCA was not a statutory body but drew legitimacy from the SC. It did have the authority to issue fines or directions and guidelines to the governments in other states.
    - However, it had no state representatives, just two permanent members.
  - The Commission, on the other hand, is a permanent and statutory body and will have representation from the state.
- **Performance:**
  - Experts say that EPCA has failed miserably in cleaning the air even after being in force for more than 20 years.
    - However, the key contributions of the EPCA include the notification of the Graded Response Action Plan (GRAP) that lists out measures to be taken in case of worsening pollution, the construction of the Regional Rapid Transport System and early adoption of BS-VI fuel standards, among other measures.
  - The new Commission's performance will be gauged by changes in the status quo when it comes to ground implementation and strict action on polluters.

#### Appreciation

- **Jurisdiction:** This Commission will specifically look at the Delhi NCR and adjoining areas only.
  - Whereas, the mandate of the CPCB is to serve the whole country.
- **Stubble Burning:** A regulatory mechanism for stubble burning is being put into place for the first time.
- **Coordination:** Earlier, there was no single body/ authority/ministry/state which was empowered or dedicated to ensure coordination among stakeholder states.

#### Criticism

- **Overrepresentation of the Central Government:**
  - The Commission has a large number of members from the central government, which has not gone down well with the states.
  - States, on the other hand, will have just one member each.
- **Concerns of States:** States are not happy with the overarching powers being vested in the Commission.
- **Political differences** will also play a part in the functioning of the Commission.
- **Dissolution of EPCA:** By forming a new commission, the government has taken the issue of air pollution out of the purview of the judiciary. It has been said that a new law is needed when the old one fails. The centre has not even tried implementing old laws fully.
- **Not an Air-shed Based Approach:** According to some experts, the Commission is a lost opportunity to explicitly set the ground rules for an air-shed based approach, one that could have been deployed in polluted areas across the country.
  - An air-shed is an area covered by a volume of air that has similar characteristics and is separated from other volumes of air by weather patterns or topography.

### First 'Har Ghar Jal' State: Goa

#### Why in News

Recently, Goa has become the first 'Har Ghar Jal' State in the country as it successfully provided 100% Functional Household Tap Connections (FHTCs) in the rural areas covering 2.30 lakh rural households.

Note:



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### Key Points

- **Early Achiever:** State's commitment and brisk efforts have ensured advancement and **achievement of targets well before time i.e. 2024 at the national level.**
- **Annual Action Plan:** Goa prepared the **State's Annual Action Plan (AAP)** to provide **100% FHTCs in rural areas by 2021.**
  - Goa utilised the benefits of the **Jal Jeevan Mission (JJM)** which aims to improve the quality of life and bring 'ease-of-living' to rural communities.
  - Accordingly, **fund allocation** from the Union to Goa in 2020-21 **has been increased** to Rs. 12.40 Crore for the plan.
- **Convergence of Schemes:** The State explored through the convergence of various programmes like the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)**, **Swachh Bharat Mission (Grameen)**, **15<sup>th</sup> Finance Commission** for rural local bodies, etc. for strengthening of drinking water sources, water supply, greywater (any domestic wastewater excluding sewage) treatment and re-use and operation and maintenance.

#### Jal Jeevan Mission

- It envisages **supply of 55 litres of water per person per day to every rural household** through FHTC by 2024.
- JJM focuses on **integrated demand and supply-side management** of water at the local level.
  - Creation of local infrastructure for source sustainability measures as mandatory elements, like rainwater harvesting, groundwater recharge and management of household wastewater for reuse, would be undertaken in convergence with other government programmes/schemes.
- The Mission is **based on a community approach to water** and **includes extensive Information, Education and Communication (IEC)** as a key component of the mission.
- JJM looks to **create a Jan Andolan for water**, thereby making it everyone's priority.
- **Funding Pattern:** The **fund sharing pattern** between the Centre and states is 90:10 for Himalayan and North-Eastern States, 50:50 for other states, and 100% for Union Territories.
  - The total allocation to the scheme is over Rs. 3 lakh crore.

- **Water Testing Facilities:** The State is in process of getting 14 **National Accreditation Board for Testing and Calibration Laboratories (NABL)** accredited water quality testing laboratories.
  - JJM mandates training 5 persons in every village especially women to be trained in using Field Test Kits, so that water can be tested in the villages.

## Ghar Tak Fibre Scheme: Bihar

### Why in News

Recently, the Prime Minister of India has inaugurated the 'Ghar Tak Fibre' scheme in Bihar.

### Key Points

- **Ghar Tak Fibre Scheme:**
  - It aims to **connect all 45,945 villages of Bihar with high-speed optical fibre** internet by **31<sup>st</sup> March 2021.**
  - Under the scheme, Bihar has to provide at least **five fibre-to-the-home (FTTH) connections and at least one WiFi hotspot per village.**
  - The Scheme will be implemented by the **Ministry of Electronics and Information Technology.**
- **Benefit:**
  - The Scheme will **lead digital services** including **e-Education**, e-Agriculture, Tele-medicine, Tele-law and other social security schemes in Bihar ensuring easy access to all state natives.
  - It is also likely to **boost the local employment generation** with the implementation of **Bharat Net initiative** which will be done by recruiting local workers.
    - BharatNet, a **special purpose vehicle (SPV)** envisaged in **2011**, was an ambitious plan to **connect all the 2,50,000 gram panchayats through a high-speed optical network.**
      - Initially, it was launched as **National Optical Fibre Network (NOFN)**, it was **renamed in 2015.**
- **Internet Penetration in Bihar:**
  - According to the **Telecom Regulatory Authority of India's (TRAI) report**, **only 30.35% of Bihar's population has internet connectivity**, much **below India's population connectivity of 55%.**

Note:

- Only **22.61% of rural Bihar have an internet connection**. Compared to this **Kerala has 98.10% rural internet connectivity**.
- Bihar also has the **lowest urban internet subscribers amounting to 73.26%** of the urban population. States like Madhya Pradesh, Andhra Pradesh, Tamil Nadu, and West Bengal all have an **urban subscriber base above 90%**.
- However, of the **8,745-gram panchayat (GP)** in Bihar, almost all are connected to the state's main internet grid under **BharatNet Project**.
  - Under it, a village or a gram panchayat is considered '**lit up**' when it consistently has **internet connection and users** at the end to verify the same.
- **Challenges:**
  - Of all the GPs of Bihar connected under phase one, **3,591-gram panchayats are non-operational**, while the status of another 200 is unclear.
  - The main problems are **lack of power and related equipment failure, equipment theft and faulty fibre**.
  - While optical fibre cable has been laid to connect nearly all the GPs, lack of users in these areas has resulted in **minimal or zero follow-ups on repair and maintenance work**.

## Guidelines for Digital Media Regulation

### Why in News

Recently, the Centre has announced **new guidelines for digital news platforms**.

### Key Points

- **New Guidelines:**
  - The government has put emphasis on compliance with the **26% Foreign Direct Investment (FDI)** cap under the government approval route in digital media.
    - The provision was brought in 2019 where **FDI in print media is capped at 26%** and that in **TV news is 49%**.
  - The **majority of the directors on the company's board** and the Chief Executive Officer (CEO) of the company **would have to be Indian citizens**.

- All **foreign employees working for more than 60 days** would need a **security clearance**.
  - If the government denies or withdraw security clearance, the digital media company will ensure that the concerned person resigns or his/her services are terminated.
- The government has given a **year to digital media news entities to align their shareholding** with these requirements.
- **Application:** The guidelines will be applicable to the following categories of entities registered or located in India:
  - **Digital media entities** which streams/uploads news and current affairs on websites, apps or other platforms.
  - **News agency** which gathers, writes and distributes/transmits news, directly or indirectly, to digital media entities and/or news aggregators.
  - **News aggregator, an entity** which uses the software of web applications to aggregate news content from various sources, such as news websites, blogs, podcasts, video blogs, user-submitted links, etc in one location.
- **Benefits:** The **Ministry of Information and Broadcasting** will be considering in the near future to **extend the following benefits**, presently available to traditional media (print and TV), to digital media entities also:
  - **Press Information Bureau (PIB)** accreditation for its reporters, cameramen, videographers enabling them with better first-hand information and access including participation in official press conferences and such other interactions.
  - **Persons with PIB accreditation can also avail the Central Government Health Scheme (CGHS) benefits and concessional rail fare.**
  - **Eligibility for digital advertisements** through the **Bureau of Outreach and Communication**.
  - Similar to self-regulating bodies in print and electronic media, **entities in digital media can form self-regulating bodies for furthering their interests and interaction** with the Government.
- **Reason:**
  - The **threat of fake news, propaganda vehicles, foreign influence and interference in India's domestic affairs** is more real than ever, particularly from India's **hostile neighbours like China and Pakistan**.

Note:



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- The guidelines could **help the government in tightening the noose on Chinese and other foreign companies** who are making investments in digital media in the country.

#### Foreign Direct Investment

- FDI is an **investment made by a firm or individual in one country into business interests located in another country.**
- Generally, FDI takes place when an investor establishes foreign business operations or acquires foreign business assets, including establishing ownership or controlling interest in a foreign company.
- It is **different from Foreign Portfolio Investment (FPI)** where the **foreign entity merely buys equity shares of a company. FPI does not provide the investor with control** over the business.
- **Routes through which India gets FDI:**
  - **Automatic Route:** In this, the foreign entity does **not require the prior approval of the government or the RBI.**
  - **Government Route:** In this, the foreign entity has to **take the approval of the government.**
    - The **Foreign Investment Facilitation Portal (FIFP)** facilitates the single window clearance of applications which are through approval route.
    - This portal is administered by the **Department for Promotion of Industry and Internal Trade (DPIIT)**, Ministry of Commerce and Industry.

## Assam-Mizoram Border Dispute

### Why in News

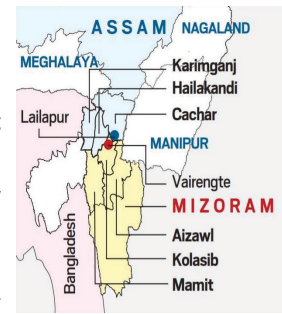
Recently, **Assam-Mizoram border** witnessed firing over a territory dispute, which spotlights the **long-standing inter-state boundary issues in the Northeast**, particularly between Assam and the states which were carved out of it.

- **Mizoram borders Assam's Barak Valley** and the boundary between present-day Assam and Mizoram is **165 km long. Both states border Bangladesh.**

### Key Points

- **Ongoing Tussle:**
  - Residents of Lailapur village in **Assam's Cachar district** clashed with residents of localities near Vairengte in **Mizoram's Kolasib district.**

- Earlier in Oct 2020, a similar clash took place on the border of **Karimganj (Assam)** and **Mamit (Mizoram)** districts.
- Mizoram civil society groups **blame "illegal Bangladeshis"** (alleged migrants from Bangladesh) on the Assam side.



#### ➤ Background:

- The boundary issue between present-day Assam and Mizoram dates back to the **colonial era when inner lines were demarcated according to the administrative needs of British Raj.**
- The issue could not be settled once and for all when the **state was created in independent India.** The result is **both states continue to have a differing perception of the border.**
  - Mizoram was granted statehood in **1987** by the **State of Mizoram Act, 1986.**
  - Assam became a **constituent state of India in 1950** and **lost much of its territory to new states that emerged** from within its borders between the early 1960s and the early 1970s.
- The Assam-Mizoram dispute **stems from a notification of 1875** that **differentiated Lushai Hills from the plains of Cachar**, and another of **1933** that **demarcates a boundary between Lushai Hills and Manipur.**
  - During colonial times, **Mizoram was known as Lushai Hills**, a district of Assam.
- **Mizoram believes the boundary should be demarcated on the basis of the 1875 notification**, which is derived from the **Bengal Eastern Frontier Regulation (BEFR) Act, 1873.**
  - Mizo leaders have argued in the past against **the demarcation notified in 1933** because Mizo society **was not consulted.**
- **The Assam government follows the 1933 demarcation**, and that is the point of conflict.
- According to an agreement between the governments of Assam and Mizoram, the **status quo should be maintained in no man's land** in the border area.
- In the Northeast's complex boundary equations, **clashes between Assam and Mizoram residents are less frequent than they are between other neighbouring states of Assam**, like with Nagaland.

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### ➤ Other Boundary Issues in Northeast:

- During British rule, **Assam included present-day Nagaland, Arunachal Pradesh and Meghalaya besides Mizoram**, which became separate states one by one.
- Currently, Assam has **boundary problems with each of them**.
- **Assam-Nagaland:**
  - **Nagaland** shares a **500-km boundary** with Assam.
  - It achieved **statehood in December 1963** and was **formed out of the Naga Hills district of Assam and Arunachal Pradesh** (then North-East Frontier Agency).
  - **Violent clashes and armed conflicts**, marked by killings, have occurred on the Assam-Nagaland border since 1965.
  - The boundary dispute is in the **Supreme Court**.
- **Assam-Arunachal Pradesh:**
  - Both states have a **boundary of over 800 km**.
  - **Arunachal Pradesh** was granted statehood by the **State of Arunachal Pradesh Act, 1986 in 1987**.
  - **Clashes were first reported in 1992** and since then, there have been several accusations of illegal encroachment from both sides, and intermittent clashes.
  - This boundary issue is also **being heard by the Supreme Court**.
- **Assam-Meghalaya:**
  - The **884-km boundary** between the two states also witnesses flare-ups.
  - **Meghalaya** came into existence as an autonomous state within the state of Assam in April 1970 comprising the United Khasi and Jaintia Hills and the Garo Hills districts. In **1972, it got statehood**.
  - As per Meghalaya government statements, today there are **12 areas of dispute between the two states**.

## Maharashtra Denies Consent to CBI

### Why in News

Recently, the Maharashtra government has **withdrawn its general consent** to the **Central Bureau of Investigation (CBI)** to probe cases in the State.

### Key Points

- The move comes a day after the CBI registered an FIR in the **TRP** scam after taking over the probe based on an FIR filed in Uttar Pradesh.
- The Maharashtra government had an **apprehension** that the CBI would take over the TRP scam case which the Mumbai Police is already investigating.
- The Maharashtra government **suspects CBI of acting at the behest of the Centre**.
  - The Supreme Court in the past has called the CBI a **"caged parrot"** that sings the Centre's tune.
- Maharashtra is the **third State after West Bengal and Rajasthan to take such an action**. The current confrontation also strengthens the perception that states in opposition see the Centre weaponising the CBI to control on opposition-led governments in states.

### General Consent

- Unlike the **National Investigation Agency (NIA)**, which is governed by its own **NIA Act, 2008** and has **jurisdiction across the country**, the CBI is governed by the **Delhi Special Police Establishment (DSPE) Act, 1946** that **makes consent of a state government mandatory** for conducting an investigation in that state.
- There are **two kinds of consent viz. case-specific and general**.
  - Given that the CBI has jurisdiction only over central government departments and employees, it can investigate a case involving state government employees or a violent crime in a given state **only after that state government gives its consent**.
  - **Section 6 of the DSPE Act, 1946 empowers the state government to give or deny consent** to CBI officers to investigate the matter within the state.
- **"General consent"** is normally given to help the CBI seamlessly conduct its investigation into cases of corruption against central government employees in the concerned state. Almost all states have given such consent.
- **Impact of Withdrawal of General Consent:**
  - It means the CBI will not be able to register any fresh case involving a central government official or a private person stationed in Maharashtra **without getting case-specific consent**.
  - Withdrawal of consent **will only bar the CBI from registering a case** within the jurisdiction of concerned

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states. The CBI could still file cases in Delhi and continue to probe people inside Maharashtra.

- In simple terms withdrawal of consent means that **CBI officers will lose all powers of a police officer** as soon as they enter the state unless the state government has allowed them.
- It will have **no impact on the investigation of cases already registered** with CBI as old cases were registered when general consent existed.
- However, the CBI has recently started taking recourse in a Calcutta High Court judgment.
  - The HC, in its order in the **Ramesh Chandra Singh and another vs CBI, 2020** observed that CBI's power to investigate and prosecute its own officials cannot be in any way impeded or interfered by the state even if the offences were committed within the territory of the state.

#### Central Bureau of Investigation

- It is the premier **investigating police agency in India**. It functions under the **Department of Personnel** of the **Ministry of Personnel, Pension and Public Grievances**.
- Its origin can be traced back to the **Special Police Establishment (SPE) set up in 1941** in order to investigate cases of bribery and corruption in the **War and Supply Department** of India during **World War II** (1939-45).
- The need for a Central Government agency to investigate cases of bribery and corruption was felt after the end of World War II. So, the **DSPE Act, 1946** was brought that gave the legal power of investigating cases to CBI.
- It is also the **nodal police agency in India** which coordinates investigation on behalf of **Interpol** member countries.

#### Cases Handled by CBI

- **Anti-Corruption Crimes:** For the investigation of cases under the **Prevention of Corruption Act, 1988** against public officials and the employees of Central Government, Public Sector Undertakings (PSUs), Corporations or Bodies owned or controlled by the Government of India.
- **Economic Crimes:** For the investigation of financial crimes, bank frauds, money laundering, illegal money market operations, graft in PSUs and banks.

- **Special Crimes:** For the investigation of serious cases of conventional nature such as offences relating to internal security, espionage, sabotage, narcotics and psychotropic substances, antiquities, murders, dacoities/robberies, and cheating among others.
- **Suo Moto Cases:** CBI can suo-moto take up investigation of offences **only in the Union Territories**.
  - The Central Government can authorise CBI to investigate a crime in a State but only with the consent of the concerned State Government.
  - The Supreme Court and High Courts, however, can order CBI to investigate a crime anywhere in the country without the consent of the State.

## Ayushman Sahakar Scheme

### Why in News

The **Ministry of Agriculture and Farmers Welfare** has launched **Ayushman Sahakar**, a scheme to **assist cooperatives in creation of healthcare infrastructure** in the country.

### Key Points

- **Formulated By:** **National Cooperative Development Corporation (NCDC)**.
  - NCDC was **set up under an Act of Parliament in 1963** for promotion and development of cooperatives.
  - It functions under the **Ministry of Agriculture and Farmers Welfare**.
  - Recent initiatives include **Sahakar Cooptube NCDC Channel** (Youth-focussed), **Sahakar Mitra** (Internship Programme), etc.
- **Features:**
  - **NCDC would extend term loans to prospective cooperatives to the tune of Rs.10,000 crore** in the coming years.
    - Any Cooperative Society with suitable provision in its byelaws to undertake healthcare related activities would be able to access the NCDC fund.
    - The **scheme covers** establishment, modernization, expansion, repairs, renovation of **hospital and healthcare and education infrastructure**.
  - **NCDC assistance will flow either through the State Governments/ UT Administrations or directly to the eligible cooperatives.**

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- The scheme also provides **working capital and margin money** to meet operational requirements.
- Further, the scheme provides **interest subvention of 1% to women majority cooperatives**.

➤ **Significance:**

- It has a **comprehensive approach**-hospitals, healthcare, medical education, nursing education, paramedical education, health insurance and holistic health systems such as **AYUSH**.
  - The **Covid-19 pandemic** has brought into focus the **requirement of creation of more facilities**.
  - There are about 52 hospitals across the country run by cooperatives. They have cumulative bed strength of more than 5,000. The scheme would give a **boost to provision of healthcare services by cooperatives**.
- The scheme **aligns itself with the focus of the National Health Policy, 2017**, covering the health systems in all their dimensions- investments in health, organization of healthcare services, access to technologies, development of human resources, encouragement of medical pluralism, affordable health care to farmers etc.
- It is **in line with the National Digital Health Mission** and would bring transformation in rural areas.

### Cooperatives

➤ **Definition:**

- According to the **International Labour Organisation (ILO)**, a cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise.

➤ **Related Provisions of Indian Constitution:**

- The **Constitution (97<sup>th</sup> Amendment) Act, 2011** added a new **Part IXB** right after Part IXA (Municipals) regarding the cooperatives working in India.
- The word “cooperatives” was added after “unions and associations” in **Article 19(1)(c) under Part III of the Constitution**. This enables all the citizens to form cooperatives by giving it the status of **fundamental right of citizens**.
- A new **Article 43B** was added in the **Directive Principles of State Policy (Part IV)** regarding the “promotion of cooperative societies”.

- Cooperatives have a strong presence in rural areas, thus, cooperatives utilizing the scheme would revolutionize the way healthcare delivery takes place in rural areas.

## Rationalisation of Autonomous Institutions

### Why in News

Recently, the **Ministry of Finance** has recommended that the **Ministry of Environment, Forest and Climate Change (MoEFCC)** “disengage” from five autonomous institutions working under it and **merge two** others, thus **reducing the 16 autonomous organisations** under the ministry to 9.

### Key Points

➤ **Background:**

- The recommendations are a part of the report that has been **prepared in accordance with the guidelines prescribed under rule 229 of General Finance rules 2017**.

- **Rule 229** pertains to ‘General Principles for setting up of Autonomous Organisations’.

- The **purpose of the report** is to make specific and actionable recommendations for rationalisation of **autonomous bodies** with a view to furthering the aim of ‘**minimum government, maximum governance**,’ ensuring **efficient use of public funds**.

➤ **Recommendations for MoEFCC:**

- **Disengagement** from the **Wildlife Institute of India (WII-Dehradun)**, **Indian Institute of Forest Management (IIFM-Bhopal)**, **Indian Plywood Industries Research and Training Institute (Bengaluru)**, **CPR Environmental Education Centre (Chennai)** and **Centre for Environment Education (Ahmedabad)**.
  - ‘Disengagement’ will involve **two aspects** viz. **phasing out government support** to the institution in a time-bound manner, **disassociating from the management** of the institutions and allowing the relevant industry/stakeholders to run them.
  - **Disengagement** by the government with a **three-year timeline** and a **gradual budget reduction of 25% each year** is recommended.

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- Both **WII** and **IIFM** can be **converted to deemed universities**, which will give them **more freedom** to initiate more courses and have enhanced faculties.
- The **Society of Integrated Coastal Management** (New Delhi) should be merged with the **National Centre for Sustainable Coastal Management** (Tamil Nadu), as both perform similar roles of promoting coastal management. This will **avoid duplication** of activities and **attain economies of scale**.
- **Salim Ali Centre for Ornithology and Natural History** (Tamil Nadu), which receives Rs. 14 crore annually from MoEFCC, should be merged with the ministry.
- **Statutory bodies** such as the **Central Pollution Control Board**, **Central Zoo Authority** (CZA), the **National Tiger Conservation Authority** (NTCA), the **National Biodiversity Authority** should continue to function under and with the financial support of MoEFCC.
  - These bodies should be encouraged to become 'self-financed'.
- **Criticism:**
  - The disengagement will make these institutions **worry for financial issues rather than research**, which should be their prime focus.
  - The move is seen as '**the first step towards sending them into private hands**'.
    - If the government feels that funds are not being utilised properly or the institutions are not performing well, their **officials should be held accountable rather than taking the route of disengagement** as this will have an impact on those students who dream of studying these specialised subjects but cannot afford the high fees charged by private universities.
- **Other Related Steps:**
  - The **Ministry of Textiles** has already **abolished the All India Handloom Board and the All India Handicrafts Board**.
  - In **2018**, the Union Cabinet approved the proposal for **closure of Autonomous Bodies**, namely, **Rashtriya Arogya Nidhi** (RAN) and **Jansankhya Sthirata Kosh** (JSK) and the functions were proposed to be vested in the Department of Health and Family Welfare.

### Autonomous Bodies

- These are **set up** whenever it is felt that certain functions need to be discharged outside the governmental set up with some amount of independence and flexibility without day-to-day interference of the governmental machinery.
- These are set up **by the Ministries/Departments concerned with the subject matter** and are funded through grants-in-aid, either fully or partially, depending on the extent which such institutes generate internal resources of their own.
  - These **grants are regulated by the Ministry of Finance** through their instructions as well as the instructions relating to powers for the creation of posts.
- They are mostly registered as societies under the **Societies Registration Act, 1860** and in certain cases they have been **set up as statutory institutions** under the provisions contained in various Acts.
- These are a **major stakeholder in the government's functioning** as they are engaged in diverse activities, ranging from formulating frameworks for policies, conducting research, and preserving cultural heritage, etc.
  - Institutes imparting technical, medical and higher education fall in this category.

## Mobile Application for Geo Tagging: PMKSY

### Why in News

Recently, the Ministry of Jal Shakti launched a mobile application for geo-tagging of the components of projects under **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)**.

### Key Points

- **Developed By:** The mobile application has been developed with the help of **Bhaskaracharya National Institute of Space Applications & Geo-informatics (BISAG-N)**.
  - **BISAG-N** is an autonomous scientific society registered under the **Societies Registration Act, 1860**. It comes under the **Ministry of Electronics and Information Technology**.
- **Objective:** To **track the pace of work and actual status of the projects**.

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- The mobile application can be used to capture the image of the project component along with other details such as location, type of canal/ structure, completion status, etc.
- The captured information can be submitted by the user for **geo-tagging** on the **geographic information system (GIS) portal** developed for this purpose.
  - **Geo-tagging** is the process of adding geographical identification data to various media such as websites, SMS messages, QR Codes.
    - This data **usually consists of latitude and longitude coordinates**. It can also include altitude, bearing, distance, accuracy data, and place names, and perhaps a time stamp.
  - A **GIS** is a framework for gathering, managing, and analyzing geography related data.
- **Operation:** The mobile application can be operated in both online & offline mode depending on the network availability in the region.

### **Pradhan Mantri Krishi Sinchayee Yojana**

- PMKSY is a **centrally sponsored scheme** launched in 2015 with the motto of “**Har Khet Ko Paani**”.
- **Objectives:**
  - PMKSY is being implemented **to expand cultivated areas with assured irrigation, reduce wastage of water and improve water use efficiency i.e. Per drop-More crop**.
  - It also focuses on **creating protective irrigation by harnessing rainwater** at micro level through “**Jal Sanchay**” and “**Jal Sinchan**”.
    - **Protective irrigation** includes:
      - Protection of the crops from adverse effects of soil moisture deficiency.
      - Irrigation, which acts as a supplementary source of water over and above rainfall.
      - Providing soil moisture to maximum possible area.
  - **Convergence of investments** in irrigation at the field level.
  - To **enhance recharge of aquifers** and introduce sustainable water conservation practices by exploring the feasibility of reusing treated municipal based water for **peri-urban agriculture** and attract greater private investment in a **precision irrigation system**.

- An **aquifer** is a body of porous rock or sediment saturated with groundwater. Groundwater enters an aquifer as precipitation seeps through the soil. It can move through the aquifer and resurface through springs and wells.
- **Peri-urban agriculture** refers to farm units close to town which operate intensive semi- or fully commercial farms to grow vegetables and other horticulture, raise chickens and other livestock, and produce milk and eggs.
- **Precision Irrigation** is an innovative technique that uses water wisely and helps farmers achieve higher levels of crop yield in a minimal amount of water.

- **Formulation:** It was formulated by amalgamating following schemes:

- **Accelerated Irrigation Benefit Programme (AIBP)** -Ministry of Water Resources, River Development & Ganga Rejuvenation (now Ministry of Jal Shakti).
- **Integrated Watershed Management Programme (IWMP)** - Department of Land Resources, Ministry of Rural Development.
- **On-Farm Water Management (OFWM)** - Department of Agriculture and Cooperation (DAC).

- **Implementation:** Decentralised implementation through **State Irrigation Plan and District Irrigation Plan**.

## **Birth Anniversary of APJ Abdul Kalam**

### **Why in News**

Recently, the Union Education Minister has launched the **Kalam Program for Intellectual Property Literacy and Awareness Campaign (KAPILA)** on the occasion of the 89<sup>th</sup> birth anniversary of Dr APJ Abdul Kalam.

- He was **born on 15<sup>th</sup> October, 1931**.

### **Key Points**

- **KAPILA:**
  - Under this campaign, students pursuing education in higher educational institutions will get **information about the correct system of application process for patenting their invention**.
  - Students in higher education institutions of the country are innovating constantly under

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the guidance of their teachers but they are not aware of the system of filing its patent.

- Through this campaign, **students will be able to get benefits from their inventions** by patenting them.
  - For India to become a **USD 5 trillion economy by 2024-25**, students and scientists have to be **more aware of protecting intellectual property (IP)**.
- The program will **facilitate the colleges and institutions to encourage more and more students** to file patents and everyone engaged in research and development **must apply to preserve and safeguard their inventions**.

#### ➤ **Patents in India:**

- **Patent:** It is the **granting of a property right by a sovereign authority to an inventor**.
  - This grant provides the inventor exclusive rights to the patented process, design, or invention for a designated period in exchange for a comprehensive disclosure of the invention.
- **Legislation:** Patent filing in India is governed by **Patents Act, 1970**.
- **Latest Updates:** In June 2020, the **Office of the Principal Scientific Adviser** to the Government of India and the **Department of Science and Technology (DST)** jointly initiated the formulation of a new national **Science Technology and Innovation Policy (STIP 2020)**.
- **Patent Data:** Between 2005-06 and 2017-18, a total of **5,10,000 patent applications** were filed in India out of which **nearly three-quarters** were filed **by foreign entities or individuals**.
  - In other words, in these 13 years, just **24% of patent claims came from Indians**.
- **Global Ranking:** According to the **World Intellectual Property Organisation (WIPO)**, India stands at the **7<sup>th</sup> position** on number of patents filed.
  - China tops the list, followed by the USA and Japan.

#### ➤ **Other Announcements:**

- The **Institution Innovation Council annual report (IIC 2.0)** was also **presented** and the launch of IIC 3.0 was announced.
  - IIC was established by the **Ministry of Education** in **2018**.
  - IIC envisions to **promote innovation in young students by encouraging, inspiring and nurturing**

them to work with new innovative ideas through periodic activities related to innovation and entrepreneurship.

- So far, IICs have been **established in about 1700 higher educational institutions** and will be established in 5000 higher educational institutions under IIC 3.0.
- It was decided to celebrate the week of 15<sup>th</sup>-23<sup>rd</sup> October as '**Intellectual Property Literacy Week**'.
  - During the week, a number of activities were organised to create online awareness about the system and the importance of the process of applying for a patent.

#### **Avul Pakir Jainulabdeen Abdul Kalam**

- **Born:** 15<sup>th</sup> October 1931 at Rameswaram, Tamil Nadu.
  - His birth anniversary is celebrated as the **National Innovation Day**.
- He was an **Indian scientist and politician** who played a leading role in the development of **India's missile and nuclear weapons programmes** like **Integrated Guided Missile Development Programme (IGMDP)**.
  - He planned programmes to produce a number of successful missiles, which helped earned him the nickname "**Missile Man**".
  - In **Indian Space Research Organisation (ISRO)**, he was the project director of the **SLV-III, India's first indigenously designed and produced satellite launch vehicle**.
- In 1998, he put forward a countrywide plan called **Technology Vision 2020**, which he described as a **road map for transforming India** from a less-developed to a developed society in 20 years.
  - The plan called for, among other measures, **increasing agricultural productivity, emphasising technology as a vehicle for economic growth, and widening access to health care and education**.
- He was sworn in as **India's 11<sup>th</sup> President in 2002** and completed the **full term in 2007**.
- **Literary Works:** Wings of Fire (autobiography), India 2020 - A Vision for the New Millennium, Ignited Minds - Unleashing the power within India, etc.
- **Awards:** Among his numerous awards were two of the country's highest honours, the **Padma Vibhushan** (1990) and the **Bharat Ratna** (1997).
- **Death:** 27<sup>th</sup> July 2015 at Shillong, Meghalaya.

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## Draft Personal Data Protection Bill, 2019

### Why in News

Recently, Facebook India's policy head has appeared before the 30-member Joint Committee of Parliament which is examining the draft **Personal Data Protection Bill, 2019**.

- However, Amazon has declined to appear on the ground of risky travel amidst the **pandemic**.

### Key Points

- Amazon, Twitter, Facebook, Google and Paytm are among the companies from whom the committee has **sought views on data security and protection** amid concerns that the **privacy of users is being "compromised" for commercial interest**.
  - Facebook was interrogated on how it targets audiences, their data storage model and transfer of data, etc.
  - **Amazon's refusal** amounts to a **breach of parliamentary privilege** and the panel is **unanimous about taking coercive action** if no one from the company appears on the next date.
- **Personal Data Protection Bill, 2019:**
  - 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 derives its inspiration from a **previous draft version prepared by** a committee headed by retired **Justice B N Srikrishna**.
  - In **December 2019**, Parliament approved sending it to the joint committee.
  - The Bill gives the government **powers to authorise the transfer of certain types of personal data overseas** and has given **exceptions allowing government agencies to collect personal data** of citizens.
  - The Bill **divides the data into three categories and mandates their storage** depending upon the type.
    - **Personal Data:** Data from which an individual can be identified like name, address, etc.
    - **Sensitive Personal Data:** Some types of personal data like financial, health-related, sexual orientation, biometric, genetic, transgender status, caste, religious belief, and more.

- It needs to be **stored only in India and can be processed abroad only under certain conditions** including **approval of the Data Protection Agency (DPA)**.
- **Critical Personal Data:** Anything that the government at any time can deem critical, such as military or national security data.
  - It must be **stored and processed in India only**.
- It **removes the requirement of data mirroring** (in case of personal data). **Only individual consent for data transfer abroad is required**.
- **Data mirroring** is the act of copying data from one location to a storage device in real-time.
- In the earlier version, the Bill **enabled the transfer of personal data outside India**, with a subcategory of **SPD having to be mirrored in the country** (i.e. a **copy will have to be kept in the country**).
- It **mandates data fiduciaries to provide the government with any non-personal data when demanded**.
  - Non-personal data refers to **anonymised data**, such as traffic patterns or demographic data.
  - The previous draft did not apply to this type of data, which many **companies use to fund their business model**.
  - **Data Fiduciary:** It may be a **service provider who collects, stores and uses data** in the course of providing such goods and services.
- The Bill **requires companies and social media intermediaries**, which are "significant data fiduciaries", to **enable users in India to voluntarily verify their accounts**.
  - It would be visible in a "**demonstrable and visible mark of verification**", which shall be visible to all users of the service".
  - This intends to **decrease the anonymity** of users and **prevent trolling**.
- **Advantages:**
  - **Data localisation** can help law-enforcement agencies access data for investigations and enforcement and also **increase the ability** of the government to **tax internet giants**.
  - Instances of cyber-attacks (for example, **Spyware Pegasus**) and surveillance can be checked.
  - **Social media**, which is sometimes used to spread fake news, can be **monitored and checked**, preventing emerging national threats in time.

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- A strong data protection legislation will also help to enforce data sovereignty.
- **Disadvantages:**
  - Many contend that the **physical location of the data is not relevant** in the cyber world as the **encryption keys may still be out of reach** of national agencies.
  - **National security or reasonable purposes** are **opened and subjective terms**, which may lead to intrusion of the state into the private lives of citizens.
  - **Technology giants like Facebook and Google are against it and have criticised** the protectionist policy of data localisation as they are afraid it would have a **domino effect in other countries** as well.
  - Also, it may **backfire on India's own young startups** that are attempting global growth, or **on larger firms that process foreign data in India**.

## SOP for Adoption of Integrity Pact Amended: CVC

### Why in News

Recently, the **Central Vigilance Commission (CVC)** has amended the Standard Operating Procedure (SOP) on the adoption of "**Integrity Pact**" in government organisations for procurement activities.

- The latest order revises the SOP issued in January 2017.
- The CVC also restricted the maximum tenure of **Integrity External Monitors (IEMs)** to three years in an organisation.

#### Integrity Pact

- It is a **vigilance tool** that envisages an **agreement between the prospective vendors/bidders and the buyer**, committing both the parties **not to exercise any corrupt influence** on any aspect of the contract.
- It also **ensures transparency, equity and competitiveness** in public procurement.

#### Integrity External Monitors

- The IEMs independently and objectively **review the documents to determine if the parties have complied with their obligations** under the integrity pact.
- They may submit a report to the chief executive of the organisation concerned or directly to the **Chief Vigilance Officer (CVO)** and the **CVC**, if they find serious irregularities attracting the **Prevention of Corruption Act, 1988** provisions.

### Key Points

#### ➤ Choice of IEM:

- **Amended Provision:** It states that the **choice of IEM** should be restricted to officials from the government and **Public Sector Undertakings (PSUs)** who have retired from positions of the **level of Secretary** to the Central Government or of the equivalent pay scale.
  - The officials who retired as Chairman and Managing Directors (CMDs) of PSUs, Schedule 'A' companies and CMD/Managing Director and Chief Executive Officer levels in the Public Sector Banks (PSBs), insurance companies and financial institutions, should be at least of the level of **Additional Secretary** or its equivalent.
  - Officers of the Armed Forces who have retired from the **rank equivalent of General** may also be considered for appointment.
  - Preference would be given to persons who have worked in any other sector, other than their own, or have worked as CVO in any organisation.
- **Earlier Provision:** Under the 2017 order, the officials who had retired from positions of the **level of Additional Secretary** to the Central government and above, or equivalent pay scale, were eligible for the PSUs, board-level officers in Schedule 'A' companies, PSBs, insurance companies and financial institutions.
  - Officers of the Armed Forces who had retired from the **rank equivalent to Lieutenant-General** and above were considered for appointment.

#### ➤ Appointment as IEM:

- **Amended Provision:** It states that for the appointment as IEM, the Ministry, department or organisation concerned has to forward a panel of suitable persons to the CVC, of those persons who are in the panel maintained by the CVC.
- **Earlier Provision:** Under the 2017 order, the panel could include those already in the panel maintained by the CVC, or they could propose names of other suitable persons.

#### ➤ Tenure:

- **Amended Provision:** It states that the IEM will be appointed for a **period of three years** in an organisation.
- **Earlier Provision:** The 2017 order stated that the **initial tenure of IEM would be three years**

Note:



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which could be **extended for another term of two years** on a request received by the CVC from the organisation concerned.

#### Central Vigilance Commission

- CVC is the **apex vigilance institution**, free of control from any executive authority, monitoring all vigilance activity **under the Central Government** and advising various authorities in Central Government organisations in planning, executing, reviewing and reforming their vigilance work.
  - It is an **independent** body and is **only responsible to the Parliament**.
- It was set up by the Government in **February, 1964** on the recommendations of the **Committee on Prevention of Corruption**, headed by **K. Santhanam**.
- The Parliament enacted the **Central Vigilance Commission (CVC) Act, 2003** conferring **statutory status** on the CVC.

## India's First Seaplane Project

### Why in News

India's first seaplane service in Gujarat, is set to start from **31<sup>st</sup> October 2020**, with the aim of providing **air connectivity** between the **Sabarmati Riverfront** in Ahmedabad and the **Statue of Unity** in Kevadia, Gujarat.

- **31<sup>st</sup> October** is the birth anniversary of **Sardar Vallabhbhai Patel**.
- The seaplane will be **operated by SpiceJet**. It is a **19-seater seaplane**, which will be able to accommodate 14 passengers.
- In the next phase, **Dharoi dam** (Mehsana district) will connect **Ambaji and Shatrunjay dam** (Bhavnagar district) and **Tapi** district.

### Key Points

- **Seaplane:**
  - It is a **fixed-wing aeroplane** designed for **taking off and landing on water**.
  - There are **two main types of seaplanes: flying boats** (often called hull seaplanes) and **floatplanes**.
    - **Flying boat** is a fixed-winged seaplane with a hull, allowing it to land on water, that usually



has no type of landing gear to allow operation on land. It **differs from a floatplane** as it uses a purpose-designed fuselage which can float, granting the aircraft buoyancy.

- The bottom of a **flying boat's fuselage is its main landing gear**. This is usually supplemented with smaller floats near the wingtips, called wing or tip floats.
- The **hull of a flying boat holds the crew, passengers and cargo** and has many features in common with the hull of a ship or a boat.
- **Floatplane** is supported on the water by **pontoons, called floats**.
- **Countries that Operate Seaplanes:**
  - Seaplanes are operational in countries like the Philippines, Canada, Australia, USA, Finland, UK, Sri Lanka, Fiji, New Zealand, Papua New Guinea, the UAE, Italy, Maldives and Hongkong.
  - In India, **Jal Hans**, a commercial seaplane service based in the Andaman and Nicobar Islands was launched as a **pilot project** in **December 2010** with a capacity of 10 passengers.
- **India's Seaplane Project:**
  - As per the **direction of the Centre**, the **Airports Authority of India (AAI)** requested state governments of Gujarat, Assam, Andhra Pradesh and Telangana and the administration of Andaman and Nicobar to **propose potential locations for setting up water airports** to boost the tourism sector.
  - In 2019, the **Centre approved flights from six water airports** that include Shatrunjay Dam (Gujarat), Guwahati riverfront and Umrangso reservoir (Assam), Nagarjuna Sagar (Andhra Pradesh), etc. under the **third round of Ude Desh Ka Aam Nagrik (UDAN)** scheme.
  - The routes awarded for seaplane operations include **Sabarmati riverfront to Statue of Unity and Shatrunjay Dam; Guwahati riverfront to Umrangso reservoir, Jorhat and Shillong** (Meghalaya) and **Nagarjuna Sagar to Vijayawada and Hyderabad** (Telangana).
  - **Agatti, Kavaratti and Minicoy islands of Lakshadweep** have also been proposed to be connected through the project under the **fourth round of UDAN**.
- **Benefit:**
  - **Increase in tourism and hotel business** at local level and **employment to local people**.

Note:

- Establishment of water airports will contribute to an increase in the level of current **social infrastructural facilities** at the proposed sites.
- **Impact on Environment:**
  - **Positive: Turbulence** created in the water while takeoff and landing will **lead to mixing of oxygen in the water**, which will have a positive impact on the aquatic ecosystem near seaplane operations.
  - **Negative:** Activities proposed under the water airport project **may have a similar type of impact as that of an airport**.
    - However, the water airport is not a listed project/activity in the Schedule to the **Environmental Impact Assessment (EIA) Notification, 2006** nor in **EIA draft 2020**.

## In-House Procedure Against Judges of Higher Judiciary

### Why in News

Recently, in a letter to the Chief Justice of India (CJI), Andhra Pradesh Chief Minister has accused the Supreme Court judge, Justice N.V. Ramana and some judges of Andhra Pradesh (AP) High Court of **misconduct, corruption and political bias**.

- The allegation against the judges is unprecedented since it has been made publicly.

### Key Points

- **Issues Involved:**
  - The Constitution of India **protects the independence of judges of the High Courts and the Supreme Court** by making them **removable only through a process of impeachment**. **Article 121 and 211** expressly bars the Parliament and State Legislatures from discussing the misconduct of judges.
    - **Article 121** states that **no discussions shall take place in Parliament** with respect to the conduct of any judge of the Supreme Court or of a High Court in the discharge of his duties **except upon a motion for the removal of the judge**.
    - **Article 211** says that **no discussion shall take place in the legislature of a state** with respect to the conduct of any judge of the Supreme Court or of a High Court in the discharge of his duties.

- However, the AP CM has **not made the allegations against the judges in the legislative assembly**, and therefore, the **bar under Article 211 is not attracted**.
- The chief minister of a state can make such allegations by circumventing the bar under Article 211, as the constitution does not envisage such a possibility.
- However, generally **such allegations against judges are not made publicly**, since it **may cast aspersions on the credibility of the judiciary**.
- Since, AP CM has made the allegations publicly, such an act may invite action for **contempt of court**.
- **Action in Cases of Misconduct of Judges:**
  - A **judge can be removed from office on grounds of 'proved misbehaviour or incapacity'**.
  - However, **not all forms of misbehaviour will warrant removal**. There could be other kinds of impropriety too.
  - There are times when serious complaints of misconduct are made and CJI is called upon to examine them. Since 1997, judges have adopted an **'in-house procedure'** for inquiring into such charges.
- **In-House Procedure:**
  - Under the in-house procedure, when a **complaint is received against a High Court judge**, the CJI should decide if the issue is frivolous or serious.
  - If a **deeper probe** is considered necessary, **both the complaint and the judge's response, along with the High Court's Chief Justice's comments, are recorded for further action**.
  - If deemed necessary, **CJI can also form a three-member committee** to hold an inquiry into the matter.
    - The committee should have **two Chief Justices from other High Courts and one High Court judge**.
    - The inquiry it holds is of the nature of a **fact-finding mission** and is **not a formal judicial inquiry** involving examination of witnesses. The judge concerned is entitled to appear before it.
- **Outcome of In-House Procedure:**
  - If the committee finds substance in the charges, it can give **two kinds of recommendations**. One, that the **misconduct is serious enough to require removal from office**, or that it is **not serious enough to warrant removal**.

Note:



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- If the misconduct involves removal of a judge, the judge concerned will be urged to resign or seek voluntary retirement.
  - If the judge is unwilling to quit, the Chief Justice of the High Court concerned would be asked to withdraw judicial work from him.
  - The President and the Prime Minister will be informed of the situation, clearing the way for Parliament to begin the process of removal.
- If the misconduct does not warrant removal, the judge would be advised accordingly.

➤ **Procedure in Case of Chief Justice of High Court/Judge of Supreme Court:**

- If the case is against a **High Court's Chief Justice**, the **same procedure** is followed as that of a judge of the High Court, but the probe **committee comprises a Supreme Court judge and two Chief Justices**.
- If a **Supreme Court judge faces such a charge**, the in-house **panel will comprise three Supreme Court judges**.
- Also, the in-house procedure does not give any separate provision to deal with complaints against the **Chief Justice of India**.

## **Live Streaming of Court Proceedings**

### **Why in News**

Recently, the **Gujarat High Court** has become the **first Court to live stream judicial proceedings** on YouTube channel.

### **Key Points**

- The High Court allowed the open court proceedings through the video conferencing, except the proceedings to be conducted **in-camera**.
  - In-camera means in **private chambers of a judge**, with the press and public excluded.
- It observed that the initiative of the live telecast is on an **experimental basis** and the aspect of continuing with or adapting the modality of live court proceedings **will be decided based on the outcome of this trial**.
- The move has been **welcomed by lawyers, law students and the public at large** besides litigants, being seen as a **major measure towards transparency** in judicial proceedings.

➤ **Background:**

- All the Courts have been functioning through video conferencing throughout the **Covid-19 lockdown** and even after that.
  - Advocates, parties, victims, etc. all are participating in the court proceedings during the course of the hearing through video conferencing.
- Also, in the **model video conferencing rules** as prescribed by the **e-Committee of the Supreme Court** (SC), it has been provided that the public will be allowed to view the hearing conducted through video conferencing.
- The SC in **Swapnil Tripathi versus the Supreme Court of India 2018** has ruled in favour of **opening up** the apex court through live-streaming.
  - It held that the **live streaming proceedings are part of the right to access justice under Article 21 of the Constitution**.
  - However, the judgment has remained unimplemented.
- The **e-Court Mission Mode Project** was conceptualized with a vision to transform the Indian Judiciary by ICT enablement of Courts.

➤ **Benefits:**

- A live stream **would help litigants follow the proceedings in their case** and also **assess their lawyers' performance**. People from far-flung states such as Tamil Nadu and Kerala do not have to travel all the way to the national capital for a day's hearing.
- It would keep a **check on lawyers' conduct** inside the courtrooms. With the entire country watching them, there would be fewer interruptions, raised voices and adjournments from the lawyers.
- It will **bring transparency and access to justice**.

➤ **Issues Involved:**

- The live streaming of the Courts is **susceptible to abuses**.
  - It can involve **national security concerns** and can amount to a **violation of the fundamental right to privacy** in matrimonial disputes and rape cases.
  - The unauthorised reproduction of live streaming videos is another cause for concern as its regulation will be very difficult at the government's end.

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- Concerns have also been raised about the **commercial aspect of the whole issue**. The agreements with broadcasters should be on a non-commercial basis. No one should profit from the arrangement.
- **Infrastructure**, especially internet connectivity, which is also the biggest challenge in implementing the live proceedings of courts.

## Amendment Related to Land in Jammu and Kashmir

### Why in News

Recently, the Centre notified 'Union Territory of Jammu and Kashmir Reorganisation (Adaptation of Central Laws) Third Order, 2020, which states that **any Indian citizen can now buy land in Jammu and Kashmir (J&K)** without being a domicile.

### Key Points

- The introduction of the UT of J&K Reorganisation (Adaptation of Central Laws) Third Order, 2020 has resulted in the **repeal of at least 11 land laws in J&K**, including the J&K Big Landed Estates Abolition Act that had resulted in famous 'Land to tiller' rights.
- **Features of Latest Order:**
  - **No domicile or permanent resident certificate is required to purchase non-agricultural land** in the UT.
  - **People as well as investors** outside J&K can now purchase land in the UT, ending the exclusive rights of locals over the land granted under Article 370 (now abrogated).
  - The Centre has been arguing that Article 370 hampered development in the UT as investors

### Open for sale

Some of the features of the new laws:

- The new laws end the exclusive rights of permanent residents over land in J&K
- People as well as investors outside the Union Territory can purchase land now
- There will be a bar though on agriculture land to be used for non-agricultural purposes

- Land can be transferred in favour of a person or an institution for the purpose of promotion of healthcare or senior secondary or higher or specialised education

**An Army officer not below the rank of Corps Commander can declare an area as "Strategic Area" for operational and training requirements of the armed forces**

were unable to purchase land prior to 5<sup>th</sup> August 2019.

- **Amended the Jammu & Kashmir Land Revenue Act, 1996**, under which only agriculturists of J&K can purchase agricultural land.
  - However, **it doesn't bar the agricultural land to be used for non-agricultural purposes**. A District Collector can allow the agricultural land to be used for non-agricultural purposes.
- The Centre also notified the **Real Estate (Regulation and Development) Act, 2016**, which paves the way for the acquisition of land in J&K by all Indian citizens.
  - Previously, **Article 35-A** of J&K Constitution placed prohibitions on the sale of land to those who were not state subjects.
- Abolished the **Big Land Estate Abolition Act, 1950** - this provided for redistribution of land which paved the way for rural prosperity and ended landlordism in J&K.
- Empowers the Centre to **declare any area in J&K as 'strategic'** and intended for the direct operational and training requirement of the **armed forces**.
  - However, this can be only done by an **army officer of or above the rank of a corps commander**.

### Land Reforms in Kashmir

- The Kashmir Valley had a history of cruel exploitation of tillers through the periods of Afghan, Sikh and Dogra rule.
- The Sheikh Abdullah's government brought the **Big Landed Estates Abolition Act, in 1950**, through a slogan **land to the tiller**.
  - The Act **placed a ceiling on land ownership** at 186 kanals (about 22 acres).
  - The rest of the **land of a landlord was redistributed** among share-croppers and landless labourers, without any compensation to the landlord.
- This led to most **radical land reform anywhere in the world outside the Communist bloc**. It brought a **social transformation** that has few parallels. It **ended landlordism in J&K and paved the way for rural prosperity**.
- This land reform was so popular in Kashmir that it continued to be pushed for the next quarter-century. The ceiling was gradually decreased until the last of the reform Acts in 1975.

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- **Spouses** of a J&K domicile shall also be **deemed as a domicile**.
  - Earlier, spouses of domiciles were not considered domiciles.
  - Children of central government officials posted for over ten years in J&K will also continue to be considered domiciles.
- **Issues Involved:**
  - For more than two years now, J&K has been without an elected government. All the changes being introduced in the UT have been steamrolled by the Centre rather than being legislated by elected representatives of the people.
  - This has created suspicions in the J&K that the Centre is gradually disempowering the local population and consolidating control through executive power.

## Kumhar Sashaktikaran Yojana

### Why in News

Recently, electric pottery wheels to 100 potter families in Maharashtra were distributed under the **Kumhar Sashaktikaran Yojana (KSY)** of **Khadi and Village Industries Commission (KVIC)**.

### Key Points

- **Kumhar Sashaktikaran Yojana (KSY)** was launched in 2018.
- **Aim:** To strengthen and improve the living of potters in the country by making them self reliant (**Atmanirbhar**).
- **Features:** Providing potters with modern equipment and training to reconnect them with the society and revive their art.
- **Implementation:** KVIC has created proper marketing channels including tie-up with the Indian Railway for selling the products of potters.
- **Benefits:** Proper training and distribution of advanced equipment under the scheme has **eliminated drudgery** from the process of pottery making and also **resulted in increasing the production by 3-4 times**.
  - This has led to an **increase in income of potters** manifolds.
- **Other Initiatives for Potters:** The **Ministry of Micro, Small and Medium Enterprises (MSME)** has announced expansion of and doubling of support to potters.

This include:

- Encouraging successful traditional potters to set up units under the Prime **Minister's Employment Generation Programme (PMEGP)** scheme.
  - PMEGP is a credit-linked subsidy scheme which promotes self-employment through setting up of micro-enterprises.
- Setting up of **clusters in Terracotta, Red clay pottery**, with new innovative value added products to build pottery to crockery/tile making capabilities under the **SFURTI scheme**.
  - The **Scheme of Fund for Regeneration of Traditional Industries (SFURTI)** aims to make traditional industries more productive and competitive by organizing the traditional industries and artisans into clusters.

### Khadi and Village Industries Commission

- KVIC is a **statutory body** established under the **Khadi and Village Industries Commission Act, 1956**.
- The KVIC is charged with the **planning, promotion, organisation and implementation of programmes** for the development of Khadi and other village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.
- It functions under the **Ministry of Micro, Small and Medium Enterprises**.

## ASER Survey 2020

### Why in News

Recently, the **Annual State of Education Report (ASER)** survey has been released which provides a glimpse into the **levels of learning loss that students in rural India are suffering**, with varying levels of access to technology, school and family resources resulting in a **digital divide** in education.

- This year, in the wake of the **pandemic**, the survey was **conducted via phone calls**, reaching 52,227 rural households with school-age children in 30 States and Union Territories (UTs).

### Key Points

- **Enrollments:**
  - **5.5%** of rural children are **not currently enrolled for the 2020 school year**, up from 4% in 2018.

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### Annual Status of Education Report

- It is a **nationwide survey of rural education and learning outcomes** in terms of **reading and arithmetic skills** that has been conducted by the **NGO Pratham** for the last 15 years.
- 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.

### Learning hit

Some highlights from the Annual Status of Education Report's September survey:

- 5.3% of rural children aged 6-10 years are not enrolled in school this year, in comparison to just 1.8% in 2018

- Around 20% of rural children did not have textbooks at home by September

- About 70% of rural

children did some learning activity. Of these, only 11% had live online classes

- Less than 36% of rural children received some learning materials or activities from the school. Almost 75% of such school interaction was via Whatsapp

- This **difference is the sharpest among the youngest children** (6 to 10) where 5.3% of rural children had not yet enrolled in school in 2020, in comparison to just 1.8% in 2018.
- Due to the **disruptions caused by the pandemic, families are waiting for the physical opening of schools** to enrol their youngest children, with about 10% of six-year-olds not in school.
- **Among 15-16 year-olds**, however, **enrollment levels are slightly higher** than in 2018.
- The **proportion of boys** enrolled in government schools **has risen** from 62.8% in 2018 to 66.4% in

2020, while **for girls**, that number has gone up from 70% to 73% in the corresponding period.

- Patterns show a **slight shift toward government schools**, with private schools seeing a drop in enrolment in all age groups.
- The **Centre has now permitted States to start reopening schools** if they can follow Covid-19 safety protocols but the majority of the country's 25 crore students are still at home.
- **Availability of Smartphones:**
  - Among enrolled children, **61.8% live in families that own at least one smartphone** which was merely 36.5% in 2018.
    - About **11% of families bought a new phone** after the **lockdown**, of which 80% were smartphones.
  - **WhatsApp is by far the most popular mode of transmitting learning materials** to students, with 75% of students receiving input via this app.
- **Availability of Learning Material:**
  - **Overall more than 80%** of children said they **had textbooks for their current grade**.
    - This proportion was **higher among students enrolled in government schools** (84.1%) than in private ones (72.2%).
  - In Bihar, less than 8% got such materials from their schools, along with 20% in West Bengal, Rajasthan and Uttar Pradesh.
  - More than 80% of rural children in Himachal Pradesh, Punjab, Kerala and Gujarat received such input.
- **Learning Activities:**
  - **Most children (70.2%) did some form of a learning activity** through material shared by tutors or family members themselves, with or without regular input.
  - 11% had access to live online classes, and 21% had videos or recorded classes, with much higher levels in private schools.
  - About 60% studied from their textbooks and 20% watched classes broadcast on TV.

### Suggestions

- **Fluid Situation:** When schools reopen, it will be important to continue to **monitor who goes back to school** as well as to understand **whether there is learning loss** as compared to previous years.
- **Building on and Strengthening Family Support:** Parents' increasing levels of education can be integrated into

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planning for learning improvement, as advocated by **National Education Policy, 2020**. Reaching parents at the right level is essential to understand how they can help their children and **older siblings also play an important role**.

- **Hybrid Learning:** As children do a variety of different activities at home, effective ways of hybrid learning need to be developed which **combine traditional teaching-learning with newer ways of "reaching-learning"**.
- **Assessment of Digital Modes and Content:** In order to improve digital content and delivery for the future, an **in-depth assessment** of what works, how well it works, who it reaches, and who it excludes **is needed**.
- **Mediating the Digital Divide:** Children from families who had **low education** and also **did not have resources** like smartphones had **less access to learning opportunities**. However, even among such households, there is evidence of effort with family members trying to help and schools trying to reach them. These children **will need even more help than others when schools reopen**.

## Maritime Vision 2030

### Why in News

Recently, the Union Minister of State for Shipping has inaugurated the **Direct Port Entry (DPE)** facility of **V O Chidambaranar Port Trust (VOCPT)**.

### Key Points

- The state-of-the-art DPE facility is created inside the **Truck Parking Terminal** which was developed under the '**Sagarmala**' for issuing customs clearance of export cargo.
- The IT-enabled infrastructure at the ports will make Indian ports, world-class ports aligning with the '**Maritime Vision 2030**' of the **Ministry of Shipping**.
- **Significance:**
  - It will **reduce logistics cost** and **increase the velocity of the cargo**.
  - It would **enable direct movement of containers from factories**, without intermediate handling at any container freight stations (CFSs), on a **24x7 basis**.
  - It will help in **increasing Ease of Doing Business** for the exporters, as the facility will **bring efficiency**

**and reduce dwell time, lower tariff cost and improve the competitiveness of shippers** in international trade.

### Maritime India Vision 2030

- It is a **ten-year blueprint for the maritime sector** which **will be released** by the Prime Minister of India at the **Maritime India Summit in November 2020**.
- It will **supersede the Sagarmala initiative** and aims to **boost waterways**, give a **fillip to the shipbuilding industry** and **encourage cruise tourism in India**.
- Policy Initiatives and Development Projects:
  - **Maritime Development Fund:** A Rs. **25,000-crore fund**, which will provide low cost, **long-tenure financing to the sector** with the Centre contributing Rs. 2,500 crore over seven years.
  - **Port Regulatory Authority:** A **pan-India** port authority will be set up **under the new Indian Ports Act** (to replace the old **Indian Ports Act 1908**) for enabling oversight across major and non-major ports, enhance institutional coverage for ports and provide for structured growth of the ports sector to boost investor confidence.
  - **Eastern Waterways Connectivity Transport Grid project:** It will aim to develop regional connectivity with Bangladesh, Nepal, Bhutan and Myanmar.
  - **Riverine Development Fund:** Calls for extending low cost, long-term financing for inland vessels with the support of a Riverine Development Fund (RDF) and for extending the coverage of the tonnage tax scheme (applicable to ocean-going ships and dredgers) to inland vessels also to enhance the availability of such vessels.
  - **Rationalisation of Port Charges:** It will make them more competitive, besides doing away with all hidden charges levied by ship liners to bring in more transparency.
  - **Promotion of Water Transport:** For decongestion of urban areas, and developing waterways as an alternative means of urban transport.

## Model Code of Conduct: EC

### Why in News

Recently, the **Election Commission (EC)** has found former Madhya Pradesh CM's **remark on a woman politician violative of the Model Code of Conduct (MCC)**.

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### Key Points

- The MCC is a **set of guidelines issued by the EC to regulate political parties and candidates prior to elections**.
- It helps EC in keeping with the **mandate it has been given under Article 324** of the Constitution, which gives it the **power to supervise and conduct free and fair elections** to the Parliament and State Legislatures.
- The MCC is **operational from the date on which the election schedule is announced until the date of result announcement**.
- **Evolution:**
  - The origins of the MCC lie in the **Assembly elections of Kerala in 1960**, when the State administration prepared a '**Code of Conduct**' for political actors.
  - Subsequently, in the **Lok Sabha elections in 1962**, the ECI **circulated the code** to all recognised political parties and State governments and it was **wholeheartedly followed**.
  - It was in **1991** after repeated flouting of the election norms and continued corruption, the **EC decided to enforce the MCC more strictly**.
- **MCC contains eight provisions dealing with:**
  - **General Conduct:** Criticism of political parties must be limited to their policies and programmes, past record and work. Activities such as using caste and communal feelings to secure votes, criticising candidates on the basis of unverified reports, bribing or intimidation of voters, etc. are prohibited.
  - **Meetings:** Parties must inform the local police authorities of the venue and time of any meeting in time to enable the police to make adequate security arrangements.
  - **Processions:** If two or more candidates plan processions along the same route, organisers must establish a contact in advance to ensure that the processions do not clash. Carrying and burning effigies representing members of other political parties is not allowed.
  - **Polling Day:** All authorised party workers at polling booths should be given suitable badges or identity cards. Identity slips supplied by them to voters shall be on plain (white) paper and shall not contain any symbol, name of the candidate or the name of the party.
  - **Polling Booths:** Only voters, and those with a valid pass from the EC are allowed to enter polling booths.
- **Observers:** The EC will appoint observers to whom any candidates may report problems regarding the conduct of the election.
- **Party in power:** The MCC incorporated **certain restrictions in 1979**, regulating the conduct of the party in power.
  - Ministers **must not combine official visits with election work** or use official machinery for the same.
  - The party **must avoid** advertising at the cost of the public exchequer or using official mass media for publicity on achievements to improve chances of victory in the elections.
  - Ministers and other authorities must not announce any financial grants, or promise any construction of roads, provision of drinking water, etc.
  - Other parties must be allowed to use public spaces and rest houses and these must not be monopolised by the party in power.
- **Election manifestos:** **Added in 2013**, these guidelines prohibit parties from making promises that exert an undue influence on voters, and suggest that manifestos also indicate the means to achieve promises.
- **Legal Enforcement:**
  - Though MCC **does not have any statutory backing**, it has come to acquire strength in the past decade because of its **strict enforcement by the EC**.
  - Certain provisions of the MCC may be enforced through invoking corresponding provisions in other statutes such as the **Indian Penal Code 1860**, **Code of Criminal Procedure 1973**, and **Representation of the People Act 1951**.
  - In **2013**, the **Standing Committee on Personnel, Public Grievances, Law and Justice**, recommended **making the MCC legally binding** and recommended that the MCC be made a part of the RPA 1951.
  - However, the **EC argues against making it legally binding**.
    - According to it, elections must be completed within a relatively short time or close to 45 days and **judicial proceedings typically take longer, therefore it is not feasible to make it enforceable by law**.

Note:



## Kisan Suryodaya Yojana: Gujarat

### Why in News

Recently, the Prime Minister has launched the 'Kisan Suryodaya Yojana' aimed at providing **day-time electricity to farmers in Gujarat** for irrigation and farming purposes.

- The Prime Minister also launched a **2.3 km-long ropeway project on Mount Girnar** in Junagadh city, a major pilgrimage site.

### Key Points

- **Kisan Suryodaya Yojana:**
  - **Rs. 3,500 crore** will be spent over the **next three years** for providing solar power to farmers for irrigation during daytime (5 AM to 9 PM).
  - About **3,500 circuit kilometers (CKM)** of new **transmission lines** will be laid.
  - **10 districts** including Dahod, Gir-Somnath and Tapi have been selected under the Scheme for 2020-21. The remaining districts will be covered in a phase-wise manner by 2022-23.
  - **Significance:**
    - It would help in the **expansion of micro irrigation** in the state. Micro irrigation is defined as the frequent application of small quantities of water directly above and below the soil surface; usually as discrete drops, continuous drops or tiny streams through emitters placed along a water delivery line.
    - It would complement irrigation projects of the State- **Sujalam Sufalam** and **SAUNI** (Saurashtra-Narmada Avtaran Irrigation) yojana.
    - It would **complement central government initiatives** like **neem coating urea**, **Soil Health Cards**, **KUSUM Yojana**, etc.
    - India has now reached **5<sup>th</sup> position in the world** in the last few years in **solar power** and is advancing fast. Further, it has given the world the plan of '**One Sun, One World, One Grid**'.
- **Ropeway Project on Mount Girnar:**
  - The 2.3 km-long ropeway project is being touted as the **longest temple ropeway in Asia**.
  - Mount Girnar has **Gorakhnath peak**, **Guru Dattatreya peak** and a Jain temple.

### Note

- On the **Kisan Suryodaya scheme**, the PM emphasised that farmers should save water and adopt the mantra '**per drop, more crop**'.
- With the objective of "per drop, more crop", **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** was also **launched in 2015**.
- It is a **centrally sponsored scheme** being implemented to expand cultivated areas with assured irrigation, reduce wastage of water and improve water use efficiency and ensure "**Har Khet Ko Paani**".
- It was conceived by amalgamating ongoing schemes viz.
  - **Accelerated Irrigation Benefit Programme (AIBP)** of the Ministry of Water Resources, River Development & Ganga Rejuvenation (now Ministry of Jal Shakti),
  - **Integrated Watershed Management Programme (IWMP)** of Ministry of Rural Development and
  - **On Farm Water Management (OFWM)** of Department of Agriculture and Cooperation (DAC).
- The scheme is implemented by the **Ministries of Agriculture and Farmers Welfare, Jal Shakti and Rural Development**.
  - It is the **fourth ropeway in Gujarat** along with Banaskantha, Pavagadh and Satpura.
  - It will give a **boost to adventure activities as well as tourism** in the state.
    - Sites like **Shivrajpur beach** which has got **blue flag certification** and **Statue of Unity**, provides a lot of employment opportunities to the locals.

## Deworming in India

### Why in News

As per the **Ministry of Health and Family Welfare**, **states in India** have **witnessed reduction in worm prevalence**.

- **Regular deworming** as advised by the **World Health Organization (WHO)** eliminates worm infestation among children and adolescents living in areas with high **Soil-Transmitted Helminthiasis (STH) burden**, thereby contributing to achieve better nutrition and health.
- **Helminthiasis** is infestation with or disease caused by parasitic worms.

Note:



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## Key Points

### ➤ Background:

- As per **WHO Report on STH** published in **2012**, in India there were an estimated **64% children** in the age group (1-14 years) **at risk of STH**.
    - The risk was estimated based on the hygiene and sanitation practices and limited STH prevalence data at that point of time.
  - To **assess the exact burden of STH** in India, the Ministry of Health and Family Welfare appointed the **National Centre for Disease Control (NCDC) as the nodal agency** to coordinate and conduct **nationwide baseline STH mapping**.
    - The baseline STH mapping across the country was **completed by the end of 2016**. The data showed **varied prevalence ranging from 12.5% in Madhya Pradesh to 85% in Tamil Nadu**.
  - To **evaluate the impact of** the consistently implemented high coverage **National Deworming Day (NDD) programme**, the Ministry **recently initiated follow-up prevalence surveys led by NCDC and partners**.
- **Result of the Follow-up Surveys:** The follow-up surveys are **completed in 14 States**.
- All 14 States have **shown reduction** in the follow up survey compared to the baseline prevalence survey.
  - The States of **Chhattisgarh, Himachal Pradesh, Meghalaya, Sikkim, Telangana, Tripura, Rajasthan, Madhya Pradesh and Bihar** have **shown substantial reduction** in worm prevalence in the STH follow up prevalence survey.
    - Chhattisgarh has successfully conducted 10 rounds of NDD as on date, and the **drop** in prevalence has been significant **from 74.6% in 2016 to 13.9% in 2018**.
    - **Sikkim**, with 9 rounds, has seen **reduction from 80.4% in 2015 to 50.9% in 2019**.
    - **Rajasthan**, the State that implemented an annual round only due to low baseline of 21.1 in 2013 has seen significant reduction to the level of **less than 1% in 2019** as per the survey.

### National Deworming Day Programme

- **Implementation of NDD is led by the Ministry of Health and Family Welfare**, in collaboration with the

Ministry of Women and Child Development, Ministry of Education and technical assistance from WHO and the technical partners. It was **launched in 2015**.

- It is **implemented as a biannual single day programme (10<sup>th</sup> February and 10<sup>th</sup> August)** through the platforms of schools and anganwadis.
- In the **last round of deworming** earlier this year in the country (which was halted due to the **Covid pandemic**), **11 crore children and adolescents** were **administered Albendazole tablets** across 25 States/UTs.
- Albendazole tablet, approved by the WHO, is used for treatment of intestinal worms in children and adolescents as part of Mass Drug Administration (MDA) programmes globally.

### Soil-Transmitted Helminths

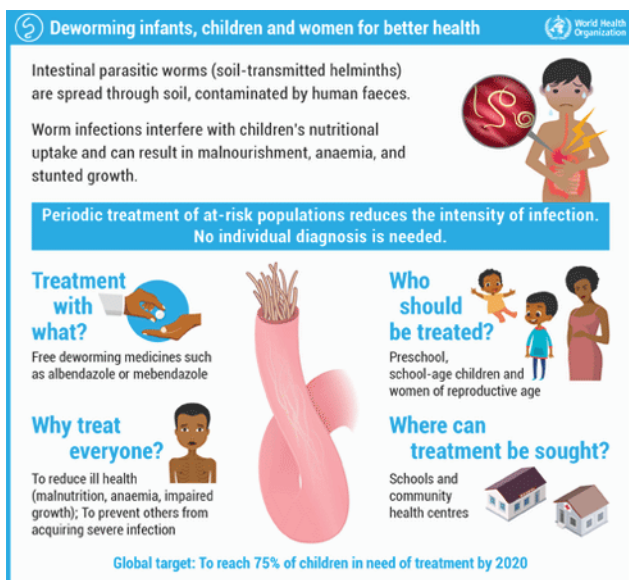
- **Soil-Transmitted Helminths** refer to the intestinal worms infecting humans that are transmitted through contaminated soil.
- Intestinal worms are **parasites** that live in the human intestines and consume nutrients and vitamins needed for a child.
- There are **three main types of helminths** that infect people, **roundworm** (*Ascaris lumbricoides*), **whipworm** (*Trichuris trichiura*) and **hookworms** (*Necator americanus* and *Ancylostoma duodenale*).
- These **worms depend on the human body** for their food and survival and while being there, they lay thousands of eggs each day.
- **Transmission:**
- Soil-transmitted helminths are **transmitted by eggs** that are passed in the faeces of infected people. In areas that **lack adequate sanitation**, these eggs **contaminate the soil**.
- **Impact:**
- Since worms feed on host (human body) tissues, including blood, it leads to loss of iron, and protein, resulting in **anaemia** – reduced oxygen carrying capacity due to less Haemoglobin (Hb) available in the body.
  - Worm infection can also lead to **diarrhoea; dysentery; loss of appetite; reduced nutritional intake and physical fitness; increased malabsorption** – a condition that prevents absorption of nutrients through the small intestine.
- **Treatment:**

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- The WHO recommended medicines – **albendazole (400 mg)** and **mebendazole (500 mg)** – are effective, inexpensive and easy to administer by non-medical personnel (e.g. teachers).



## ESI Scheme Extended to Arunachal Pradesh

### Why in News

Recently, the Central Government has **extended the Employees' State Insurance (ESI) Scheme to Arunachal Pradesh**, with effect from 1<sup>st</sup> November 2020.

- The ESI Scheme **stands implemented in 568 districts** in all the States and Union Territories, except for Lakshadweep.

### Key Points

- **About:**
  - ESI Scheme **provides social protection to workers and their dependents** in the organised sector for emergencies like sickness, maternity and death or disablement due to an employment injury or occupational hazard.
  - It is **financed by contributions from employers and employees (self-financing)**.
    - In **June 2020**, the government had **reduced the rate of contribution** under the ESI Act **from 6.5% to 4%** (employers' contribution reduced from 4.75% to 3.25% and employees' contribution reduced from 1.75% to 0.75%).

- **Employees, earning less than Rs. 137 a day** as daily wages, are **exempted from payment** of their share of contribution.

### ➤ Statutory Provisions:

- The **ESI Act, 1948** is applicable to factories and notified establishments in an implemented area employing 10 or more employees for wages.
- The **"appropriate Government"**, State or Central, is empowered to extend the provisions of the ESI Act to various classes of establishments, industrial, commercial or agricultural or otherwise.
- **Most of the State Governments have extended the ESI Act to a certain specific class of establishments**, such as, shops, hotels, restaurants, cinemas, preview theatres, motors transport undertakings and newspaper establishments, etc. employing 10 or more persons.
- However, the threshold for coverage of establishments is still **20 employees in Maharashtra**.
- **Eligibility for Employees:** The **existing wage limit** for coverage under the Act is **Rs. 21,000 per month** (Rs. 25,000 per month in the case of **persons with disability**).
- **Benefits:** Cashless medical care services, sickness benefit, maternity benefit, employment injury benefit and dependent benefit in case of death due to employment injury, unemployment benefit etc.
  - The employees are also entitled to an **unemployment allowance**. There are two unemployment allowance schemes namely **Atal Beemit Vyakti Kalyan Yojana (ABVKY)** and **Rajiv Gandhi Shramik Kalyan Yojana (RGSKY)**.
- **Administration:** It is administered by an **apex corporate body called the Employees' State Insurance Corporation (ESIC)**, which is **headed by the Union Minister of Labour**, as its Chairman.

## Institution of Eminence Scheme

### Why in News

- Recently, the OP Jindal Global University officially got an **'Institution of Eminence (IoE)** tag.
- The university was selected by the University Grants Commission (UGC), along with 13 other higher education institutions, for IoE status in 2019.

Note:

**Key Points**➤ **Background:**

- Earlier in 2018, the Empowered Expert Committee (EEC) chaired by former Chief Election Commissioner, **N. Gopalasamy recommended** a list of institutions for the consideration of the **IoE status**.
- Under this, the government aims **to establish 20 world class institutes in the country** to provide support and prepare them **to become world-class institutions** and the **ultimate aim** is to make them **secure top global rankings**.

➤ **Objectives:**

- **Excellence and Innovation:** To provide for higher education leading to excellence and innovations in such branches of knowledge as may be deemed fit at post-graduate, graduate and research degree levels.
- **Specialization:** To engage in areas of specialization to make distinctive contributions to the objectives of the university education system.
- **Global Rating:** To aim to be rated internationally for its teaching and research as a top hundred Institution in the world over time.
- **Quality teaching and Research:** To provide for high quality teaching and research and for the advancement of knowledge and its dissemination

➤ **Criteria:**

- **Global/National Ranking:**
  - To get the status, the institutions should be among:
    - Top 50 in the **National Institution Ranking Framework (NIRF)**.
    - Top 500 in internationally recognised rankings.
  - **Public Institutes** that are eligible to apply under Institutes of Eminence are as follows:
    - Central Universities
    - Government-owned and controlled Deemed to be Universities.
    - Institutions of National importance such as IITs, NITs, etc.
    - State Universities are set up under a law made by the Legislative Assembly of a State.
  - **Private institutions** are assessed on the basis of their ranking in the **QS India or NIRF**, the NIRF ranking being used as a tie-breaker.

- Any institution that did not appear in any rankings is excluded completely from the list of IoE tag.

- **Greenfield Proposals:** Only after exhausting the above criterion, if any slot remains vacant, consideration shall be given to **yet to be established (Greenfield)** proposals.

- The term greenfield project generally refers to the initiation of a project without the need to consider any prior work.
- The Greenfield Institutions get a **3 year period** to establish and operationalise the institution.
- **Satya Bharti Foundation (telecom major Airtel's philanthropic arm)** became the **second greenfield institution** to be given IoE status, **after Reliance's Jio Institute**.

➤ **Benefits:**

- **Autonomy:** Institutes with IoE tag will be given greater autonomy and freedom to decide fees, course durations and governance structures.
- **Grant:** The public institutions under IoE tag will receive a government grant of Rs. 1,000 crore, while the private institutions will not get any funding under the scheme.

**DRIP Phase II and Phase III****Why in News**

Recently, the **Cabinet Committee on Economic Affairs**, chaired by the Prime Minister, has approved the **Dam Rehabilitation and Improvement Project (DRIP) Phase II and Phase III**.

- It envisages **comprehensive rehabilitation of 736 existing dams** located across the country and complements the **Dam Safety Bill, 2019**.

**Key Points**➤ **Objectives:**

- To improve the safety and performance of selected existing dams and associated appurtenances in a sustainable manner.
- To strengthen the dam safety institutional setup in participating states as well as at the central level.

Note:



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- To explore the alternative incidental means at few of selected dams to generate the incidental revenue for sustainable operation and maintenance of dams.
- **Project Cost and Funding: Rs. 10,211 crore.**
  - Financial assistance of Rs. 7,000 from the **World Bank** and the **Asian Infrastructure Investment Bank** (AIIB).
  - Rs. 3,211 crore is to be borne by the **concerned implementing agencies in the states.**
- **Implementation Period:** Over a **period of 10 years** from **April 2021 to March 2031**, in two phases of six years duration with two years overlapping.

#### **Dam Rehabilitation and Improvement Project**

- It was **started in 2012** and was **scheduled to be completed in 2018.**
  - In September 2018, the Government **approved its revised cost estimates** along with a **two-year time extension from 2018 to 2020**, for the completion.
- Apart from its general objectives, it also **aims at ensuring the safety of downstream population and property** that are affected in the case of a dam failure or operational failure.
- It was initially taken up **for the repair and rehabilitation of dam projects across the seven states of India**, namely Jharkhand, Karnataka, Kerala, Madhya Pradesh, Odisha, Tamil Nadu and Uttarakhand.

## **Merger of Schools in Odisha: SATH Project**

### **Why in News**

The Odisha government has **identified around 8,000 schools** in 15 districts which **will be merged with other schools** due to **low enrollment** (less than 20 students).

- The merger is **being carried out under the NITI Aayog's Sustainable Action for Transforming Human Capital in Education (SATH-E) project**, and has been termed **Consolidation and Rationalisation of schools.**

### **Key Points**

- **SATH-E Project:**
  - **Sustainable Action for Transforming Human Capital (SATH)** focusses on **two main sectors - Education and Health** and to build **three 'Role Model' States.**

- **SATH-E** aspires to be a 'saathi', to the educational system with the student and the teacher at its centre".
  - In **2017, Odisha** was among **three states**, along with **Jharkhand and Madhya Pradesh**, to be **selected by NITI Aayog** for the project.
- The initiative **aims to** transform elementary and secondary school education through goal driven exercise and create role model states for education. The initiative **culminates at the end of the 2020 academic year.**
- **Critical interventions** including **school mergers, remediation program, training, monitoring teacher recruitment/ rationalization, institutional reorganization** at district and state level and proper utilization of **Management Information System (MIS)** are in execution mode since January, 2018.
  - **Merger of schools** is advocated to help **consolidate resources** such as teachers, libraries, laboratories and play equipment.
  - **MIS** can assist the school manager in determining the aims of the school, formulating strategic plans, distributing resources, and evaluating staff performance as well as organizational success.
- Progress of the project is **being monitored** through a National Steering Group (NSG) and Central Project Monitoring Unit (CPMU) at national level and State Project Monitoring Unit (SPMU) at State level.

#### ➤ **Concerns with Merger of Schools:**

- Activists have argued that closure or merger of schools is **in violation of section 3 and 8 of the Right to Education (RTE) Act, 2009.**
  - **Section 3** provides to **every child of the age of six to fourteen years** the right to free and compulsory education in a **neighbourhood school** till the completion of elementary education.
  - **Section 8** assigns **duties to the appropriate Government** to ensure that it provides free and compulsory elementary education to every child, in a neighbourhood school.
- Majority of these schools are **from tribal belts on hilly terrains.** Closure of schools in a village will only **increase the dropout rate** as it won't be feasible for students to travel far to attend school.
- Parents are also concerned that if their children fail to attend school, they will also be **deprived of the midday meals.**

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### ➤ State Government's Response:

- Students who will have to travel to a distant school will be **provided with a daily allowance of Rs. 20** and **students from schools facing closure** will also be provided a **one-time facilitation allowance of Rs 3,000**.
- If the **distance to school is more than 1 km**, students will be provided **travel allowance as per Right To Education (RTE) norms**.
- Further, the **district collectors have been authorised to cancel the merger** if genuine concerns arise.

## Sexual Harassment and the Code on Wages

### Why in News

According to a provision in the **Code on Wages 2019**, 'conviction for sexual harassment' can be a **ground for denying bonus payouts** to employees.

- The Central government published the **Draft Code on Wages (Central) Rules, 2020** in July 2020 and placed it in the public domain inviting objections and suggestions.

### Key Points

- The Code lays down norms for annual bonus dues that accrue to employees, replacing the **Payment of Bonus Act, 1965**, which bars bonus dues only in case of fraud, violent conduct and theft or sabotage.
  - **Payment of Bonus Act, 1965:**
    - The **minimum bonus** payable is **8.33% of the salary or wage** earned by the employee during the accounting year subject to a **maximum of 20%** of such salary or wage and is **applicable to all employees earning a salary of up to Rs. 21,000 a month**.
  - **Section 29 of the Code** states that "Notwithstanding anything contained in this Code, an employee shall be disqualified from receiving bonus under this Code, if he is dismissed from service for fraud or riotous or violent behaviour while on the premises of the establishment or theft, misappropriation or sabotage of any property of the establishment or conviction for sexual harassment."
    - The **salary and bonus payment limits are yet to be notified** under the Code on Wages.

- Other **disqualification triggers are explicitly restricted to actions on an employer's premises**, the trigger referring to conviction under sexual harassment does not include such a condition about the location of the incident.
  - As of now, **it is not clear if sexual harassment incidents or related crimes against women outside the workplace could lead to dismissal** of employees with loss of bonus payments but it should come under the purview irrespective of where it is done.

### ➤ Significance of the Move:

- This is a huge step to **get people to be on their best behaviour** in the workplace as the prospect of losing one's benefits may make employees more careful of their conduct.
- This is also a step forward **towards creating seriousness about instances of sexual harassment** at the workplace and in general.
- This move will serve as an additional deterrent apart from the **Prevention Of Sexual Harassment (POSH) law of 2013**.

### Code on Wages Act, 2019

- The **new wage code** removes the **multiplicity of wage definitions**, which can significantly reduce litigation as well as compliance cost for employers.
- It links minimum wage across the country to the **skills of the employee** and the **place of employment**.
- It seeks to **universalise the provisions** of minimum wages and their timely payment to all employees irrespective of the sector and wage ceiling.
- It seeks to ensure **Right to Sustenance for every worker and intends to increase the legislative protection** of minimum wage.
- A **National Floor Level Minimum Wage** will be set by the Centre and will be **revised every five years**, while states will fix minimum wages for their regions, which cannot be lower than the floor wage.
- It **subsumes the following four labour laws**:
  - Payment of Wages Act, 1936
  - Minimum Wages Act, 1948
  - Payment of Bonus Act, 1965
  - Equal Remuneration Act, 1976

### Prevention Of Sexual Harassment Law 2013

- Under it, sexual harassment includes **any one or**

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more of the following unwelcome acts or behaviour (whether directly or by implication):

- Physical contact and advances.
  - Demand or request for sexual favours.
  - Making sexually coloured remarks.
  - Showing pornography.
  - Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.
- As per the POSH law guidelines, firms are required to form an **Internal Complaints Committee (ICC)** to **inquire into complaints of sexual harassment** at the workplace.
  - ICC is required to **make recommendations** to employers on the action required pursuant to its inquiry in such complaints.
  - If the ICC upholds a complaint, it **could be interpreted as a conviction** and ICC has the **powers to decide if someone is guilty and report it further to the police**, though not all sexual harassment cases translate into a police case.

## Mandatory Jute Bag Packaging

### Why in News

Recently, the **Cabinet Committee on Economic Affairs**, chaired by the Prime Minister, has approved that **100% of the foodgrains and 20% of the sugar** shall be **mandatorily packed in jute bags**.

- The decision will give an impetus to the diversification of the **jute** industry.

### Key Points

- **Extended Norms:**
  - The decision mandates that **initially 10% of the orders of jute bags** for packing food grains would be placed through a reverse auction on the **GeM portal**, which will gradually help in a regime of price discovery.
    - In a **reverse auction**, the sellers compete to obtain business from the buyer and prices will typically decrease as the sellers underbid each other.
    - **Price discovery** is the process of determining the price of an asset in the marketplace through the interactions of buyers and sellers.

### ➤ Statutory Provision:

- Government has expanded the scope of mandatory packaging norms under the **Jute Packaging Materials (Compulsory Use in Packing Commodities) Act, 1987**, also known as the **JPM Act**.

- Under it, the Government is **required to consider and provide for the compulsory use of jute packaging material** in the supply and distribution of certain commodities.

### ➤ Government Dependent Sector:

- The jute industry is **predominantly dependent on the Government sector** which purchases jute bags of value of more than Rs. 7,500 crore every year for packing foodgrains.

- This is done in order **to sustain the core demand** for the jute sector and **to support the livelihood of the workers and farmers** dependent on the sector.

- **Nearly 3.7 lakh workers and several lakh farm families are dependent** for their livelihood on the jute sectors so the government has been making **concerted efforts for the development of the jute sector by:**

- Increasing the quality and productivity of raw jute.
- Diversifying the jute sector.
- Boosting and sustaining demand for jute products.

### ➤ Benefits:

- The move will benefit farmers and workers located in the **Eastern and North-Eastern regions** of the country particularly in the states of West Bengal, Bihar, Odisha, Assam, Andhra Pradesh, Meghalaya and Tripura.
- The reservation norms in the present proposal would **further the interest of domestic production** of raw jute and jute packaging material in India, thereby, making India self-reliant in consonance with **Aatmanirbhar Bharat**.

### Government Initiatives for Promoting Jute Industry

#### ➤ Jute-Improved Cultivation and Advanced Retting Exercise:

- Jute ICARE aims to **improve the productivity and quality of raw jute**.
- Under it, the Government is **disseminating improved agronomic practices** such as line sowing using seed drills, distribution of quality certified seeds, etc.

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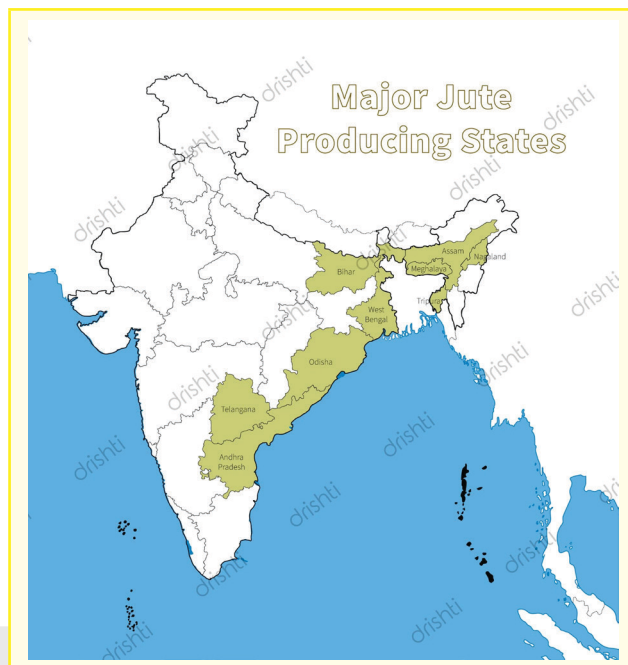


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- **Jute SMART:**
  - It is an **e-govt initiative** which was launched in **December 2016** to **promote transparency** in the jute sector.
  - It provides an integrated platform for procurement of sacking by Government agencies.
- **Definitive Anti-Dumping Duty:**
  - It has been **imposed on import of jute goods from Bangladesh and Nepal** with effect from 5<sup>th</sup> January 2017 to protect the domestic sector.
- **Incentive Scheme for Acquisition of Plants and Machinery:**
  - Launched in **2013**, it aims to **facilitate modernisation in existing and new jute mills** and up-gradation of technology in existing jute mills.
- **Collaboration between the National Jute Board and the National Institute of Design:**
  - It aims to support the diversification of the jute sector through a **Jute Design Cell**.
  - **National Jute Board** under the Ministry of Textiles, acts as the **apex body** for the promotion of the products in India and abroad.
- **Jute is included** in the **Minimum Support Price (MSP)** regime of the country.

#### Jute

- **Temperature:** Between 25-35°C.
- **Rainfall:** Around 150-250 cm.
- **Soil Type:** Well-drained alluvial soil.
- **Top Jute Producing States:** West Bengal > Bihar > Assam > Andhra Pradesh > Odisha.
  - It is mainly concentrated in eastern India because of the rich alluvial soil of Ganga-Brahmaputra delta.
- The world's **largest jute producing countries** are **India, Bangladesh, China and Thailand**.
  - **India is the world's largest producer** of raw jute and jute goods, contributing to over 50% and 40% respectively of global production.
- It is known as the **golden fibre** because it is one of the longest and most used natural fibre for various textile applications.
- It is **used in making** gunny bags, mats, ropes, yarn, carpets and other artefacts.
- Due to its high cost, it is **losing market to synthetic fibres and packing materials**, particularly nylon.



## SERB-POWER Scheme

### Why in News

Recently, the Union Minister for Science and Technology has launched **SERB-POWER (Promoting Opportunities for Women in Exploratory Research) Scheme**, which has two components of fellowship and research grants.

- The **Science and Engineering Research Board (SERB)**, is a **statutory body of the Department of Science and Technology (DST)**, Government of India.

### Key Points

- It is a scheme designed **exclusively for women scientists to mitigate gender disparity in science and engineering research** in various science and technology (S&T) programmes in Indian academic institutions and **research and development (R&D)** laboratories.
- It will serve as a **benchmark of recognition in the national scenario** and will **empower women scientists** and **cultivate a women-friendly culture** and **ensure more women in leadership positions** in decision-making bodies.
- **SERB-POWER Fellowship:**
  - **Target:**
    - Women researchers in 35-55 years of age.

Note:



- Up-to 25 Fellowships per year and not more than 75 at any point in time.
- **Components of Support:**
  - Fellowship of Rs. 15,000/- per month in addition to regular income.
  - Research grant of Rs. 10 lakh per annum.
  - Overhead of Rs. 90,000/- per annum.
- **Duration:**
  - Three years, without the possibility of extension. Once in a career.
- **SERB-POWER Research Grants:**
  - **Funding under Two Categories for up to 50 Power Grants:**
    - **Level I:** Up to 60 lakhs for three years for applicants from IITs, IISERs, IISc, NITs, Central Universities, and National Labs of Central Government Institutions.
    - **Level II:** Up to 30 lakhs for three years for applicants from State Universities/Colleges and Private Academic Institutions.
  - **Regulations:**
    - Grants will be regulated through **terms of reference conforming to SERB-Core Research Grant (CRG) guidelines.**

### Related Government Initiatives

- **Vigyan Jyoti Scheme:**
  - Launched by the DST, it aims 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.
- **Gender Advancement for Transforming Institutions Scheme:**
  - GATI Scheme will develop a **comprehensive charter and a framework for assessing gender equality** in STEM.
- **Knowledge Involvement in Research Advancement through Nurturing Scheme:**
  - Started by the DST, KIRAN scheme **aims to bring gender parity** in the S&T sector by inducting more women talent in the R&D domain.
- **Beti Bachao Beti Padhao Scheme:**
  - BBBP Scheme is the **joint initiative** of the Ministry of Women and Child Development, Ministry of Health and Family Welfare and Ministry of

Human Resource Development to ensure survival, protection, and empowerment of the girl child.

### ➤ National Science Day 2020:

- It was celebrated on **28<sup>th</sup> February 2020** with the theme '**Women In Science**'.
- Dr Niti Kumar, a senior scientist from the **Council of Scientific and Industrial Research-Central Drug Research Institute (CSIR-CDRI)**, Lucknow received **SERB Women Excellence Award-2020** on this occasion.

## National Unity Day 2020

### Why in News

Every year, the **National Unity Day** (Rashtriya Ekta Diwas) is celebrated on **31<sup>st</sup> October** to commemorate the birth anniversary of **Sardar Vallabhbhai Patel**.

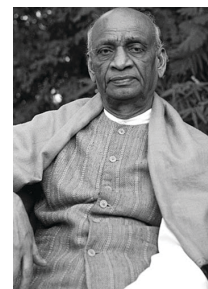
- The Prime Minister launched the **seaplane service** from Ahmedabad to the **Statue of Unity**, Kevadia.

### Key Points

- The day was **celebrated for the first time in 2014**, when the Government of India decided to celebrate Patel's birthday as the National Unity Day to recognise his monumental contribution and service to the nation.
- On this day, several events like Run For Unity, a nationwide marathon to increase awareness about Patel's contributions, National Unity pledge, Ekta Parade, etc. are organised.
- In **2018**, the Government unveiled the **Statue of Unity** in Gujarat in Patel's honour.
  - It is the **tallest statue (182-meter) in the world.**
  - In January 2020, it was added in the '**Eight Wonders**' of the **Shanghai Cooperation Organisation (SCO)**.

### Sardar Vallabhbhai Patel

- **Born:** 31<sup>st</sup> October 1875 in Nadiad, Gujarat.
- **Achievements:**
  - First Home Minister and Deputy Prime Minister of India.
  - **Headed various Committees of the Constituent Assembly of India**, namely:
    - Advisory Committee on Fundamental Rights.



Note:

- Committee on Minorities and Tribal and Excluded Areas.
- Provincial Constitution Committee.
- Integrated the farmer's cause in Kheda Satyagraha (1918) and Bardoli Satyagraha (1928) with the national freedom movement.
- **Women of Bardoli bestowed the title 'Sardar'** on Vallabhbhai Patel, which means 'a Chief or a Leader'.
- Known as the **"Iron Man of India"** for playing an important role in unification and **integration of Indian princely states** into the Indian federation and for convincing princely states to align with the Indian Union.
- Requested the people of India to **live together by uniting (Ek Bharat)** in order to **create a foremost India (Shresth Bharat)**.
- This ideology still reflects in the **Atmanirbhar Bharat** initiative which seeks to make India self-reliant.
- Remembered as the **'Patron Saint of India's Civil Servants'** as he **established the modern all-India services system**.
- **Death:** 15<sup>th</sup> December 1950 in Bombay.

## World Polio Day 2020

### Why in News

Every year, **24<sup>th</sup> October** is observed as **World Polio Day** in order to call on countries to stay vigilant in their fight against the disease.

- It was established to **commemorate the birth of Jonas Salk**, who developed an **Inactivated** (killed) **Polio Vaccine** (IPV).

### Key Points

- In the last three decades, the **Global Polio Eradication Initiative** (GPEI), led by national governments and the **World Health Organisation** (WHO), has been monitoring the disease situation globally.
- As per the WHO, **since 1980**, the cases of wild poliovirus have **decreased by over 99.9%** as a result of vaccination efforts made around the world.
- **Polio Eradication:**
  - For a country to be declared polio-free, the **wild**

**transmission of all three kinds of Polioviruses** has to be stopped.

- For **eradication**, cases of both wild and vaccine-derived polio infection **have to be reduced to zero**.
  - **Eradication** of a disease refers to the **complete and permanent worldwide reduction to zero new cases** through deliberate efforts. If a disease has been eradicated, **no further control measures are required**.
  - However, **elimination** of a disease refers to reduction to zero or a very low defined target rate of new cases in a defined geographical area. It requires **continued measures to prevent re-establishment** of disease transmission.

### Recent Outbreaks:

- In **2019**, polio outbreaks were **recorded in the Philippines, Malaysia, Ghana, Myanmar, China, Cameroon, Indonesia and Iran**, which were mostly **vaccine-derived** in which a **rare strain of the virus genetically mutated** from the strain in the vaccine.
- According to the WHO, if the oral vaccine-virus is excreted and allowed to circulate in an unimmunised or under-immunised population for at least 12 months, it can mutate to cause infections.
- **Afghanistan and Pakistan** are the two countries that are the **last stronghold of the wild poliovirus**.
- **Polio in India:**
  - **India received polio-free certification by the WHO in 2014**, after three years of zero cases.
  - This achievement has been spurred by the successful **pulse polio campaign** in which all children were administered polio drops.
  - The **last case** due to wild poliovirus in the country was **detected on 13<sup>th</sup> January 2011**.

### Polio

#### ➤ About:

- Polio is a **crippling and potentially deadly viral infectious disease** that affects the nervous system.
- There are **three individual and immunologically distinct wild poliovirus strains**:
  - Wild Poliovirus type 1 (WPV1)
  - Wild Poliovirus type 2 (WPV2)
  - Wild Poliovirus type 3 (WPV3)

Note:

- **Symptomatically**, all three strains are **identical**, in that they cause irreversible paralysis or even death.
- However, there are **genetic and virological differences**, which make these three strains separate viruses which must each be eradicated individually.
  - **WPV2 and WPV3 have been eradicated globally** but **WPV1 remains in circulation in Afghanistan and Pakistan**.
    - WPV2 was **eradicated in 1999**.
  - World Polio Day **2019** marked a milestone in polio eradication as the independent **Global Commission for the Certification of Poliomyelitis Eradication (GCC)** declared **WPV3 to be globally eradicated**.
- **Spread:**
  - The virus is **transmitted by person-to-person** mainly **through the faecal-oral route** or, less frequently, by a common vehicle (for example, through contaminated water or food).
  - It largely **affects children under 5 years of age**.
  - The virus **multiplies in the intestine**, from where it can **invade the nervous system** and can **cause paralysis**.
- **Symptoms:**
  - Most people with polio **do not feel sick**. Some people have only **minor symptoms**, such as fever, tiredness, nausea, headache, nasal congestion, sore throat, cough, stiffness in the neck and back, and pain in the arms and legs.
  - In **rare cases**, polio infection causes **permanent loss of muscle function** (paralysis).
  - Polio can be **fatal if the muscles used for breathing are paralysed** or if there is an infection of the brain.
- **Prevention and Cure:**
  - There is **no cure**, but it can be **prevented through immunisation**.
- **Vaccines:**
  - **Oral Polio Vaccine (OPV)**: It is given orally as a birth dose for institutional deliveries, then primary three doses at 6, 10 and 14 weeks and one booster dose at 16-24 months of age.
  - **Injectable Polio Vaccine (IPV)**: It is introduced as an **additional dose along with the 3<sup>rd</sup> dose of DPT** (Diphtheria, Pertussis and Tetanus) under the **Universal Immunisation Programme (UIP)**.

## World Food Day

### Why in News

**World Food Day** is celebrated to commemorate the establishment of the **United Nation's Food and Agriculture Organisation (FAO)** on **16<sup>th</sup> October 1945**.

- The Prime Minister of India released a **commemorative coin of Rs. 75 denomination** to mark the **75<sup>th</sup> Anniversary of the FAO**.
- FAO is a **specialised agency of the United Nations** that leads international efforts to defeat hunger.

### Key Points

#### ➤ About World Food Day:

- It is observed **annually on 16<sup>th</sup> October** to address the problem of global hunger.
- It emphasises on the **Sustainable Development Goal 2 (SDG 2)** i.e. **Zero Hunger**.
- **Theme for 2020: "Grow, Nourish, Sustain. Together."**
  - There has been a renewed focus on food, **nutrition**, health, immunity and sustainability due to the unprecedented challenges posed by the **Covid-19 pandemic**.

#### ➤ 75<sup>th</sup> Anniversary of FAO:

- Over the years, FAO has **helped to increase agricultural production and eradicate hunger all over the world**, including India and has played an important role in increasing nutrition.
- **2020's Nobel Peace Prize** to the **World Food Programme** is also a major achievement for the FAO as the programme was started by FAO.

#### ➤ Indian Context:

- FAO has closely watched **India's fight against malnutrition** in the past decades but its scope had many constraints.
  - **Due to reasons such as** pregnancy at a young age, lack of education and information, inadequate access to drinking water, lack of cleanliness, etc. **India is lagging behind in achieving the expected results of "malnutrition free India" by 2022**, envisaged under the **National Nutrition Mission (POSHAN Abhiyaan)**.
- India is thankful to FAO for **fully supporting India's proposal to declare 2023 as the International Year of Millets**.

Note:



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- The move will **encourage intake of nutritious food, increase their availability** further and **benefit small and medium farmers** who mostly grow coarse grains on their land where there is a problem of water and the land is not so fertile.

### Highlighted Indian Initiatives

- **Eat Right India** and **Fit India Movement** along with **Swachh Bharat Abhiyan, Jal Jeevan Mission** and other efforts will improve the health of Indians and heal the environment.
- **Introduction of 17 new biofortified varieties of crops** to overcome the shortcomings of the common variety of crops which lacks important micronutrients.
  - Example: **MACS 4028 Wheat, Madhuban Gajar**, etc.
- **Increased ambit and effective implementation of the Food Security Act, 2013.**
- **Amendments to the APMC (agricultural produce market committee) Acts** to make them more competitive.
- Steps to ensure that farmers get one and a half times the cost as **Minimum Support Price (MSP)**, which along

with the government procurement, is an important part of ensuring the country's food security.

- Development of a large network of **Farmer Producer Organisations (FPOs)**.
- **Amendments in the Essential Commodities Act, 1955** to deal with the issue of grain wastage in India.
- Government is making efforts to **make India Trans Fat free by 2022**, a year ahead of the **World Health Organisation (WHO)** target, in synergy with the vision of **New India @ 75** (75 years of India's independence).
  - **Trans Fat** is a **food toxin** present in **Partially Hydrogenated Vegetable Oils (PHVOs)** (e.g. vanaspati, shortening, margarine, etc.), baked and fried foods.
  - It is a major **contributor to the rise in non-communicable diseases** in India and also a modifiable risk factor for **cardiovascular diseases (CVD)**. Eliminating CVD risk factor is especially relevant during Covid-19 as **people with CVD are predisposed to have serious conditions** having an impact on mortality.

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Note:



# Economic Scenario

## Highlights

- *GST Compensation: Centre to Borrow on Behalf of States*
- *RBI's Annual Report on State Finances*
- *Forex Reserves*
- *Heeng Cultivation Project in India*
- *Fertiliser Subsidy*
- *International Day for the Eradication of Poverty 2020*
- *Expansion of Production-Linked Incentive Scheme*
- *Credit Suisse Global Wealth Report*
- *Antitrust Case Against Google: USA*
- *Economic Performance Comparison Between India and China*
- *CPI-IW Base Year Revised to 2016*
- *Multimodal Logistics Park in Assam*
- *Compound Interest Waiver on Moratorium Loans*
- *World Economic Outlook: IMF*
- *India-Australia Circular Economy Hackathon*
- *Depreciation of Rupee*
- *Quarterly Periodic Labour Force Survey*

## GST Compensation: Centre to Borrow on Behalf of States

### Why in News

Recently, the Centre has decided to borrow an estimated revenue shortfall of Rs. 1.1 lakh crore as loans to States to meet the **Goods and Services Tax (GST)** shortfall.

### Key Points

#### ➤ Borrowing:

- The borrowing **will not have any impact on the fiscal deficit of the Government of India** as the Centre is acting as mediator only. The Centre is borrowing the loan and passing that on to the states.
- The **amounts will be reflected as the capital receipts of the state governments** and as part of financing of its respective fiscal deficits.

#### ➤ Background:

- The **economic slowdown had reduced both GST and cess collections** in FY 2019-20, resulting in a 40% gap (shortfall) between the compensation paid and cess collected.
- The state's **GST revenue gap in 2020-21** is expected to be about Rs. 3 lakh crore, while **cess collections** are only projected to reach Rs. 65,000 crore, leaving a **shortfall of Rs. 2.35 lakh crore.**

- The Centre **distinguished the GST shortfall into two types:**

- Due to GST implementation itself.
- Caused by the impact of **Covid-19.**

- The Finance Minister termed the fall of GST revenue due to Covid-19 as an **act of God**. However, the **GST Compensation Act, 2017** did not foresee an act of God.

- The GST Compensation Act, 2017 **guaranteed states that they would be compensated for any loss of revenue in the first five years of GST implementation**, until 2022, using a **cess levied on sin and luxury goods.**

- The Centre has been at loggerheads with many states over the compensation issue due to GST shortfall. In August 2020 at **GST Council** meet, the **Centre had proposed two options to states to meet the shortfall:**

- A special window could be provided, in consultation with the **Reserve Bank of India (RBI)**, so that the states can get Rs. 97,000 crore at a reasonable rate of interest, the amount can be repaid after five years (of GST implementation) ending 2022 from cess collection.
- Another option is that this entire gap of Rs. 2.35 lakh crore can be met by the borrowing by the states in consultation with RBI.

- However, many states were against these two

Note:



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options and were planning to move the Supreme Court over the issue.

➤ **Benefits:**

- The borrowing by the Centre would **avoid differential rates of interest** that individual states may be charged for their respective **State Development Loans (SDLs)** and would be an **administratively easier arrangement**.
- The **country's general government debt**, which includes both the Centre's and States' borrowings **will not increase due to this step**.
- The States that get the benefit from the Special Window are likely to borrow a considerably lesser amount from the additional borrowing facility of 2% of Gross State Domestic Product under **Atmanirbhar Package**.
  - The borrowing limits of state governments was increased from 3% to 5% of GSDP for the year 2020-21 under **Atmanirbhar Package**.

**Goods And Services Tax**

- GST was introduced through the **101<sup>st</sup> Constitution Amendment Act, 2016**.
- It is an **indirect tax** levied on the supply of final goods and services. The GST has **subsumed indirect taxes** like excise duty, Value Added Tax (VAT), service tax, luxury tax etc.
- It is essentially a **consumption tax** and is levied at the final consumption point.
- It is **levied only on the value addition** and is collected on goods and services at each point of sale in the supply line.
- The GST that a merchant pays to procure goods or services (i.e. on inputs) can be **set off** later against the tax applicable on supply of final goods and services. The set off tax is called **input tax credit**.
- The GST avoids the cascading effect or tax on tax which increases the tax burden on the end consumer.
- **Tax Structure under GST:**
  - **Central GST** to cover Excise duty, Service tax etc, **State GST** to cover VAT, luxury tax etc.
  - **Integrated GST** to cover inter-state trade.
    - IGST per se is not a tax but a system to coordinate state and union taxes.
  - It has a **4-tier tax structure** for all goods and services under the slabs- **5%, 12%, 18% and 28%**.

## RBI's Annual Report on State Finances

### Why in News

Recently, the **Reserve Bank of India (RBI)** has released its **annual report on state finances**.

### Key Points

- **Covid-19 Impact:** The double whammy (also termed as **scissor effect**) of the **Covid-19 pandemic**, a **collapse in revenue** and **rise in health-related and other costs**, is likely to have a significant impact on state government finances.
- **Fiscal Deficit:** As most states presented their budgets before the onset of the pandemic, their budget estimates of deficits are **unlikely to capture the true picture of the ongoing fiscal year (2020-21)**.
  - The **average value of gross fiscal deficit to Gross State Domestic Product (GSDP)** for the states which presented their budget before the outbreak of the pandemic is **2.4%**, while the **average for the remaining states** that made post-outbreak budget presentations is **4.6%**.
  - This indicates that the **gross fiscal deficit of states is going to double for the 2020-21 period**.
    - **Fiscal Deficit** is the difference between the total income of the government and its total expenditure.
- **Capital Spending:** Capital spending by the states is going to be **lower than budgeted levels** this year. Also, States may treat **capital expenditure as a residual element**.
  - Lower spending is a result of states **not being able to start a lot of projects** due to the **lockdown** in the first quarter and **monsoon** in the second quarter.
  - Capital expenditure undertaken by states is generally treated as a residual and is **prone to adjustment, conditional upon revenue generation**.
    - Capital expenditure is the **money spent on the acquisition of assets like land, buildings, machinery, equipment**, as well as **investment in shares**.
    - It accounts for **more than 60% of general government (centre + states) capital expenditure**.
- **Tax Buoyancy:** The implied tax buoyancy for **2020-21 is higher than budgeted** on the basis of 2019-20 revised estimates.

Note:



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- Tax buoyancy is the **ratio of change in taxes and GSDP** (Gross State Domestic Product). **Higher tax buoyancy implies that tax collection would rise at a faster pace for the same rise in incomes.**
- **GST Revenue: States Goods and Service Tax (SGST)**, the component of the **GST**, which accrues directly to the states, **would suffer the biggest hit.**
  - SGST collections **fell by 47.2%** during the April-June 2020-21 quarter.
  - State receipts will also **suffer because of a fall in the divisible pool of the Centre's tax revenue.**
- **Overall Impact:**
  - **States' indebtedness is set to rise**, and if it is not accompanied by an acceleration in growth, fiscal sustainability will become the casualty, overwhelming the modest gains of the prudence in recent years.
  - Due to a **surge in contingent liabilities** (guarantees), **state governments may have to put investment projects on hold.**
  - To give a **boost to aggregate demand**, state governments are **reducing various kinds of expenditure.** These include deferment and deduction of salaries and allowances and rationalisation of travel and establishment expenses.

## Forex Reserves

### Why in News

According to the **Reserve Bank of India (RBI)** data, the country's **foreign exchange (forex) reserves touched a lifetime high of USD 555.12 billion** after it surged by USD 3.615 billion in the week ending on 16<sup>th</sup> October 2020.

### Key Points

- **Reason Behind the Increase:**
  - The rise in total reserves was **due to a sharp rise in Foreign Currency Assets (FCAs)**, a major component of the overall reserves.
  - **FCA jumped by USD 3.539 billion** to USD 512.322 billion.
- **Foreign Exchange Reserves:**
  - These are **assets held on reserve by a central bank** in foreign currencies, which can include bonds, treasury bills and other government securities.

- It needs to be noted that **most foreign exchange reserves are held in USDs.**
- These assets **serve many purposes** but are most significantly held to ensure that the central bank **has backup funds** if the national currency rapidly devalues or becomes altogether insolvent.

### India's Forex Reserves Include

- **Foreign Currency Assets:**
  - FCA are assets that are **valued based on a currency other than the country's own currency.**
  - It is the **largest component of the forex reserve.** It is **expressed in dollar terms.**
  - It includes **the effect of appreciation or depreciation of non-US units** like the Euro, Pound and Yen held in the forex reserves.
    - **Currency appreciation** refers to the increase in value of one currency relative to another in the forex markets.
    - **Currency depreciation** is a fall in the value of a currency in a floating exchange rate system.
    - In a **floating exchange rate system**, market forces (based on demand and supply of a currency) determine the value of a currency.
- **Gold**
- **Special Drawing Rights:**
  - These are an **international reserve asset**, created by the **International Monetary Fund (IMF)** in 1969 to supplement its member countries' official reserves.
  - It is **neither a currency nor a claim on the IMF.** Rather, it is a potential claim on the freely usable currencies of IMF members. SDRs can be exchanged for these currencies.
  - The value of the SDR is calculated from a weighted basket of **major currencies**, including the USD, Euro, Japanese Yen, Chinese Yuan, and British Pound.
  - The **interest rate on SDRs or SDRi** is the interest paid to members on their SDR holdings.
- **Reserve position with the IMF:**
  - A **reserve tranche** position implies a **portion of the required quota of currency each member country must provide to the IMF** that can be utilized for its own purposes.
  - The reserve tranche is basically an **emergency account** that IMF members can access at any time without agreeing to conditions or paying a service fee.

Note:



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## Heeng

### Cultivation Project in India

#### Why in News

Scientists at **CSIR-Institute of Himalayan Bioresource Technology (IHBT), Palampur** are on a mission to grow **heeng** (asafoetida) in the **Indian Himalayas**.

- IHBT is the only laboratory of the **Council of Scientific and Industrial Research (CSIR)** in Himachal Pradesh.

#### Key Points

- **Heeng:**
  - It is a **herbaceous plant** of the umbelliferae family. It is a **perennial plant** whose **oleo gum resin** is extracted from its **thick roots and rhizome**. The plant stores most of its nutrients inside its deep fleshy roots.
  - It is **endemic to Iran and Afghanistan**, which are also the **main global suppliers of it**. It is very popular in India and is used in cooking.
  - **Climatic Condition:** It thrives in dry and **cold desert conditions**. The plant can withstand a maximum temperature between 35 and 40 degree, whereas during winters, it can survive in temperatures up to minus 4 degree.
    - Regions with **sandy soil, very little moisture and annual rainfall of not more than 200mm** are considered conducive for heeng cultivation.
    - During extreme weather, the plant can get dormant.
  - **Properties:** It has **medicinal properties**, including relief for digestive, spasmodic and stomach disorders, asthma and bronchitis.
    - The herb is used to help with painful or excessive bleeding during menstruation and premature labour.
- **India's Heeng Cultivation Project:**
  - Heeng is **not cultivated in India**. India imports about 1,200 tonnes of raw heeng worth Rs. 600 crore **from Iran, Afghanistan and Uzbekistan**.
  - In 2017, IHBT approached the **National Bureau of Plant Genetic Resources (NBPGR)** with an **experimental project idea** to cultivate heeng in the Indian Himalayas.

- In June 2020, the **IHBT inked a Memorandum of Understanding with the agriculture ministry of Himachal Pradesh** to jointly cultivate the heeng.
  - The agriculture ministry has identified **four locations in the Lahul-Spiti valley** and has distributed heeng seeds to seven farmers in the region.
- However, the **challenge** for the scientists is that **heeng seeds remain under a prolonged dormant phase** and the rate of **seed germination is just 1%**.

## Fertiliser Subsidy

#### Why in News

The Centre is **working on a plan to restrict the number of fertiliser bags** that individual farmers can buy during any cropping season.

#### Key Points

- **Fertiliser Subsidy:**
  - Farmers **buy fertilisers at Maximum Retail Prices (MRP) below their normal supply-and-demand-based market rates** or what it costs to produce/import them.
    - For example, the MRP of neem-coated urea is fixed by the government at Rs. 5,922.22 per tonne, whereas its average cost-plus price payable to domestic manufacturers and importers comes to around Rs. 17,000 and Rs. 23,000 per tonne, respectively.
  - The **difference**, which varies according to plant-wise production cost and import price, is **footed by the Centre as subsidy**, which goes to the companies.
  - The **MRPs of non-urea fertilisers are decontrolled or fixed by the companies**. However, the **Centre pays a flat per-tonne subsidy on these nutrients** to ensure reasonable prices.
    - The per-tonne subsidy ranges from Rs. 10,231 to Rs. 24,000 for different types of fertilisers.
  - **Decontrolled fertilisers retail way above urea**, as they **attract lower subsidy**.
    - In **April 2020**, the **Cabinet Committee on Economic Affairs (CCEA)** **cut the subsidy for non-urea fertilisers**, which was about 3% lower than the previous year.

Note:



➤ **Subsidy Mechanism:**

- From **March 2018**, a new **direct benefit transfer (DBT) system was introduced**, wherein subsidy payment to the companies would **happen only after actual sales to farmers by retailers**.
- Each retailer has a **point-of-sale (PoS) machine** linked to the Department of Fertilisers' **e-Urvarak DBT portal**. Anybody buying subsidised fertilisers is required to furnish their **Aadhaar** or **Kisan Credit Card (KCC)** number.
- **Only upon the sale getting registered on the e-Urvarak platform can a company claim subsidy**, with these being processed on a weekly basis and payments remitted electronically to its bank account.

➤ **Loophole:**

- Currently, the Centre follows a **"no denial" policy where anybody, non-farmers included, can purchase any quantity of fertilisers** through the PoS machines.
- It **allows for bulk buying by unintended beneficiaries**, who are not genuine or deserving farmers.
- There is a **limit of 100 bags that an individual can purchase at one time but it does not stop anyone from buying any number of times**.

➤ **Reason Behind the Restriction Plan:**

- The main motive is **to curb diversion**, which is natural **with any under-priced product**.
  - For example, urea whose basic MRP (excluding taxes and neem-coating cost) has been raised by hardly 11% since April 2010.
- Being super-subsidised, urea is always **prone to diversion for non-agricultural use**.
  - For example, it is used as a binder by plywood/particle board makers, cheap protein source by animal feed manufacturers or adulterant by milk vendors, apart from being smuggled to Nepal and Bangladesh.

➤ **Proposed Measures:**

- Discussions are going on to **cap the total number of subsidised fertiliser bags that any person can buy during an entire Kharif or Rabi cropping season**.
  - It is expected that it would **end even retail-level diversion** and purchases by large buyers masquerading as farmers.
- A **reasonable cap** for a total of 100 bags only once **would easily cover the seasonal requirement** of a

20-acre farmer. Those **wanting more can well afford to pay the unsubsidised rates** for the extra bags.

➤ **Other Associated Costs to the Farmers:**

- Apart from fertilisers, there are **other things for which farmers need to pay** like **Goods and Service Tax (GST)** and other taxes on inputs.
  - It ranges from **12%** on tractors, agricultural implements, pumps and drip/sprinkler irrigation systems to **18%** on crop protection chemicals.
  - Fertiliser itself is taxed at **5%**.
  - **Excise and value-added tax** on diesel.
- And since there's **no GST on farm produce**, farmers **cannot claim any input tax credit on their sales**, unlike other businessmen.

## International Day for the Eradication of Poverty 2020

### Why in News

Every year **17<sup>th</sup> October** is observed as International Day for the eradication of Poverty.

- Its observance started in **1992** with the adoption of **UN resolution**.
- The **theme** for the year 2020 is **"Acting Together to Achieve Social and Environmental Justice for All"**

### Key Points

- **Poverty Trends:** More than 90 % countries have reported a **dip in per capita income** because of **Covid-19** and the ensuing economic disruptions.
  - **More than 115 million new poor** have been added to the world, and their spread is universal, from the rich Europe to the already poor Asia and from rural to urban areas.
  - According to the latest **"Poverty and Shared Prosperity Report"** by the world bank, the Covid-19 pandemic is estimated to push an additional 88 million to **115 million** people into extreme poverty this year, with the total rising to as many as **150 million by 2021**.
- **Beyond Income Poverty:** India and Nigeria are two countries that host the world's largest number of poor. Here, the poor live in **very ecologically fragile areas**. This makes poverty **not alone an income related aspect** as economists and politicians consider.

Note:



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### ➤ The Ecology of Poverty:

- In India, the **poorest regions** are invariably the **forested areas** of the country in states like Chhattisgarh, Jharkhand and Madhya Pradesh.
  - Some **275 million people** in India depend on forest for subsistence. In the country's poorest regions, forests provide up to **30 % of their total income**. This is more than agriculture and other sources of income.
- At the global level, just **five countries—India, Bangladesh, Nigeria, Ethiopia and the Democratic Republic of Congo**—account for **half of the extreme poor** in the world. Paradoxically, the above five countries, barring Congo, are also witnessing rapid economic growth.
- Various estimates say **the natural capital accounts for 9 % of wealth globally**, but it accounts for **47 % of the wealth in low income countries**. This shows the **dependence of people on natural resources** in developing and poor countries.
  - **Poverty and Forest Dependence:**
    - A Food and Agriculture Organization (FAO) study shows that more than a billion people are forest-dependent, and most of them are below the poverty line. Most of them are in **Africa and Asia**.
- **The Geography of Poverty:** The more the reliance on ecology/nature for survival, higher is the probability to be poor due to modern urban development.
  - **Regional Shift:** In 1990, half of the world's poor lived in **East Asia and the Pacific**. At present, **sub-Saharan Africa and South Asia** host over **85 % of the poor** in the world. Further, **26 of the world's 27 poorest countries** are in sub-Saharan Africa.
    - In these regions, three-fourths of the total poor live in **rural areas**.
      1. These places have a **highly degraded ecology** (due to increasing exploitation of natural resources for development). Most of the poor depend on natural resources like land, forests and livestock for survival. So, for them, the economy is all about ecology. Degradation of the ecology, thus, **leads to poverty**.
- **Ecology and Entitlement:** According to the **International Union of Forest Research Organizations**, forestry

contributes at least **\$ 539 billion** directly to the world Gross Domestic Product (GDP).

- **Development** has come with a heavy cost to the ecology. For instance, the latest **the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) global assessment** reported a decline in nature's contributions to people **since 1970**.
  - It clearly said that "extraction of provisioning services has increased, while provision of regulating and maintenance services has declined".
- According to a study by **the United Nations Environment Programme (UNEP)** (covering 140 countries), the globally produced capital per head doubled and human capital per head increased by about 13%, but the **value of the stock of natural capital per head declined by nearly 40% in 1992-2014**.
  - It means those who depend on the environment witnessed a **decline in their assets thus triggering poverty**.

## Expansion of Production-Linked Incentive Scheme

### Why in News

The government will extend the **production-linked incentive (PLI) scheme** to eight more sectors to boost domestic manufacturing.

### Key Points

- PLI Scheme is an **outcome- and output-oriented scheme** where incentives will be paid only if the manufacturers make the goods.
- This scheme will give **cash incentives for five to seven years** and all the **sunrise and important sectors** are proposed to be covered in this.
  - The sectors **may be** automobile, networking products, food processing, advanced chemistry and solar PV manufacturing.
- **Need:**
  - Sunrise sectors are promising sectors but they may need support in the initial stage.
  - Export base can be developed in sectors under PLI scheme.

Note:

- There is a growing demand in the world for diversification in supply chains and India can become a major player.
- With the view to make India a manufacturing hub, the government **launched the PLI scheme for mobile phones** (electronic manufacturing) and it was **extended to pharma products and medical equipment sectors**.

### **PLI Scheme for Large Scale Electronics Manufacturing**

- The scheme proposes a financial **incentive** to boost domestic manufacturing and attract large investments in the electronics value chain including **electronic components and semiconductor packaging**.
- Under the scheme, electronics manufacturing companies will get an **incentive of 4 to 6% on incremental sales (over base year) of goods manufactured in India** for a period of next 5 years.
- The scheme **shall only be applicable for target segments** namely mobile phones and specified electronic components.
- The government estimates that with the PLI scheme, **domestic value addition for mobile phones is expected to rise to 35-40% by 2025** from the current level of 20-25% and **generate additional 8 lakh jobs**, both direct and indirect.
- The production of mobile phones in the country has surged eight-times in the last four years from around Rs. 18,900 crore in 2014-15 to Rs 1.7 lakh crore in 2018-19.

## **Credit Suisse Global Wealth Report**

### **Why in News**

Recently, **Credit Suisse** has released the **Global Wealth Report 2020**.

- Credit Suisse is a **financial services company** based in Switzerland.
- The Credit Suisse Global Wealth Report provides the most comprehensive and up-to-date coverage of information on household wealth worldwide.

### **Key Points**

- **Global Scenario:**

- In **2019**, total global **wealth rose by USD 36.3 trillion** and wealth per adult reached USD 77,309, which is 8.5% more when compared to 2018.
  - As a consequence, the world has been better placed to absorb any losses from **Covid-19** during 2020.
- However, total **household wealth dropped by USD 17.5 trillion** between January and March 2020, a **4.4% decrease** compared to the value at the end of 2019.
  - **Asia Pacific** is the **highest contributor of household wealth**.
- **Female workers have suffered disproportionately**, partly because of their high representation in businesses and industries such as restaurants, hotels, personal service and retail that have been **badly affected by the pandemic**.
- **Indian Scenario:**
  - Household wealth in India is **dominated by property and other real assets**, although **financial assets** have grown over time, now forming 22% of gross assets.
    - **Stocks, bonds, bank deposits** are some examples of **financial assets**.
  - The average wealth of Indian adults **rose marginally** to USD 17,420 **at end-June 2020**, as against USD 17,300 as of December 2019, showing some growth **despite the Covid pandemic and lockdowns**.
  - **Wealth inequality remains quite high** in India.
    - There is **considerable poverty** reflected in the fact that **73% of the adult population had wealth below USD 10,000 at the end of 2019**.
    - At the other extreme, a **small fraction of the population (2.3% of adults)** had a net worth over USD 1,00,000.
      - With 4,593 **ultra-high-net-worth individuals** in the country as of end-2019, **India came in fourth after the USA, China and Germany**.
  - Between January and April 2020, **unemployment rates approximately tripled** in India to **24%**.

### **Challenges Related to Wealth Inequality in India**

- **Distinguishing Poor and Non-poor:** In developing countries such as India, despite having hundreds of pro-poor schemes, the biggest question is **whether such benefit is reaching the poor**.

Note:

- The real challenge is in **distinguishing the poor from non-poor**, particularly when such data are questionable.
- **Low Government Spending:** The **government spending on health, education and social protection** in the country is **low** and more often than not, subsidises the private sector.
- **Impact on Women:** The **burden of inequality continues to be borne by India's women**, they continue to be tasked with bearing the burden of care work, thus withholding their entry into the labour force.
- **Impact on Vulnerables:** While **traditionally vulnerable communities**, such as the Scheduled Castes and Scheduled Tribes, are catching up with the rest of society in primary education, they are falling further behind when it comes to advanced (12 years or more) education.
  - Most now have access to mobiles but few have computers. And too many people are still just one illness away from poverty, as per the **UNDP's 2019 Human Development Report (HDR)**.
- **Climate change** will only exacerbate the inequality.

## Antitrust Case Against Google: USA

### Why in News

Recently, the **US Justice Department** has sued Google, accusing the company of illegally **abusing its dominance in internet search** in ways that harm competitors and consumers.

- The lawsuit (or **antitrust action** against the company) comes after a **report by the US House of Representatives panel** that found **Google** and three other tech giants -- **Facebook Inc**, **Apple Inc** and **Amazon.com Inc** — all **abused their power as gatekeepers** in the digital economy to thwart competitive threats.

### Key Points

- **US Government's Stand:**
  - Google is **illegally protecting its dominant position in the market for search and search advertising with the deals** it has struck with companies like Apple.
    - Google pays Apple billions of dollars a year to have its search engine set as the default option on iPhones and other devices.

- **Challenges contracts** that Google has with smartphone makers that use Google's Android operating system, requiring them to install its search engine as the default.
- All this **stifles competition and innovation from smaller upstart rivals** to Google and **harms consumers** by reducing the quality of search and limiting privacy protections and alternative search options.
  - Many countries have broad laws that protect consumers and regulate how companies operate their businesses. The goal of these laws is to **provide an equal playing field for similar businesses** that operate in a specific industry **while preventing them from gaining too much power over their competition**. These are called **antitrust laws**.
- **Investigated Google's behavior and acquisitions in the overall market for digital advertising**, which includes search, web display and video ads.
  - Online advertising was the source of virtually all of Alphabet's USD 34 billion in profit last year. Alphabet Inc. is Google's parent company.
- **Most of Google's services are offered for free in exchange for personal information** that helps it sell its ads.
  - Goods that are free to consumers are **not exempt from antitrust oversight**.
  - In the **landmark Microsoft case of the late 1990s**, the software giant bundled its web browser for free into its dominant Windows operating system.
  - **Microsoft lost** because, using restrictive contracts, it bullied personal computer makers and others to try to prevent them from offering competing web browser software — competition that could have undermined the Windows monopoly.
- **Google's Defense:**
  - The **deals** that the Justice Department is citing are **entirely legal**. Such company-to-company deals violate antitrust law only if they can be shown to exclude competition.
    - Users can freely switch to other search engines, like Microsoft's Bing or Yahoo Search, anytime they want. Google's search service is the runaway market leader because people prefer it.

Note:



- Further, its services have **helped hold down the prices of smartphones**.
- **Report by the US House of Representatives panel:**
  - **Big Tech Companies** like Google, Facebook, Amazon and Apple **act as a “gatekeeper”**, i.e. can control access to information.
    - Gatekeepers can also decide whether a message will be spread to a wider audience.
  - These companies **not only wield tremendous power, but also abuse it** by charging exorbitant fees, imposing oppressive contract terms, and **extracting valuable data from the people** and businesses that rely on them.
  - Companies ran the marketplace for their respective domains, while also competing in it and to ensure they retain the number one position, the companies have **restored to “self-preferencing, predatory pricing, or exclusionary conduct”**.
    - **Self-preferencing** involves actions by an undertaking which are designed to favour its own products or services over those of its competitors.
    - **Predatory pricing** is an act of setting prices low in an attempt to eliminate the competition.
    - **Exclusionary conduct** is a conduct that creates or maintains monopoly power by disadvantaging and harming competitors.
- **Significance:**
  - The step is a **response** to the policy question of what measures, if any, should be taken to curb today’s tech giants, which hold the power to shape markets, communication and even public opinion.
  - The US Justice Department has come up with the **possibility of structurally breaking up Google**, and not just imposing conditions on its behavior as has happened in Europe.
    - Critics contend that multibillion-dollar fines and mandated changes in Google’s practices imposed by European regulators in recent years weren’t severe enough and that structural changes are needed for Google to change its conduct.

### Scenario in India

- **Various antitrust probes** are going on **against Google in India**. Google has had run-ins with regulators, especially the **Competition Commission of India (CCI)**.

- In the last two years, the **CCI has raised issues with Google’s commercial flight search option**, its **dominant position in the search marketplace**, the **abuse of its dominant position** in the Android phone and smart television market, and others.
  - In 2019, for example, **CCI had held Google guilty of misuse of its dominant position in the mobile Android market** and said the company had imposed “unfair conditions” on device manufacturers to prevent them from using other operating systems.
- Recently, Google has also been **accused of following a high and unfair commission mechanism for apps listed on its Play Store**.

### Antitrust Laws

- Antitrust laws are **regulations** that **monitor the distribution of economic power** in business, making sure that **healthy competition is allowed** to flourish and economies can grow.
- Antitrust laws **apply to nearly all industries and sectors**, touching every level of business, including manufacturing, transportation, distribution, and marketing.
- These **prohibit a number of business practices that restrain trade**. Examples of illegal practices are **price-fixing conspiracies, corporate mergers** that are likely to cut back the competitive fervor of certain markets, and **predatory acts** designed to gain or hold on to **monopoly power**.
- In India, **competition policy** has been implemented via the **Competition Act, 2002** which alongwith its amendment, establishes a **Competition Commission of India** to prevent anti-competitive practices, promote and sustain competition, protect the interests of the consumers and ensure freedom of trade in the markets in India.

## Economic Performance Comparison Between India and China

### Why in News

Recently, the September 2020 **Centre for Monitoring Indian Economy (CMIE) data** has been released which highlighted paradoxes in the economic recovery after

Note:



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the lockdowns in **India**. As per the data, **China has recorded growth** for the consecutive third quarter (July-September 2020).

- CMIE is a **leading business information company**. It was established in **1976**, primarily as an independent think tank.

### Key Points

#### ➤ Employment:

- The CMIE data shows that there is a revival in employment amid a fall in **labour force participation**.
  - The **labour force participation rate (LFPR)** is **defined** as the percentage of persons in the labour force (i.e. working or seeking or available for work) in the population.
- However, when more people find jobs a greater number should have come in looking for jobs normally.
- The unusual trend can be explained by a **rural-urban disaggregation of the data**. Rural India is seeing an increase in jobs due to post-harvest activity whereas employment in urban India is decreasing.
- Also, better quality and higher-paying jobs in urban areas are being lost and substituted by lower-paid rural jobs.
- This phenomenon points to the fact that a **reversal of migration back to the cities is not happening** to the extent that it should have.

#### ➤ Inflation:

- The supply-side shock due to lockdown has led to an increase in **headline inflation** mainly driven by an increase in food prices.
  - **Headline inflation** is a measure of the total inflation within an economy, including commodities such as food and energy prices.
- However, **the unexpected trend is the rise in core inflation** i.e. non-food, non-fuel inflation, that too during a period when growth is set to register a record contraction.
  - **Core inflation** is the change in the costs of goods and services but does not include those from the food and energy sectors.
- **Ideally, the collapse in demand** due to lockdown **should have triggered a drop in core inflation**.

#### ➤ Consumer Confidence:

- Another unexpected development is evident in the **Reserve Bank of India (RBI)**'s latest consumer confidence survey.

- The central bank's '**current situation index**' fell to an all-time low in September 2020 even as its 'forward-looking surveys' show that consumer confidence for the year 2020-21 has improved.

- **Current situation index** is a sub-index that measures overall consumer sentiment regarding the present economic situation.

- So even as the current situation of households has been progressively worsening, the survey points to households reporting better prospects for the future.

#### ➤ Growth:

- According to the recent **International Monetary Fund's (IMF) World Economic Outlook (WEO) report**, Indian economy is going to be the **worst affected** among the comparative countries like China, USA, Pakistan and Brazil.
- India is not only going to be worst-affected in the short term but also in the medium term.
- The IMF has also **doubled** the rate of **Gross Domestic Production (GDP)** contraction for India. However, globally the growth has become better.

#### ➤ China's Economic Performance:

- China's **economic growth continued to gain momentum in the third quarter**, with the GDP expanding 4.9% from a year earlier in the July-September 2020 period.
- China is witnessing an **increase in tourism, growth in industrial production and exports** that has generated revenue and jobs for millions of Chinese people. However, **consumption is yet to regain its normal pace** in China.
- The IMF has forecasted that China's economy will expand by 1.9% in 2020, making it the only major economy to register growth in the pandemic-hit year.
- The economic rebound follows China's broad return to normalcy in early months of 2020, following sweeping **Covid-19** curbs including stringent lockdowns, extensive contact tracing, and restrictions on international travel through the first half of the year.

Note:

## CPI-IW Base Year Revised to 2016

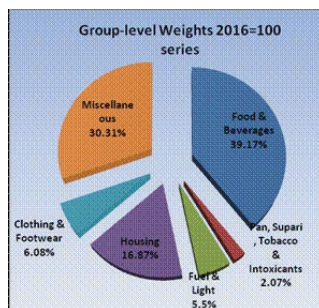
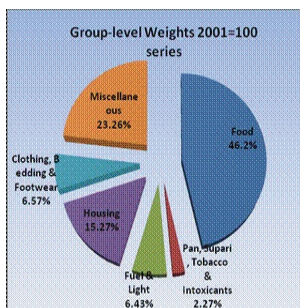
### Why in News

Recently, the **Ministry of Labour and Employment** has released the new series of the **Consumer Price Index for Industrial Worker (CPI-IW)** with the base year 2016.

- The new series has **replaced the existing series with the base year 2001.**
- Earlier, the series was revised from 1944 to 1949; 1949 to 1960; 1960 to 1982 and 1982 to 2001.

### Key Points

- The new series **covers the latest consumption pattern** of the target population.
- It gives **more weightage to spending on health, education, recreation** and other miscellaneous expenses while **reducing the weight of food and beverages.**
  - The weight of **spending on housing and clothing increased** from 15.2% to 17%.
  - The weight of **miscellaneous items, like education and health, rose** to 30.31% from 23.26%.
  - The weight of **food and beverage was reduced** from 46.2% to 39% and indicates an increase in disposable income.
- The number of **markets and the sample size** for working-class family income and expenditure surveys has **increased.**
  - The **sample size was increased** from 41,040 families to 48,384, also the number of **selected markets for collecting retail price data was increased** from 289 to 317.
- The **number of items in the index basket has increased** to 463 items as against 392 items in the 2001 series.



- The **Labour Bureau** is also working towards **revising the index every five years.**
- **Effect:**
  - The new series **would not have an immediate impact on the dearness allowance (DA)** as the **government has frozen their biannual hike** since January 2020 to offset the financial implications on the exchequer during the pandemic.
    - The DA, a **component of salary, is revised every six months to keep pace with the inflation rate.**
    - For **private-sector workers**, the central government and most states **increase the variable DA component of minimum wages twice a year based on the CPI-IW inflation numbers.**
  - However, the **change in base year** will certainly have an **effect on DA calculation by June 2021**, when the freezing on DA will come to end.

### Consumer Price Index for Industrial Worker

- CPI-IW is **mainly used for determining dearness allowance (DA)** paid to central/state government employees and workers in the industrial sectors besides **measuring inflation** in retail prices, **fixation and revision of minimum wages** in scheduled employments.
- CPI-IW is **compiled and maintained by the Labour Bureau**, an attached office of the Ministry of Labour and Employment.

### Consumer Price Index

- It measures price changes from the **perspective of a retail buyer.** It is released by the **National Statistical Office (NSO).**
- CPI calculates the difference in the price of commodities and services such as food, medical care, education, electronics, etc, which Indian consumers buy for use.
- It has several sub-groups including food and beverages, fuel and light, housing and clothing, bedding and footwear.
- At present, India has **five consumer price indexes, three of which are working-class specific.** These are:
  - **CPI for Industrial Workers (IW).**
  - **CPI for Agricultural Labourer (AL).**
  - **CPI for Rural Labourer (RL).**
    - These three indexes are compiled by the **Labour Bureau.**

Note:

- CPIs AL and RL are used to fix minimum wages of agricultural labourers and rural unskilled employees.
- The Labour Bureau is also expected to bring out the **new series of the CPI-AL/RL**, which currently has the base year of 1986-87 by August 2021.
- The other two are **CPI-Urban and CPI Rural**.
  - These two indexes are **compiled by the NSO** in the **Ministry of Statistics and Programme Implementation**.
  - The combined rise in retail prices is captured by **CPI Combined**.
- A committee set up by the **National Statistical Commission (NSC)** in 2005, under the recommendation of **Dr C Rangarajan Commission**, has suggested that CPI-Rural and CPI-Urban could be a substitute for CPI-AL/RL and CPI-IW, respectively.

## Multimodal Logistics Park in Assam

### Why in News

Recently, the Union Minister for Road Transport and Highways has laid the foundation stone for the **country's first Multimodal Logistics Park (MMLP) at Jogighopa in Assam**.

### Key Points

- **About the Park:**
  - These are being developed under the **Bharatmala Pariyojana** of the Government of India.
  - **Bharatmala Pariyojana** is an umbrella programme for the highways sector envisaged by the **Ministry of Road Transport and Highways**.
  - In order to reduce congestion on proposed economic corridors, enhance logistic efficiency and reduce logistics costs of freight movements, **35 locations** have been identified for development of **Multimodal Logistics Parks**.
  - It will have **direct connectivity** with **National Highway 17**, the **proposed Jogighopa waterway terminal on Brahmaputra**, the newly constructed **Rupsi and Guwahati airports** as well as the **main railway route**.

- India will be able to **establish trade with Bangladesh** through the Jogighopa waterway terminal
- It will have **all the facilities** like warehouses, railway siding, cold storage, custom clearance house, yard facility, workshops, petrol pumps, truck parking, administrative building, boarding lodging, eating joints, water treatment plant, etc.
- The park will **reduce trade cost by 10%** and have **cargo capacity of 13 million metric tons (MMT) per year**.
- It will serve as a **growth engine for the economic development of the state and the north-east** and provide direct/indirect employment to nearly 20 lakh people.
- **Background:**
  - **Logistics Sector:** According to the **Asian Development Bank (ADB)**, **logistics in India is expected to be a USD 215 billion industry in 2020**.
    - It is projected to expand through 2032 at a rate that is roughly 1.2 times the growth rate of India's **gross domestic product (GDP)** and generate USD 360 billion in value added.
  - **Infrastructure Status:** Logistics has been accorded "infrastructure" status in 2017, facilitating the availability of debt on easier terms and access to **external commercial borrowings**, longer tenor funds from insurance companies, and pension funds, as well as investment support.
  - **Challenges:**
    - At 13%-14% of India's GDP, **logistics costs are far higher** than the benchmark of 7%-8%.
    - India **ranked 44<sup>th</sup> in the World Bank Logistics Performance Index 2018**, which measures performance based on **six metrics** viz. customs, infrastructure, international shipments, logistics competence, tracking and tracing, and timeliness.
      - In India, each segment of logistics encounters significant challenges leading to **high cost and low efficiency**.
      - For example, road freight cost at Rs.1.9 per ton-kilometer is almost double than that in the USA, while the average speed of freight vehicles is about 50%-60% lower.
- **Related Government Initiatives:**
  - The Ministry of Commerce and Industry is considering **replacing the Multi-Modal Transportation of Goods**

Note:



**Act (MMTG), 1993 with a full-fledged national logistics law** with a view to promote growth in the sector.

- The **Logistics Wing** within the Department of Commerce, Ministry of Commerce and Industry, placed a **draft of the National Logistics Policy** in public domain in February 2019.
- **Objective:** To **bring down logistics cost** as a percentage of GDP to about 10%, **optimise the modal mix** (25%-30% share of road, 50%-55% railways, and 20%-25% waterways), improving **last mile connectivity**, and enhance the logistics value chain through **digitisation, standardisation, and modernisation of warehousing** among others.
- The development of MMLPs at strategic locations is envisaged as a key policy measure to rationalise cost of logistics in India and improve its competitiveness.
- **MMLPs serve five key functions:** freight aggregation and distribution, multimodal freight transport, integrated storage and warehousing, information technology (IT) support, and value-added services.

## Compound Interest Waiver on Moratorium Loans

### Why in News

Recently, the Government of India has announced the scheme for the **waiver of compound interest** that was payable by the borrower who had opted for **loan moratorium** between 1<sup>st</sup> March 2020 and 31<sup>st</sup> August 2020.

- In March 2020, the **Reserve Bank of India (RBI)** offered a **three-month moratorium on loans**, enabling borrowers to defer repayments on EMIs and other loans. This was later **extended by another three months**, till 31<sup>st</sup> August 2020.
- These moves were aimed at providing borrowers relief amid the economic impact of the **Covid-19 pandemic**.

### Key Points

- **Compound Interest Waiver Scheme:**
  - Under this, the government will grant **eligible borrowers ex-gratia payment** of the difference between the compound interest and simple interest for the six-month moratorium period.

## Festive respite

Banks will credit compound interest levied on loans up to ₹2 crore between March 1 and August 31 back to borrowers by November 5

### LOANS COVERED:

- Home
- Education
- Consumer durables
- Automobiles
- Credit card dues
- Loans to micro, small and medium enterprises

### CONDITION: Aggregate of all outstanding loans must not exceed ₹2 crore

- Eligible borrowers will get benefit irrespective of whether they availed the moratorium or not
- Lenders have been asked to set up grievance redressal system for the scheme within a week
- The government will reimburse banks and NBFCs after they credit loan accounts and submit claims



- **Ex-gratia payment** is the money which is paid due to moral obligation and not due to legal obligation.
- **Simple interest** is levied **only on the principal amount** of a loan or deposit. In contrast, **compound interest** is levied **on the principal amount and the interest** that accumulates on it in every period.

### ➤ Eligibility:

- The scheme shall be applicable for **loans availed by Micro, Small and Medium Enterprises (MSMEs)** as well as **loans to retail customers** for education, housing, consumer durables, automobiles, **provided a borrower has an aggregate outstanding loan of Rs. 2 crore or less**, from all such loans.
- **Credit card dues** have also been included in the scheme's ambit.
- The **loan interest waiver payment** shall be admissible, **irrespective of whether the borrower had availed the moratorium partly, fully, or not at all**.
- However, this would only be permitted for **loan accounts that had not been reported as Non-Performing Assets (NPAs)** as on 29<sup>th</sup> February 2020.
  - A loan is recorded as an NPA 90 days after repayments become overdue.
- **Effect:**
  - The **amount saved** through loan interest waiver **will be very small** because only the **interest that would have been charged on the interest of the original loan** during the six months moratorium period is waived off.

Note:



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- In other words, the **loan repayment will continue** and one will still need to pay the **simple interest** that would have paid if not opted for the loan moratorium.
  - It is only the **compounding interest that goes off**.
- **Implementation:**
  - Lenders have been asked to **set up a grievance redressal mechanism for eligible borrowers** under the scheme by **30<sup>th</sup> October 2020**.
  - A **mechanism** has also been put in place for **lenders to claim the amount back** from the government. Lenders have to **submit claims for reimbursement by 15<sup>th</sup> December 2020** through a special cell set up in the State Bank of India (SBI).

## World Economic Outlook: IMF

### Why in News

According to the **October update** of the **World Economic Outlook 2020**, India's **gross domestic product (GDP)** will witness a **contraction of over 10%**.

- This is more than the double of 4.5% contraction projected in the **April edition**.
- World Economic Outlook is a survey by the **International Monetary Fund (IMF)** which is usually **published twice a year** in the months of **April and October**.

### Key Points

- **Global growth** would **contract by 4.4% in 2020** and **bounce back to 5.2% in 2021**.
- **Indian economy**, severely hit by the **pandemic**, is projected to **contract by 10.3% in 2020**.
  - The spread of the **Covid-19** and containment measures have severely **disrupted supply and demand** conditions in India.
- However, **India is likely to bounce back with an 8.8% growth rate in 2021**, thus regaining the position of the fastest-growing emerging economy, **surpassing China's projected growth rate of 8.2%**.
  - Among the major economies, **China is the only country to show a positive growth rate of 1.9% in 2020**.

### India-Bangladesh Difference

- **GDP Comparison:** According to the IMF's forecasts, Bangladesh's per capita GDP

is expected to overtake India in 2020. **India is likely to grow faster in 2021** and in all likelihood again surge ahead.

- **Per Capita Income Comparison:** However, over the **five-year period ending in 2025**, Bangladesh's per capita GDP is expected to grow at a slightly higher pace, implying that **in 2025, its per capita income would be USD 2,756**, marginally higher than that of India's at USD 2,729.

- Given **Bangladesh's lower population growth and faster economic growth**, India and Bangladesh are **likely to be neck and neck** for the foreseeable future in terms of per capita income.

- **Comparison Method:**

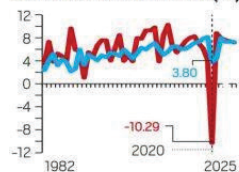
- Typically, countries are compared on the basis of **GDP growth rate**, or on **absolute GDP**.
- However, **per capita income** also involves another variable like the **overall population** and is arrived at **by dividing the total GDP by the total population**.

- **Major Trends:**

- For the most part since **Bangladesh's independence**, on both these counts, **India's economy has been better** than Bangladesh's.
  - India's economy has **mostly been over 10 times the size of Bangladesh** and grown faster every year.
- In **1991**, when India was undergoing a severe **financial crisis** and grew by just above 1%, **Bangladesh's per capita GDP surged ahead** of India's. Since then, India again took the lead.
- There are **three reasons** why **India's per capita income has fallen below Bangladesh in 2020**. These are as below:
  - **Growth Rates:** Since 2017 onwards, **India's growth rate has decelerated sharply while Bangladesh's has become even faster**.
    - Bangladesh's economy has been clocking rapid GDP growth rates since 2004. However, this pace

### UPS AND DOWNS IN TWO ECONOMIES

Chart 1: GDP GROWTH RATE (%)



Source: World Economic Outlook Report 2020

Chart 2: GDP (\$ billion)

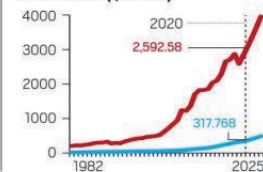
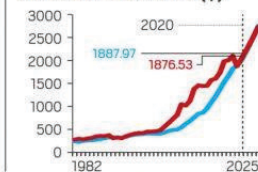


Chart 3: GDP PER CAPITA (\$)



Legend: Bangladesh (Blue line), India (Red line)

Note:



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did not alter the relative positions of the two economies between 2004 and 2016 because India grew even faster than Bangladesh.

- **Populations:** Over the same period, **India's population grew faster** (around 21%) than Bangladesh's population (just under 18%).
  - The **combined effect** of these two factors can be seen in how the **per capita GDP gap had closed considerably even before Covid-19**.
  - Bangladesh's per capita GDP was **merely half of India's in 2007** but this was just before the global financial crisis. It was **roughly 70% of India's in 2014** and this **gap closed rapidly** in the last few years.
- **Impact of Covid-19:** The **most immediate factor** was the **relative impact of Covid-19** on the two economies in 2020.
  - While India's GDP is set to reduce by 10%, Bangladesh's is expected to grow by almost 4%.

#### ➤ **Reasons Behind Bangladesh's Fast Growth:**

- **Independence from Pakistan:** It gave Bangladesh a chance to start afresh on its economic and political identity.
- **Less Stringent Labour Laws:** Labour laws were not as stringent and its economy increasingly involved women in its labour force, seen by the **higher female participation**.
- **Role of Garment Industry in Exports:** A key driver of growth was the garment industry where women workers gave Bangladesh the edge to corner the global export markets from which China retreated.
- **Industry and Services Led GDP:** Structure of Bangladesh's economy is such that its GDP is led by the industrial sector, followed by the services sector and both these sectors create a lot of jobs and are **more remunerative than agriculture**.
  - **India**, on the other hand, has **struggled to boost its industrial sector** and has far too many people **still dependent on agriculture**.
- **Improved Social and Political Metrics:** Over the past two decades, Bangladesh has improved on several social and political metrics such as health, sanitation, financial inclusion, and women's political representation.
  - For example, despite a lower proportion of the population having access to basic sanitation, the **mortality rate attributed to unsafe water**

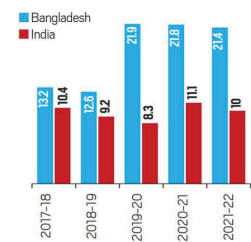
**and sanitation in Bangladesh is much lower than in India.**

- On financial inclusion, according to the **World Bank Global Findex database**, the **proportion of dormant bank accounts is quite small** when compared to India.
- Bangladesh is also far ahead of India in the latest **gender parity rankings**. Out of 154 countries mapped, Bangladesh is in the top 50 while India is at 112.
- Bangladesh with the 75<sup>th</sup> rank, is ahead of India, with 94<sup>th</sup> rank, in the **Global Hunger Index 2020**.

#### ➤ **India's Better Performance:**

- India's **level of poverty is much lower than that of Bangladesh's**.
  - According to the World Bank, poverty in Bangladesh is **expected to increase substantially** in the short term, with the **highest impact on daily and self-employed workers** in the non-agricultural sector and salaried workers in the manufacturing sector.
- India is far ahead of Bangladesh in **basic education parameters** and that is what explains its higher rank in the **Human Development Index**.
- India stands at the **63<sup>rd</sup> rank** while **Bangladesh is at the 168<sup>th</sup> rank**, out of total 190 countries in the **Ease of Doing Business 2020**.
- India is at the **48<sup>th</sup> position** while **Bangladesh ranked 116<sup>th</sup> among 131 economies** in the **Global Innovation Index 2020**.

Chart 4: PREVALENCE OF POVERTY



% of population living below the international poverty line of \$1.9/day  
Source: Informality and COVID-19 report by the World Bank

## India-Australia Circular Economy Hackathon

### Why in News

**Atal Innovation Mission** (AIM) in association with Australia's **Commonwealth Scientific and Industrial Research Organisation** (CSIRO), will organise **India-Australia Circular Economy Hackathon (I-ACE)**, a two-day hackathon on the circular economy, in December 2020.

Note:



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- Its idea was conceived during a **virtual summit**, held between the Prime Ministers of both countries on **4<sup>th</sup> June 2020**.

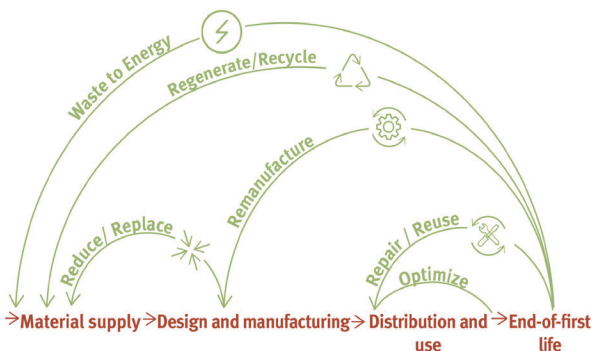
### Key Points

- **Focus: Identification and development of innovative technological solutions** by students, startups and **Micro, Small and Medium Enterprises (MSMEs)** of both nations.
- **Key Themes:**
  - Innovation in packaging, reducing packaging waste.
  - Innovation in food supply chains, avoiding waste.
  - Creating opportunities for plastic waste reduction.
  - Recycling critical energy metals and e-waste.
- **Selection of Winners:** Shortlisted students and startups/MSMEs will be called for the hackathon, where two winners (one student and one startup/MSME) per theme from each country will be announced at an award ceremony.
- **Prize:** Winning teams from both countries will get cash prizes. The winning Indian student and startup/MSME will be awarded a prize of Rs. 2 lakh and Rs 5 lakh, respectively, coupled with post-hackathon product development opportunities.

### Circular Economy

- **Meaning:** It is an economy where products are designed for durability, reuse and recyclability and thus almost everything gets reused, remanufactured, and recycled into a raw material or used as a source of energy.
- **Efficient Use of Resources:** It includes **3 Rs (Reduce, Reuse and Recycle)**, Refurbishment, Recover, and Repairing of materials.

- Linear supply chain
- Circular economy practices



- **Example:** If someone is planning to discard their mobile, it can be given to someone else for **Reuse** instead of throwing it just like that.
  - Once the mobile reaches its end of life, it can be ensured that everything embedded in it like aluminium, copper, plastic, etc. should be brought back to production cycle so that the circle of the economy gets completed.
- **Response to the Linear Process:** It has come **against and as a response to the linear economy**, in which raw materials are taken from the environment, turned into new products and then disposed of after use.
- **Benefits:**
  - **For Industry:**

### Circular Economy and India

- India is already on its path to the circular economy. Initiatives of the **National Productivity Council (NPC)** and government show that.
  - **NPC** is an autonomous organisation under the Ministry of Commerce and Industry.
  - **Key Initiatives:**
    - **Productivity Week 2019's theme** was 'Circular Economy for Productivity and Sustainability'.
    - **Digital India** contains a significant component of the recycling of electronic wastes.
    - **Swachh Bharat Mission** is also about making wealth out of wastes.
- India has a **huge potential for reuse and recycling** as only around 20% of the total waste generated goes into the recycling process.
- The **manufacturing sector, especially MSMEs can help** a lot in the transformation towards a circular economy. The sector should '**DECIDE**' i.e.
  - Designing processes for refurbishment and easy cycling.
  - Educating masses on Circular Economy and its benefits.
  - Collaborative models for smooth implementation of Circular Economy.
  - Innovating products for circularity.
  - Digitisation for transparency, virtualisation, dematerialisation, and feedback-driven intelligence for saving resources.
  - Energy-efficient for environmental sustainability.

Note:



- **Fulfills the need for raw materials:** The output produced by industries in a circular economy comes back to the industries in the form of input.
- **Efficient utilisation of resources:** This helps industries in earning cash profits equivalent to 3-5% of their turnover. Ultimately, **Quality, Cost, Delivery, and Flexibility (QCDF)** and **sustainability level** of industries get improved.
- **For Environment:**
  - **Problem of disposal of waste** gets solved as waste is converted into raw materials.
  - **Solves the problem of air, water and land pollution.**
- **For Consumers:**
  - **Cost-Effective:** Products are more **cost-effective** for consumers as they tend to be more efficient, besides having a longer shelf life.
- **Global Response:** **Germany and Japan** have used it as a binding principle for reorganising its economy, whereas **China even has a law** on it (**Circular Economy Promotion Law**).
- Further, the **Sustainable Development Goals (SDGs)** adopted by the **United Nations** Member States in 2015, include many related ambitions.

## Depreciation of Rupee

### Why in News

Recently, the Indian rupee depreciated below the 74 levels against the US dollar.

### Key Points

- The rupee depreciated by 16 paise to settle against the previous low of August 73.87 against the US dollar.
- The rupee depreciation is on account of global risk aversion. The investors are preferring a stable US dollar over rupee.
  - Under **risk aversion**, an investor prefers lower returns with known risks rather than higher returns with unknown risks.
- The US dollar is advancing not only against the rupee but also against major currencies due to the surging **Covid-19** cases.
- The escalating Covid-19 cases in Europe has stoked fears across markets that fresh lockdowns would further hit the already fragile economic recovery.

## Appreciation and Depreciation of Currency

- In a **floating exchange rate system**, market forces (based on demand and supply of a currency) determine the value of a currency.
- **Currency Appreciation:** It is an **increase in the value of one currency** in relation to another currency.
  - Currencies appreciate against each other for a variety of reasons, including government policy, interest rates, trade balances and business cycles.
  - Currency appreciation **discourages a country's export activity** as its products and services become costlier to buy.
- **Currency Depreciation:** It is a **fall in the value of a currency** in a floating exchange rate system.
  - Economic fundamentals, political instability, or risk aversion can cause currency depreciation.
  - Currency depreciation **encourages a country's export activity** as its products and services become cheaper to buy.

## Quarterly Periodic Labour Force Survey

### Why in News

Recently, the **National Statistical Office (NSO)** has released the **quarterly Periodic Labour Force Survey (PLFS)** for **October-December 2019**.

- This dataset differs from the **Annual Report of Periodic Labour Force Survey**, which covers **both rural and urban areas**. However, unemployment data for urban areas is released quarterly.

### Key Points

- **Unemployment Rate (UR):**
  - It eased in urban areas to 7.9% in October-December 2019 compared to 9.9% in October-December 2018.
    - However, state-wise data showed that **urban UR was higher than the national average** in Uttar Pradesh, Uttarakhand, Telangana, Kerala, Madhya Pradesh, Jammu and Kashmir, Delhi and Andhra Pradesh.
  - **The female UR** decreased to 9.8% in October-December 2019 compared to 12.3% in October-December 2018.

Note:

**National Statistical Office**

- It is the **central statistical agency of the Government**, mandated under the **Statistical Services Act 1980** under the **Ministry of Statistics and Programme Implementation**.
- It is responsible for the development of arrangements for **providing statistical information services** to meet the needs of the Government and other users for information on which to base policy, planning, monitoring and management decisions.
  - The services include collecting, compiling and disseminating official statistical information.
  - All business operations in NSO are done in compliance with **international standards, procedures and best practices**.

**Unemployment Rate**

- It is defined as the percentage of persons unemployed among the persons in the labour force.

**Labour Force Participation Rate**

- LFPR is defined as the percentage of persons in the labour force (i.e. working or seeking or available for work) in the population.

**Worker Population Ratio**

- It is defined as the percentage of employed persons in the population.

**Activity Status**

- The activity status of a person is determined on the basis of the activities pursued by the person during the specified reference period.
  - **Usual Status:** The activity status determined on the basis of the reference period of the last 365

days preceding the date of survey, is **known as the usual activity status** of the person.

- **Current Weekly Status:** The activity status determined on the basis of a reference period of the last 7 days preceding the date of the survey, is **known as the CWS** of the person.
- **The male UR** moderated to 7.3% in October-December 2019 from 9.2% in October-December 2018.
- **Labour Force Participation Rate (LFPR):**
  - It rose to 37.2% in October-December 2019 from 36.3% in October-December 2018.
- **Periodic Labour Force Survey:**
  - It is India's **first computer-based survey launched by the NSO in 2017**.
  - It has been constituted based on the recommendation of a committee headed by **Amitabh Kundu**.
  - PLFS has a **two-fold objective**:
    - To estimate the key employment and unemployment indicators (**Worker Population Ratio (WPR), LFPR, UR**) in the **short time interval of three months for the urban areas only in the Current Weekly Status (CWS)**.
    - To estimate employment and unemployment indicators in **both usual status and CWS in both rural and urban areas annually**.
  - Before PLFS, the NSSO (previous name of NSO) used to bring the data related to **employment and unemployment** based on its **quinquennial** (every 5 years) **household socio-economic survey programme**.



Note:

# International Relations

## Highlights

- Geneva Conventions
- Uranium Supply From Australia to India
- 65th Anniversary of Bandung Conference: NAM
- Pro-Democracy Protests in Thailand
- Israel and Bahrain Diplomatic Ties
- Taiwan Insecurity of China
- G-20 Anti-Corruption Working Group Meeting
- Extending New START Treaty
- India Invited to Join the Blue Dot Network
- Australia to Join Malabar Exercise
- Second Meeting of India-Central Asia Dialogue
- India-USA 2+2 Dialogue 2020
- Sudan and Israel to Normalise Relations
- India in Support of France
- Pakistan on FATF Grey List
- Chair of ILO Governing Body: India

## Geneva Conventions

### Why in News

After the **Galwan (India-China) clash** in Ladakh in June 2020, the **International Committee for the Red Cross (ICRC)** urged both the Indian and Chinese governments that they **observe the Geneva Conventions to which both countries are signatories**.

### Key Points

- The **Geneva Conventions (1949)** and their **Additional Protocols** are **international treaties** that contain the most important rules **limiting the barbarity of war**.
- They **protect people who do not take part in the fighting** (civilians, medics, aid workers) and those **who can no longer fight** (wounded, sick and shipwrecked troops, prisoners of war).
  - The **first Geneva Convention** protects wounded and sick soldiers on land during war.
  - The **second Geneva Convention** protects wounded, sick and shipwrecked military personnel at sea during war.
  - The **third Geneva Convention** applies to **prisoners of war**.
  - The **fourth Geneva Convention** affords protection to civilians, including in occupied territory.
- **Article 3**, common to the four Geneva Conventions, covers **situations of non-international armed conflicts**. They include traditional civil wars, internal armed conflicts that spill over into other States or internal conflicts in which a third State or a multinational force intervenes alongside the government.
- **Two Protocols of 1977**: Additional to the four 1949 Geneva Conventions were adopted in **1977**. They strengthen the protection of victims of international (Protocol I) and non-international (Protocol II) armed conflicts and place limits on the way wars are fought.
- In **2005**, a **third Additional Protocol** was adopted creating an additional emblem, the Red Crystal, which has the same international status as the Red Cross and Red Crescent emblems.
- The **International Committee for the Red Cross (ICRC)**, an international humanitarian organisation, has the mandate to monitor that signatories follow the rules in situations of conflict.
  - Established in **1863**, the ICRC operates worldwide, helping people affected by conflict and armed violence and promoting the laws that protect victims of war.
  - An **independent and neutral organization**, based in **Geneva, Switzerland**.
  - The ICRC is **funded** mainly by voluntary donations from governments and from National Red Cross and Red Crescent Societies.

Note:



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## Uranium Supply From Australia to India

### Why in News

Recently, the **Department of Atomic Energy (DAE)** has turned down the offers submitted by the two Australian companies for commencing supply of uranium ore to India citing lack of viability of the proposals.

### Key Points

- **India-Australia** ties have been on an upswing since 2012, when the **Australian government decided to sell uranium to India** despite India not being a signatory to the nuclear **Non Proliferation Treaty**.
- The above decision was **formalised by way of a bilateral agreement in 2014** known as **Cooperation in the Peaceful Uses of Nuclear Energy**.
- The uranium imports from Australia **were to be used to meet fuel requirements of Indian nuclear reactors** that are under **International Atomic Energy Agency (IAEA)** safeguards.
- However, the **progress on uranium supply has been very low**, despite efforts from both sides. In 2017, Australia had sent its first uranium shipment to India but that was cited as “a small sample of uranium” transferred “purely for testing purposes”.

### India's Civil Nuclear Capacity

- India has **22 reactors** with an **installed capacity of 6,780 megawatt**. Of these, **eight reactors are fuelled by indigenous uranium** while the remaining **14 are under IAEA safeguards** and qualify to use imported uranium.
- India was required to bring 14 reactors under IAEA safeguards in a phased manner under the **separation plan** announced by India in 2006, which was negotiated after the 2005 nuclear deal with the USA.
- Currently, India imports uranium fuel from **Russia, Kazakhstan, Uzbekistan, France and Canada**.
  - Kazakhstan is the world's largest producer of uranium.
- A steady supply of uranium is expected to boost the performance of Indian nuclear power plants, as well as of several fuel cycle facilities.

### Non-Proliferation Treaty

- The NPT is an **international treaty** whose objective is to prevent the spread of nuclear weapons and weapons technology, to foster the peaceful uses of nuclear energy, and to further the goal of disarmament.
- The treaty was signed in **1968** and entered into force in 1970. Presently, it has 190 member states.
- It **requires countries to give up any present or future plans to build nuclear weapons** in return for access to peaceful uses of nuclear energy.
- It represents the **only binding commitment in a multilateral treaty** to the goal of disarmament by the nuclear-weapon States.
  - Nuclear-weapon states parties under the NPT are defined as those that manufactured and exploded a nuclear weapon or other nuclear explosive devices before 1<sup>st</sup> January 1967.

### India's Stand on NPT

- India is **one of the five countries that have not signed the NPT**, the others include **Pakistan, Israel, North Korea, and South Sudan**.
- India always considered the NPT as discriminatory and had refused to sign it.
- India has opposed the international treaties aimed at non-proliferation since they were selectively applicable to the non-nuclear powers and legitimised the monopoly of the five nuclear weapons powers.
- India believes that nuclear **disarmament can be achieved through a step-by-step process** underwritten by a **universal commitment** and an **agreed multilateral framework** after meaningful dialogues among all States possessing nuclear weapons, for building trust and confidence.

## 65<sup>th</sup> Anniversary of Bandung Conference: NAM

### Why in News

The year **2020** marks the **65<sup>th</sup> anniversary** of the landmark **Bandung Conference** that resulted in the adoption of the founding principles of the **Non-Aligned Movement (NAM)**.

- The basic concept for NAM originated in **1955** during discussions that took place at the **Asia-Africa Bandung Conference** held in **Indonesia**.

Note:



### Key Points

- The milestone of the 65<sup>th</sup> anniversary is a **good time to reflect upon the philosophy** behind the movement.
- India reiterated that NAM **never was and can never be a platform for pursuits that undermine the territorial integrity** of a State by another State.
  - India will deploy her rich developmental experience for the peace and welfare of humanity, treating the world as one family.
- India also **emphasized** that in order to make NAM a relevant entity in the global decision making process, its **members must avoid raising issues that divide the forum**.
- **Covid-19** is a reminder of the interconnectedness and dependence of NAM members on each other.
  - Members must work to reduce the socio-economic impact of the pandemic on the most vulnerable sections of society. NAM's unique tradition of promoting **South-South cooperation** can provide a way out as societies look to rebuild and regenerate in the wake of this crisis.
- Apart from the global **pandemic, terrorism, climate change, cybersecurity threats** and the uneven **impact of frontier technologies** (Artificial Intelligence, robotics, Internet of Things, etc.) and **development concerns** are few other challenges which can only be tackled if all the members work together.
- The strength of the NAM lies in its **diversity**, its **shared developmental experience**, and its **youthful populations**.

### Non-Aligned Movement

- **Background:**
  - It was formed during the **Cold War** as an organisation of **States that did not seek to formally align** themselves with either the **USA (Capitalism)** or the **Soviet Union (Socialism)** but sought to **remain independent or neutral**.
- **Foundation:**
  - Six years after the Bandung Conference, the **Movement of Non-Aligned Countries was founded** on a wider geographical basis at the **First Summit Conference of Belgrade**, which was held in **September 1961**.
  - It was held under the leadership of **Josip Broz Tito of Yugoslavia, Gamal Abdel Nasser of Egypt,**

**Jawaharlal Nehru of India, Kwame Nkrumah of Ghana, and Sukarno of Indonesia.**

- **Purpose:**
  - The purpose of the organisation was enumerated in the **Havana Declaration of 1979** to ensure **"the national independence, sovereignty, territorial integrity and security of non-aligned countries"** in their struggle against **imperialism, colonialism, neo-colonialism**, racism, and all forms of foreign subjugation.
- **Members and Observers:**
  - It has **120 members as of April 2018** comprising 53 countries from Africa, 39 from Asia, 26 from Latin America and the Caribbean and 2 from Europe.
  - There are **17 countries and 10 international organisations** that are **Observers** at NAM.
- **Headquarters:**
  - NAM **does not have a formal constitution or permanent secretariat**, and its **administration is non-hierarchical and rotational**.
  - **Decisions** are made by **consensus**, which requires substantial agreement, but not unanimity.

## Pro-Democracy Protests in Thailand

### Why in News

Recently, **Thailand's government has banned gatherings of more than five people** in the face of three months of escalating demonstrations that have targeted the King as well as the Prime Minister.

### Key Points

- Initially, the government **allowed peaceful and lawful protests but now stringent control** has been ensured, due to anarchy in protests.
- **Background:**
  - **2014:** The roots of the current discontentment go back to the **2014 coup** which brought the **junta** (military dictatorship) in **power which tightened its grip on power**



Note:

and introduced more and more restrictions on the public.

- **2017:** In 2017, the **military introduced a new Constitution**, which allowed the military to appoint a 250-member Senate that would play a role in selecting the Prime Minister.
- **2019:** The country held the **delayed Parliamentary election in 2019**, which was seen as a mere exercise to transfer power from the junta to an elected government.
- **Role of Monarchy:** Thailand's royal family has **considerable influence over the country's political system** and is revered by citizens.
  - Many, particularly young Thais, have **increasingly started questioning the monarchy's role, privileges, and the power** it has exerted in the country for years.
- **Latest Cause: Anti-government protests emerged in 2019** after courts banned the most vocal opposition party.
  - This political party was relatively new and had been formed in 2018, with the goals to restrain the military's powers and interference in the political spectrum and to tackle social and economic inequality in the country.
- **About the Protest:**
  - Most of the protestors are **students and young people in their 20s without an overall leader**.
  - **Key Groups:**
    - The **Free Youth Movement**, which was behind the first major protest in July.
    - The **United Front of Thammasat and Demonstration**, a student group from Bangkok's Thammasat University, which has championed calls for monarchy reform.
    - The **Bad Student Movement** of high-schoolers, which seeks education reform.
- **Demands Raised:**
  - **Reforms to the Monarchy:**
    - Students submitted 10 demands to the government, asking for a **separation of the King's assets and the Crown Property Bureau** (quasi-government institution to manage the monarch's property in Thailand).
    - They also wanted to **cut the Palace's share in the national budget, a ban on the King from**

**expressing his political views, and safeguards to prevent him from endorsing future coups.**

- Some protesters **want to reverse a 2017 increase in the king's constitutional powers**, made the year after he succeeded his widely revered late father King Bhumibol Adulyadej.
- **Lese Majeste Laws:**
  - Protesters also **seek the scrapping of lese majeste laws**.
  - The **monarchy is protected by Section 112 of the Penal Code**, which says whoever defames, insults or threatens the king, queen, heir-apparent or regent shall be jailed for three to 15 years.
  - This law has **remained virtually unchanged since the creation of the country's first criminal code in 1908**, although the penalty was toughened in 1976.
- **Upholding Democracy:**
  - Pro-democracy activists say that Thailand is **backtracking on the constitutional monarchy** established when absolute royal rule ended in 1932.
  - Also, the **monarchy is too close to the army and argue that this has undermined democracy**.
- **Other Demands:**
  - The students have also **called for the Prime Minister's resignation; a new Constitution; fresh, free and fair elections; and an end to attacks on dissidents and opposition parties** such as the Future Forward Party.

## Israel and Bahrain Diplomatic Ties

### Why in News

Bahrain and Israel are signing a **joint communique** on the establishment of **diplomatic, peaceful and friendly relations**, as well as a number of **memorandums of understanding** in areas of mutual benefit.

### Key Points

- Bahrain has a history of open politics and civil society movements, although rights have been curtailed in the past decade.

Note:



- The decision to normalise ties comes from the belief in the values of tolerance in a region whose people have suffered from wars and conflicts.
- The United Arab Emirates and Bahrain became only the third and fourth Arab states to agree to normalise ties with Israel, following Israel's **1979** peace deal with Egypt and a **1994** pact with Jordan.
- Under the deal, **Israel would suspend its plans to annex large parts of the occupied West Bank.**
  - The West Bank is **sandwiched between Israel and Jordan**. One of its major cities is **Ramallah**, the **de facto administrative capital of Palestine**.
  - Israel took control of it in the **Six-day Arab-Israeli war, 1967** and has over the years established settlements there.
- **Impact on the USA:**
  - This is the second deal in 2020 after the Israel-UAE Peace Deal brokered by the USA. The recognition **grants a diplomatic win** to the USA President Donald Trump ahead of the Presidential election.
  - The deal buys UAE a lot of **goodwill in the US**, where its image has been tarnished by its involvement in the **Yemen war**.
- **Saudi Arabia** made clear that it will not normalise ties without a resolution to the Palestinian issue despite signs of rapprochement.
- **Concerns:**
  - **For Palestine:**
    - The Palestinians have not embraced the USA's vision. 86% of Palestinians believed the normalization agreements with the UAE and Bahrain served only Israel's interests and not their own.

- For Palestinians, who long have relied on Arab backing in their struggle for independence, the announcement **marked both a win and setback** for the **Israel-Palestine relations**.
  - While the deal **halts Israeli annexation plans of the west Bank**, the Palestinians have repeatedly **urged Arab governments not to normalize relations with Israel until a peace agreement** establishing an independent Palestinian state is reached.
- **Shia-Sunni rifts** in the region may get wide and violent.
  - Saudi Arabia (Sunni) and Iran (representing Shia) have a long history of enmity. For decades, one of the main sources of instability in West Asia has been the cold war between Saudi Arabia and Iran.
  - The Sunni-Shiite schism may also provoke violence between Muslims in such places as Pakistan, Nigeria and Indonesia.
- **Indian Interest in West Asia:** A peaceful and prosperous West Asia is necessary for India. Such deals between Arab Countries and Israel are having a positive impact for Indian interests in the region. Also, difficulty in balancing Arab countries and Israel will become easy. Indian interests include:
  - **Geopolitical:** West Asia occupies an important position in international relations due to its geographical location and proximity to continents and countries South Asia, China, Central Asia, Europe, and Africa.
  - **Energy:** The region is strategically significant due to its enormous energy resources, trade route links to different parts of the world.
  - It is the world's largest oil-producing region accounting for 34% of world production, 45% of crude oil exports and 48% of oil proven reserves.
  - **Diaspora:** Indian expatriates have constituted a substantial share of the regional labour market.
    - Remittances from the region constitute a major chunk of total remittances to India.

## Taiwan Insecurity of China

### Why in News

Recently, China has objected to any official exchanges between India and **Taiwan**.

Note:

### Key Points

- **Chinese Concern:** The statement from China came in response to reports that India and Taiwan were considering going forward with **talks on a trade deal**.
  - China believes the **'One-China principle'** is a universal consensus of the international community, including India.
  - China also objected to the recent **campaign (posters and social media)** in India **wishing Taiwan "Happy National Day"** (October 10) and referring to it as a **"country" or a "nation"**.
  - China is also opposing inclusion of Australia in the upcoming **Malabar naval exercise** with India, Japan and the United States.
- **India-Taiwan Relations:**
  - India and Taiwan **do not maintain formal diplomatic relations**. The areas of cooperation between India and Taiwan have been limited due to negligible political relations.
  - From 1995 to 2014, the **bilateral trade** turnover has grown manifold from just USD 934 million to USD 5.91 billion.
  - **Technology:** In the field of science and technology, there are more than thirty ongoing government-funded joint research projects.
    - In August 2015, the Taiwan-based Foxconn, one of the largest hardware manufacturers in the world, announced an investment of USD 5 billion in India.
    - India and Taiwan in 2018 signed a **bilateral investment agreement**. India-Taiwan trade ties have been **expanded** and Taiwanese firms are **prominent investors in India**.
    - Taiwan has for long been a world leader in high-tech hardware manufacturing, and can contribute much to the **"Make in India"**, **"Digital India"** and **"Smart Cities"** campaigns.
    - Taiwan's agro-technology and food processing technology can also be very beneficial for India's agriculture sector.
  - Both sides have also expanded **educational exchanges** after a mutual degree recognition agreement in higher education was **signed in 2010**.
- **Challenges:**
  - **One China policy:** India finds it difficult to realise the full potential of its bilateral relationship with

Taiwan. At present, about 16 countries worldwide continue to recognise Taiwan as an independent state. India is not among the sixteen countries.

- **Trade & Investment:** The economic exchange is still relatively insignificant. Taiwan's share of trade with India is around 1% of its global trade.

### Taiwan

- Taiwan - the Republic of China (ROC), home to **twenty-three million people**, is an island **off the southern coast of China** that has been governed independently from mainland China since **1949**.



- Its neighbours include China (officially the People's Republic of China, PRC) to the west, Japan to the northeast, and the Philippines to the south.
- Taiwan is the most populous state that is not a member of the United Nations and the largest economy outside the UN.
- Taiwan is Asia's 5<sup>th</sup> largest economy.
- It is a global leader in chip manufacture and the second-largest manufacturer of IT hardware, etc.
- **China's Claim:** The People's Republic of China (PRC) views the island as a province, while in Taiwan—a territory with its own democratically elected government—leading political voices have differing views on the island's status and relations with the mainland.
  - China and Taiwan maintain a fragile relationship, which has improved during the past seven years but is periodically tested.

## G-20 Anti-Corruption Working Group Meeting

### Why in News

Recently, Saudi Arabia hosted the **first-ever Ministerial**

Note:



**Meeting of the G-20 Anti-Corruption Working Group (ACWG) virtually.**

- Currently, **Saudi Arabia holds the presidency of G-20** and is the first Arab nation to do so.

### Key Points

#### ➤ G-20 Anti-Corruption Working Group:

- It was set up in **June 2010 at the Toronto Summit of G-20**. The year **2020** marks its **10<sup>th</sup> anniversary**.
- **Objective:** To prepare “comprehensive recommendations for consideration by leaders on how the G20 could continue to make practical and valuable contributions to international efforts to combat corruption”.
- ACWG has **led the G-20 anti-corruption efforts** coordinating the collective and national actions taken by its members.
- It actively works with the **World Bank Group**, the **Organisation for Economic Cooperation and Development (OECD)**, the **United Nations Office on Drugs and Crime (UNODC)**, the **International Monetary Fund (IMF)**, the **Financial Action Task Force (FATF)**, etc.
  - The World Bank and the UNODC are also involved in the ACWG through the active participation and contribution of **Stolen Asset Recovery Initiative (StAR)** to its work, which **plays an advisory role** on asset recovery, anti-money laundering/counter-terrorism financing, transparency and beneficial ownership, etc.

#### ➤ G-20 on Corruption:

- It **recognises the negative impact of corruption** which, ‘threatens the integrity of markets, undermines fair competition, distorts resource allocation, destroys public trust, and undermines the rule of law’.
- It agreed on the **Anti-Corruption Action Plan, 2019-2021 in Buenos Aires in 2018**. In the framework of this action plan, G-20 members look forward to developing targeted actions where the **G-20 can best add value in promoting international efforts** in the fight against corruption.

### Initiatives in India

#### ➤ Central Vigilance Commission:

- Though **created in 1964**, it became an **independent statutory body in 2003**.
- Its mandate is to oversee the vigilance administration and to advise and assist the executive in matters relating to corruption.

#### ➤ Prevention of Corruption Act, 1988:

- It aims at **checking corruption in big places and striking hard against corporate bribery**.
- It was **amended in 2018** to introduce a number of new provisions including **criminalizing the act of giving bribes** also in addition to taking the bribe and at the same time putting in place an effective deterrence for such actions by individuals as well as corporate entities.

#### ➤ Lokpal and Lokayuktas:

- The **Lokpal and Lokayukta Act, 2013** provided for the establishment of Lokpal for the Union and Lokayukta for States.
- These institutions are operational in the country to **bring in more transparency, more citizen-centricity and accountability** in governance.

#### ➤ Fugitive Economic Offenders Act, 2018:

- It **empowers authorities for non-conviction based attachments and confiscation of proceeds** of crime and properties as well as assets of a fugitive economic offender.

#### ➤ Prevention of Money Laundering Act, 2002:

- **Money laundering** is the **process of making large amounts of money generated by criminal activity**, such as drug trafficking or terrorist funding, appear to have come from a legitimate source.
- The law was **enacted to prevent and control money laundering**, provide for confiscation and seizure of property obtained from laundered money and to deal with any other issue connected with money-laundering in India.

#### ➤ Other Related Legislation and Moves:

- **Right to Information Act, 2005.**
- **Whistleblowers Protection Act, 2014.**
- **Benami Transactions (Prohibition) Act, 2016.**
- **Ratification of United Nations Convention Against Corruption in 2011.**
- **Introduction of e-governance.**

Note:



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## Extending New START Treaty

### Why in News

The **Russian President** has proposed extending by one year the **New START (Strategic Arms Reduction Treaty)** between the USA and Russia expiring in February 2021.

### Key Points

- **The New START Treaty:** It is a treaty **between the United States of America** and the **Russian Federation** on measures for the further reduction and limitation of **strategic offensive arms**.
  - It entered into force on **5<sup>th</sup> February, 2011**.
  - New START has replaced the 1991 START I treaty, which expired December 2009, and superseded the 2002 Strategic Offensive Reductions Treaty (SORT), which terminated when New START entered into force.
  - It is a **successor to the START framework of 1991** (at the end of the Cold War) that limited both sides to 1,600 strategic delivery vehicles and 6,000 warheads.
  - It continues the **bipartisan process** of verifiably reducing the USA and Russian strategic nuclear arsenals by limiting both sides to 700 strategic launchers and 1,550 operational warheads.
  - It will lapse in February 2021 unless extended for a five-year period.
- **Recent Proposal:** Russia has extended the proposal along with concerns of lack of interest from the United States.
  - In 2019, the United States has also suspended the **Intermediate-Range Nuclear Force Treaty** (INF Treaty) with Russia.
    - It was a nuclear arms-control accord reached by the United States and the Soviet Union in 1987 in which the two nations agreed to **eliminate their stocks of intermediate-range and shorter-range (or "medium-range") land-based missiles** (which could carry nuclear warheads).
    - The **United States withdrew** from the Treaty on 2<sup>nd</sup> August 2019.
  - **USA's Stand:** The USA wanted any replacement treaty should include China and to encompass all of Russia's nuclear weapons — not just the

"**strategic**" weapons covered under New START but also Russia's sizable stockpile of smaller, "**tactical**" nuclear weapons that fall outside the treaty.

- Russia rejected the demands, and China has refused to take part in negotiations.
- The USA has agreed to negotiate the extension.

## India Invited to Join the Blue Dot Network

### Why in News

Recently, a group of the US Senators, in a letter, has asked India to join the **Blue Dot Network** (BDN).

- The letter also **backed India's decision to invite Australia** to the annual **Malabar naval exercise**.

### Key Points

- **Blue Dot Network:**
  - It was formally announced on **4<sup>th</sup> November 2019** at the **Indo-Pacific Business Forum in Bangkok, Thailand**. It is led by the **USA along with Japan and Australia**.
  - It is a **multi-stakeholder initiative** to bring together governments, the private sector and civil society to **promote high-quality, trusted standards for global infrastructure** development.
  - It is expected to **serve as a globally recognised evaluation and certification system** for roads, ports and bridges with a focus on the **Indo-Pacific region**.
  - It is planned as a **direct counter to China's Belt and Road Initiative** (BRI).
    - However, unlike the BRI, the **BDN would not offer public funds or loans** for the project.
- **Blue Dot Certification:** BDN will serve as a **globally recognized seal of approval for major infrastructure projects**, letting people know that **projects are sustainable and not exploitative**.

## Australia to Join Malabar Exercise

### Why in News

Recently, **Australia** has agreed to join the **Malabar Exercise on India's request**. The exercise is scheduled to be held in November 2020.

Note:



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### Key Points

#### ➤ 2020 Malabar Exercise:

- The 2020 Exercise is expected to be held in the **Bay of Bengal and the Arabian Sea**. In 2019, the exercise was conducted off the coast of Japan.
- Due to **Covid-19 pandemic**, the exercise had been planned in a '**non-contact-at sea**' format.
- **Objective:** To enhance safety and security in the maritime domain.

#### ➤ Australia's Inclusion:

- The issue of Australia's inclusion in Malabar had again come up for discussion at the **Quad** foreign ministers meet in Tokyo held in October 2020. Thereafter, India invited Australia to join the Exercise.
  - **Quad** is the informal strategic dialogue between India, the USA, Japan and Australia with a shared objective to ensure and support a **free, open and prosperous Indo-Pacific region**.
- The move will bolster the ability of the member countries to work together to **uphold peace and stability across the Indo-Pacific region**.
- It is also expected to further lay the foundations for the eventual **formalisation of the Quad grouping**.

#### ➤ Background:

- Despite regular requests from Australia, India resisted issuing the invitation due to its concerns that the move would give the appearance of a '**quadrilateral military alliance**' against China.
    - In 2017, Australia had requested for observer status in the Malabar Exercise.
    - **China has repeatedly expressed strong opposition** to any expansion of the Malabar Exercise, which it sees as a multilateral naval construct designed to "counter and contain" China.
  - However, the recent **India-China tensions** over the situation at the **Line of Actual Control (LAC)** may have brought more flexibility to India's decision-making process.
  - **Japan and the USA have also been pressing India** on the matter.
- #### ➤ Cooperation Between Quad Members:
- India and Japan signed a **military logistics agreement** in September 2020.
  - India has signed maritime information-sharing agreements for **Maritime Domain Awareness (MDA)**

with Australia and Japan and a similar agreement is under discussion with the USA.

- **MDA** is defined by the **International Maritime Organization** as an effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of a country.
- India and the USA are stepping up efforts to conclude the **Basic Exchange and Cooperation Agreement (BECA)** ahead of the **Indo-US 2+2 ministerial meeting** in October 2020.
  - BECA, a key military pact, will allow India to use the USA's geospatial intelligence and enhance the accuracy of automated systems and weapons like missiles and armed drones.
  - BECA is one of the **four foundational military communication agreements** between the two countries. The **other three** are:
    - **General Security Of Military Information Agreement (GSOMIA)**.
    - **Logistics Exchange Memorandum of Agreement (LEMOA)**.
    - **Communications and Information Security Memorandum of Agreement (CISMOA)**.

## Second Meeting of India-Central Asia Dialogue

### Why in News

Recently, India virtually hosted the second meeting of the **India-Central Asia Dialogue**.

- The **first meeting of the dialogue** was held in Samarkand, the Republic of Uzbekistan in January 2019.

### Key Points

- **Combat Terrorism:** All the nations strongly **condemned terrorism and reaffirmed their determination to combat** it by destroying terrorist safe-havens, networks, infrastructure and funding channels.
  - They also underlined the need for **every country to ensure that their territory is not used to launch terrorist attacks** against other countries.
- **Afghan Peace Process:** All countries called for the **settlement of the Afghan conflict** on the basis of Afghan-led, Afghan-owned and Afghan-controlled peace process.

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- **Infrastructure:** They appreciated **India's efforts to modernise the infrastructure of the Chabahar port in Iran**, which could become an important link in trade and transport communications between the markets of Central and South Asia.
- **Initiatives Announced by India:**
  - An additional **USD 1 billion Line of Credit** for the Central Asian countries.
    - It is expected that the money will be **spent on major infrastructural and connectivity projects**.
  - **Grant financing for high impact community development projects** in the countries.
  - **Establishment of working groups by India Central Asia Business Council** comprising the key chambers of all participating countries.
    - The council was launched by the Government of India along with the **Federation of Indian Chambers of Commerce and Industry (FICCI)** in February 2020.
    - It aims to promote business in the region and to collaborate and provide an industry view to the governments of the six countries.

#### India-Central Asia Dialogue

- It is a **ministerial-level dialogue** between **India** and the **Central Asian** countries namely **Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan**.
  - All five nations became independent states after the **collapse of the USSR in 1991**, post-**Cold war**.
- All the countries participating in the dialogue, **except for Turkmenistan**, are also members of the **Shanghai Cooperation Organisation**.



- The dialogue focuses on a number of issues including ways to **improve connectivity and stabilise war-ravaged Afghanistan**.
- In the first dialogue, **India proposed** setting up of '**India-Central Asia Development Group**' to take

forward development partnership between India and Central Asian countries.

- The group will enable India to **expand its footprints in the resource-rich region** amid an ongoing **standoff with China** and to **fight terror** effectively, including in Afghanistan.

## India-USA 2+2 Dialogue 2020

### Why in News

Recently, India and the USA have concluded the **3<sup>rd</sup> India-USA 2+2 dialogue** in New Delhi.

- The **USA reiterated its support to India in defending its territorial sovereignty** in the background of the ongoing **standoff between India-China**.
- It also referred to the greater **threats posed by China in the Indo-Pacific region** and by the **Covid-19 pandemic** in general.
- The **first two rounds** of these dialogues between both the countries were held in **2018 and 2019**.

### Key Points

- India has signed the **Basic Exchange and Cooperation Agreement (BECA)** with the USA.
  - BECA will enable the **exchange of geospatial data and information** between the two countries and will **improve the accuracy of India's missiles** in precision strikes.
  - The geospatial maps and charts to be shared, will be **acquired from multiple sources** like satellites, unmanned aerial vehicles (UAVs), reconnaissance aircraft, aerostats among others.
  - As part of measures to enhance military to military cooperation, Liaison Officers at each other's establishments could be leveraged to enhance information sharing.
  - BECA is one of the **four foundational military communication agreements between the two countries**. The **other three** are:
    - General Security Of Military Information Agreement.
    - Logistics Exchange Memorandum of Agreement.
    - Communications and Information Security Memorandum of Agreement.

Note:



- Both countries released a **Joint Statement on shared Indo-USA goals in the Asia-Pacific region** and emphasised that the **Code of Conduct in the South China Sea** should not prejudice the legitimate rights and interests of any nation in accordance with international law.
  - They also decided to **expand joint capacity building activities** with partner countries in the **Indo-Pacific region**.
- **Other Steps Taken:**
  - Memorandum of Understanding (MoU) on **Technical Cooperation in Earth Observations and Earth Sciences**.
  - Agreement to **extend the duration of the MoU on the Global Center for Nuclear Energy Partnership**.
  - Agreement on the **electronic exchange of customs data**.
  - **Letter of intent regarding cooperation in traditional Indian medicines**.
  - **Discussions on the status of Afghanistan** and support for its peace process.

## Sudan and Israel to Normalise Relations

### Why in News

Recently, in a **deal brokered by the USA**, Sudan and Israel have agreed to **normalise relations** to end decades of hostility.

### Key Points

- Sudan, which was **technically at war with Israel since its foundation in 1948**, has now become the **third country to forge diplomatic relations** with it, in recent times.
  - Earlier, the USA brokered diplomatic pacts between **Israel and the UAE and Bahrain** as well, to normalise their relations.
- **Implications:**
  - The deal would **deepen Sudan's engagement with the West**.
  - The deal follows USA's conditional agreement to **remove Sudan from its blacklist of countries accused of sponsoring terrorism**.



Note: Israel has diplomatic relations with more than 160 countries.  
Sources: Israel Ministry of Foreign Affairs, WSJ and news reports

- Sudan was **added to the list in 1993** after it was accused of harbouring groups such as **Hezbollah** and **Palestinian militant outfits** which the USA deems as terrorists.
- As a result, Sudan was **cut off from the global economy** and was **starved of foreign investment** which faced another blow in **2011** when **South Sudan was formed** taking away its major oil resources.
- With its name removed from the list, Sudan will no longer stay deprived of foreign investments.
- Under the deal, **Sudan has agreed to pay USD 335 million in compensation** to victims of the **Al-Qaeda bombings** of USA embassies in Kenya and Tanzania in 1998.
  - It delivers a **foreign policy achievement for Trump** just days before the USA election.
  - It **boosts Israel's motive** which has made it a priority to **forge ties with formerly hostile countries in Africa and the Arab world** in the absence of any progress with the Palestinians.
- In the initial phase, there will be **no exchange of ambassadors or a mutual establishment of embassies**.
- After the **six-day war of 1967 war**, Arab powers met in **Khartoum** (Sudan's capital) to **pledge three "noes"** viz. **no peace** with Israel, **no recognition** of Israel, and **no negotiations** with Israel. Therefore, the deal holds a symbolic significance for Israel.
- Unlike the UAE and Bahrain, which have never fought with Israel, **Sudan sent forces to fight in the war around Israel's creation in 1948** and during the **war of 1967**. In the **1970s**, **Israel backed Sudanese insurgents** fighting the Khartoum government.

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- With this agreement, **Israel will complete the creation of a safety cordon in the Red Sea**, which currently includes Egypt, Jordan, South Sudan and Saudi Arabia.
- The deal is also **aimed at unifying Arab countries against their common adversary, Iran**.
- Though Sudan has been largely marginal to Middle Eastern politics in recent decades, the normalisation has significant symbolic value.

#### ➤ Global Reaction:

- **Allies of the USA**, including Germany, Egypt, the UAE, Bahrain, have **welcomed the deal** as a boost to stability in West Asia.
- Meanwhile, **Palestinian leaders have strongly condemned** the deal, echoing their rejection of all of the Israel's normalisation accords.

## India in Support of France

### Why in News

Recently, **India has come out in support of France's President** who has been criticised by Pakistan and Turkey for strongly defending the French people's right to freedom of expression.



### Key Points

#### ➤ Background:

- Condemning the murder of a schoolteacher for showing caricatures of the Prophet, the French President defended the **freedom of expression and secular values**.
- A caricature is a picture or description of somebody that makes his/her appearance or behaviour funnier and more extreme than it really is.

- In response, **Turkey and Pakistan accused** French President of running an **anti-Islamic agenda and provoking Muslims**.

- **Iran and Saudi Arabia too condemned** it and the entire Muslim called for the boycott of French products.

#### ➤ India's Support to France:

- **India condemned the criticism by Turkey and Pakistan** and called it violative of the **most basic standards of international discourse**.
- India also **condemned the murder** of schoolteacher as a brutal terrorist attack.
- While France has seen repeated violent incidents around caricatures and cartoons that are deemed offensive, **it is unusual for India to dive into a controversy over religion in another country**.
- India's support could have been influenced by the fact that the charge was led by **Turkey and Pakistan**, which have **repeatedly attacked India over Jammu and Kashmir and alleged human rights violations**.

### India-France Ties

- **Strategic:** India has close strategic ties with France, especially on issues of mutual interest from **counter-terrorism to defence, and nuclear to space**.
- **Terror:** France backed the India's proposal for a global conference on terrorism. Both countries also support organising a new **"No Money for Terror"**, an international conference on fighting terrorist financing.
  - Two countries agreed to enhance their operational cooperation and launch fresh efforts to fight radicalisation, especially **Online Radicalisation**.
- **Defence:**
  - Both countries have a **defence dialogue** at the Ministerial level.
  - The three defence services have regular exercises:
    - **Exercise Shakti** (Army).
    - **Exercise Varuna** (Navy).
    - **Exercise Garuda** (Air Force).
  - In July 2020, the Indian Air Force (IAF) **received its first batch (5 out of 36) of French Rafale aviation** combat aircraft at Ambala Airbase (Haryana).

Note:

- **Space:**
  - Both countries have decided to deepen space cooperation to meet new challenges together, whether it concerns planetary exploration or human spaceflight.
  - France has agreed to be part of **India's Venus mission**, scheduled for **2025**.
  - **Indian Space Research Organisation's (ISRO) Venus Infrared Atmospheric Gases Linker (VIRAL)**, a Venus instrument, has been co-developed by Russian and French agencies.
- **Multilateral Platform:** France has been **extremely supportive of India at the UN Security Council** on Kashmir and Pakistan-sponsored terrorism, among other issues.
  - The **Prime Minister of India was a special invitee at the 45<sup>th</sup> G-7 Summit in Biarritz, France** where India was one of the **Goodwill partners**.
- **Climate:** The two countries have close cooperation on climate change, and have formed the **International Solar Alliance (ISA)**.

## Pakistan on FATF Grey List

### Why in News

The **Financial Action Task Force (FATF)** has **decided to keep Pakistan on the "greylist"** till the next review of its compliance to the recommendations in February 2021.

- The decision was taken after a **three-day virtual plenary session**.

### Key Points

- **Pakistan Remains on Grey List:**
  - The FATF had issued the **27-point action plan** after placing **Pakistan on the 'Grey List' in June 2018**. The action plan **pertains to curbing money laundering and terror financing**.
  - Recently, the task force's **International Cooperation Review Group (ICRG)** noted that Pakistan had complied with 21 points.
    - **Since 2007**, the ICRG has analysed high-risk jurisdictions and recommended specific action to address the money laundering/terror financing risks emanating from them.
  - At the **recent plenary session**, the FATF observed that Pakistan has made progress across all action

plan items and has **largely addressed 21 of 27 action items**.

- Keeping Pakistan on the 'Grey List', the **FATF strongly urged Pakistan to swiftly complete its full action plan by February 2021**.
- The **points on which Pakistan failed to deliver** included its lack of action against the non-profit organisations linked to the terror groups banned by the **UN Security Council (UNSC)**; and **delays in the prosecution of banned individuals and entities** like Lashkar-e-Taiba (LeT) chief Hafiz Saeed and LeT operations chief, Zaki Ur Rahman Lakhvi, as well as Jaish-e-Mohammad chief **Masood Azhar**.
  - While Saeed was sentenced in February 2020 to 11 years in prison for terror financing, the **Pakistan government claims that others are "untraceable"**.
- Further, Pakistan was found **non-compliant in cracking down on terror financing** through narcotics and smuggling of mining products including precious stones.
- The FATF process also **showed concern about the 4,000 names** that were on Pakistan's Schedule-IV list under the Anti-Terrorism Act up to January, but went missing in September 2020.
- **Consequences for Pakistan:**
  - The FATF listing **makes it extremely difficult for Pakistan to get financial aid** from the **International Monetary Fund (IMF)**, the **World Bank** and the **European Union**.
- **Response of Different Countries:**
  - **Turkey** proposed that the **members should consider Pakistan's good work** and instead of waiting for completion of the remaining six of the 27 parameters, **an FATF on-site team should visit Pakistan** to finalise its assessment.
    - On-site teams are **permitted only after jurisdictions complete their action plans**. Normally such a visit is a **signal for exit from the grey or black list**.
  - When the proposal was placed before the Plenary, **no other member seconded the move**. It was **not supported by even China, Malaysia and Saudi Arabia**.
- **India's Stand:**
  - Pakistan continues to provide **safe havens** to terrorist entities and individuals and has also **not yet**

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taken any action against several terrorist entities and individuals including those proscribed by the UNSC, such as Masood Azhar, Dawood Ibrahim, Zakir-ur-Rahman Lakhvi.

#### Financial Action Task Force

- **Formation:** The Financial Action Task Force (FATF) is an **inter-governmental body** established in **1989** during the **G7 Summit** in Paris.
- **Objectives:** To set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.
- **Secretariat:** Its Secretariat is located at the **Organisation for Economic Cooperation and Development (OECD)** headquarters in Paris.
- **Member Countries:** The FATF currently has **39 members** including two regional organisations — the **European Commission** and **Gulf Cooperation Council**. India is a member of the FATF.
- **Decision Making Body:** The **FATF Plenary** is the decision making body of the FATF. It **meets three times per year**.
- **Lists under FATF:**
  - **Grey List:** Countries that are considered safe haven for supporting terror funding and money laundering are put in the FATF grey list (or 'Jurisdictions under increased monitoring'). This inclusion serves as a warning to the country that it may enter the blacklist.
  - **Black List:** Countries known as Non-Cooperative Countries or Territories (NCCTs) are put in the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries. As of this year, there are only **two countries** on the FATF's black list -- **North Korea** and **Iran**.

## Chair of ILO Governing Body: India

### Why in News

After 35 years, India has assumed the **Chairmanship of the Governing Body** of **International Labour Organization (ILO)**.

### Key Points

- Labour & Employment Secretary **Apurva Chandra** has been elected as the Chairperson of the Governing Body of the ILO for the **period October 2020-June 2021**.
- The Chairperson of the Governing Body of ILO is a **position of international repute**. The Governing Body (GB) is the **apex executive body of the ILO**.
  - **GB meets thrice a year**, in March, June and November. It takes decisions on **ILO policy**, decides the **agenda of the International Labour Conference**, adopts the draft programme and budget of the organisation for submission to the conference, and elects the Director-General.
  - The broad policies of the ILO are set by the **International Labour Conference**, which **meets once a year in June, in Geneva, Switzerland**.
- Chandra will be **presiding over the upcoming Governing Body's meeting**, to be held in November 2020.
  - It will **provide a platform** to apprise participants of the transformational initiative taken by the government in removing the rigidities of the labour market, besides making intention clear about the universalisation of social security to all workers in the organised or unorganised sector.
  - The **four codes** on **wages, industrial relations, social security and occupational safety, health and working conditions** are expected to improve ease of doing business and safeguard the interest of workers.

### International Labour Organization

- The **only tripartite United Nations (UN) agency**, since **1919**, the ILO brings together **governments, employers and workers of 187 member States**, to set labour standards, develop policies and devise programmes promoting decent work for all women and men.
- The ILO became the **first specialized agency of the UN** in 1946.
- The principal means of action in the ILO is the setting up the International Labour Standards in the form of **Conventions and Recommendations**.
  - **Conventions** are international treaties and are instruments, which create legally binding obligations on the countries that ratify them.
  - **Recommendations** are non-binding and set out guidelines orienting national policies and actions.

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- It received the **Nobel Peace Prize** in 1969.
- It releases the annual **World Employment and Social Outlook (WESO) Trends** report.
- **India and ILO:**
  - India, a **Founding Member** of the ILO, has been a permanent member of the ILO Governing Body since 1922. The first ILO Office in India started in 1928.
  - India has **ratified 41 Conventions** of the ILO, which is much better than the position existing in many other countries.
  - India has **ratified six out of the eight-core/fundamental ILO conventions**. These conventions are:
    - Forced Labour Convention (No. 29)
    - Abolition of Forced Labour Convention (No.105)
    - Equal Remuneration Convention (No.100)
    - Discrimination (Employment Occupation) Convention (No.111)
    - Minimum Age Convention (No.138)
    - Worst forms of Child Labour Convention (No.182)
  - India has **not ratified the two core/fundamental conventions**, namely Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87) and Right to Organise and Collective Bargaining Convention, 1949 (No. 98).
  - The **ILO expressed deep concern at the changes that many Indian states made to labour laws** to boost economic activities, which slowed down due to the **Covid-19 outbreak**.



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# Science and Technology

## Highlights

- Saviour Sibling
- Atomic Hydrogen Content of Galaxies
- OSIRIS-REx Mission: NASA
- COVIRAP: A Quick Covid-19 Test
- Monoclonal Antibodies for Covid-19
- NAG Missile: Anti Tank Guided Missile
- PLACID Trials
- Earth Observation Satellite EOS-01: ISRO
- Superconductivity at Room Temperature
- Computation Analysis of Indian Genes
- CSIR-CMERI's Municipal Solid Waste Processing Facility

## Saviour Sibling

### Why in News

Recently, doctors successfully conducted India's first 'saviour sibling' experiment.

### Key Points

- 'Saviour Sibling' refers to babies that are created to serve an older sibling as a donor of organs, bone marrow or cells.
  - Stem cells from the umbilical cord blood or blood of the saviour sibling are used for treatment of serious blood disorders like **thalassemia, sickle cell anaemia**.
- They are created with In vitro fertilisation (IVF) so that they can undergo pre-implantation genetic diagnosis (or testing) to rule out any genetic disorders and also check bone marrow compatibility.
  - Pre-implantation Genetic Testing (PGT) refers to the genetic profiling of embryos. It is used to screen embryos for genetic diseases or chromosomal abnormalities.
  - From each embryo, PGT takes a biopsy of only a few cells and conducts a genetic analysis.
  - This analysis can search to exclude embryos carrying a genetic variant that causes a hereditary disease, and it can search to find embryos that are an Human Leukocyte Antigen (HLA) match to a sibling.
    - HLA is a type of molecule found on the surface of most cells in the body. These play an important

part in the body's immune response to foreign substances.

- These make up a person's tissue type, which varies from person to person.
- HLA typing is important in organ transplantation protocols, as they determine the likelihood of rejection.
- The world's first saviour sibling, Adam Nash, was born in 2000 in the USA.
- **Need:** For those families with a child that requires a stem cell transplant, often there is a hurdle of finding a donor for the transplant.
  - A successful transplant requires an HLA match between donor and recipient. However, the probability of finding a suitable match among family members is about 30% overall.
- **Ethical Considerations and Implications:** In a 2004 paper published in the Journal of Medical Ethics, UK researchers debated whether selecting saviour siblings should be banned.
  - They studied the arguments to ban it:
    - That saviour siblings would be wrongfully treated as means rather than ends.
    - They would cause or constitute a slide towards designer babies,
    - They would suffer physically and/or emotionally.
  - But the paper found these arguments to be flawed. It concluded that the selection of saviour siblings should be permitted, especially given that prohibiting it would result in the preventable deaths of a number of existing children.

Note:

**In vitro Fertilisation**

- IVF is one of the more widely known types of **Assisted Reproductive Technology (ART)**.
- In vitro comes from the latin word 'in glass', i.e. studies are done in a test tube rather than in a human or animal.
  - The **opposite** to 'In-vitro' is 'In-vivo', which comes from the latin word 'within the living'. In vivo refers to experimentation being done in a living organism.
- In vitro means outside the body. Fertilization means the sperm has attached to and entered the egg.
- During IVF, mature eggs are collected (retrieved) from the ovaries and fertilized by sperm in a lab. Then the fertilized egg (embryo) or eggs (embryos) are transferred to a uterus.

## Atomic Hydrogen Content of Galaxies

**Why in News**

In a significant discovery, the Pune-based **Nationwide Centre for Radio Astrophysics (NCRA-TIFR)** and **Raman Analysis Institute (RRI)**, Bengaluru have used the **Giant Metrewave Radio Telescope (GMRT)** to measure the **atomic hydrogen** content (of 8 billion years ago) of galaxies when the universe was young.

- This will **help in unveiling the reason behind declining star formation in the Milky Way** in the present time.

**Key Points**

- **The Study:** For the first time the atomic hydrogen gas content of star forming galaxies for a past date (about 8 billion years ago) was measured with the help of the upgraded GMRT.
  - Unlike stars which emit light strongly at optical wavelengths, the atomic hydrogen signal lies in the radio wavelengths, at a wavelength of 21 cm, and can only be detected with radio telescopes.
  - **Stacking:** This 21 cm signal is intrinsically very weak, to overcome this limitation, the team used a technique called "stacking" to combine the 21 cm signals of nearly 8,000 galaxies that had earlier been identified with the help of optical telescopes.
    - This method measures the average gas content of these galaxies.

**Significance of Discovery:**

- Galaxies in the universe are made up mostly of gas and stars, with gas being converted into stars throughout the life of a galaxy.
  - Understanding galaxies requires us to determine how the amounts of both gas and stars change with time.
- The star formation activity in galaxies peaked about 8-10 billion years ago (galaxy was young) and has been declining steadily till today.
  - The cause of this decline was unknown as there had been **no information regarding the amount of atomic hydrogen gas** — the **primary fuel for star formation** — in galaxies in these early times.
- The observed decline in star formation activity could thus be explained by the exhaustion of the atomic hydrogen. Given the intense star formation in these early galaxies, their atomic gas would be consumed by star formation in just one or two billion years.

**Giant Metrewave Radio Telescope**

- GMRT is an array of **thirty fully steerable parabolic radio telescopes of 45 metre diameter**. It is operated by the National Centre for Radio Astrophysics of the Tata Institute of Fundamental Research. It is an **indigenous project**.
- It functions at the **metre wavelength part of the radio spectrum** because **man-made radio interference is considerably lower** in this part of the spectrum in India and there are **many outstanding astrophysics problems** which are best studied at metre wavelengths.
- Detecting the 21 cm signal from the most distant galaxies in the universe was the main science goal of the GMRT, when it was designed and built by a team led by the late pioneering astrophysicist **Govind Swarup** in the 1980s and 1990s.
- The big jump in sensitivity was due to the upgrade of the GMRT with new wide band receivers and electronics in 2017.
- The **location** for GMRT, Pune meets several important criteria such as **low man-made radio noise**, availability of **good communication**, vicinity of **industrial**, educational and other infrastructure and, a geographical latitude sufficiently north of the geomagnetic equator in order to have a reasonably quiet ionosphere and yet be able to observe a good part of the southern sky as well.

Note:



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## OSIRIS-REx Mission: NASA

### Why in News

Recently, **NASA's OSIRIS-REx** spacecraft briefly touched down on the surface of **asteroid Bennu** to collect rock and dust samples.

### Key Points

#### ➤ About OSIRIS-REx Mission:

- It is the **United States' first asteroid sample return mission**, aiming to collect and carry a pristine, unaltered sample from an asteroid back to earth for scientific study.
  - The **OSIRIS-REx** (Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer) **spacecraft was launched in 2016** for the journey to **Bennu**.
  - The mission is essentially a **seven-year-long voyage** and will conclude when at least 60 grams of samples are delivered back to the Earth (in 2023).
  - As per the **National Aeronautics and Space Administration (NASA)**, the mission promises to bring the **largest amount of extraterrestrial material back to the Earth since the Apollo era**.
    - Apollo was the NASA program that resulted in American astronauts' making a total of 11 space flights and walking on the moon (1968-72).
  - The spacecraft **contains five instruments** meant to explore Bennu including cameras, a spectrometer and a laser altimeter.
  - Recently, the **spacecraft's robotic arm called the Touch-And-Go Sample Acquisition Mechanism (TAGSAM)**, made an attempt to "TAG" the asteroid at a sample site and collected a sample.
  - The departure window for the mission will open up in 2021, after which it will take over two years to reach back to Earth.
- #### ➤ Asteroid Bennu:
- Bennu is **an ancient asteroid**, currently **more than 200 million miles from Earth**.
  - Bennu **offers scientists a window into the early solar system** as it was first taking shape billions of years ago and tossing ingredients that could have helped seed life on Earth.

- Significantly, Bennu hasn't undergone drastic changes since its formation over billions of years ago and therefore it contains chemicals and rocks dating back to the birth of the solar system. It is also relatively close to the Earth.
- So far, it is known that **this asteroid is a B-type asteroid**, implying that it contains **significant amounts of carbon** and various other minerals.
- Because of its high carbon content, it reflects about 4% of the light that hits it, which is very low when compared with a planet like Venus, which reflects about 65% of the light that hits it. Earth reflects about 30%.
- Around **20-40% of Bennu's interior is empty space** and scientists believe that **it was formed in the first 10 million years of the solar system's formation**, implying that it is **roughly 4.5 billion years old**.
- As per high-resolution photographs taken by the spacecraft, the surface of the asteroid is **covered in massive boulders**, making it more difficult to collect samples from its surface.
- There is a slight possibility that Bennu, which is classified as a **Near Earth Object (NEO)**, **might strike the Earth** in the next century, between the years 2175 and 2199.
- NEOs are comets and asteroids nudged by the gravitational attraction of nearby planets into orbits which allows them to enter the Earth's neighbourhood.
- The asteroid was **discovered** by a team from the NASA-funded Lincoln Near-Earth Asteroid Research team in 1999.

## COVIRAP: A Quick Covid-19 Test

### Why in News

Recently, the **Indian Council of Medical Research (ICMR)** has approved a new low-cost **Covid-19** diagnostic method named **COVIRAP**, developed by the **Indian Institute of Technology (IIT), Kharagpur**.

### Key Points

#### ➤ Working of COVIRAP:

- COVIRAP has an **automated pre-programmable temperature control unit**, a **special detection unit**

Note:



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on genomic analysis, and a customised smartphone app for results.


- The machine has an **isothermal nucleic acid amplification method**, which did away with the need for a **thermocycler**.
  - **Isothermal amplification of nucleic acids** is a process that rapidly and efficiently accumulates **nucleic acid sequences** at a constant temperature.
  - The Isothermal Amplification Techniques have been developed as **alternatives to Polymerase Chain Reaction (PCR)**.
  - **Thermocyclers** are instruments used to **amplify DNA** (deoxyribonucleic acid) and **RNA** (ribonucleic acid) **samples** by the **PCR**.
- **Once the sample is processed** in the machine after being mixed with solutions developed by the IIT team, **treated paper strips are dipped** into it, and the **emergence of coloured lines will depict the presence of the virus**.

#### ➤ Benefits:

- **Cheaper:** It is a **cheaper process** as the machine costs less than Rs. 5,000 and the test kits would each cost about Rs. 500.
- **Quicker:** The test is completed **within an hour while the RT-PCR test** (Reverse Transcription Polymerase Chain Reaction) **takes 3-4 hours** for testing the sample.
- **Simpler:** The portable test units **can be handled by unskilled operators outside the lab environment**.
  - It is also better than the **FELUDA test** because the FELUDA employs a gene-editing technology called **CRISPR-cas9**, which requires a lab testing environment.
- **Reusable:** The **same unit can be re-used for a large number of tests** by replacement of the paper cartridge after each test.

### Novel solution

A look at how the new COVID-19 testing device works



**Virus alert:** Researchers with the COVIRAP device at IIT Kharagpur. • SPECIAL ARRANGEMENT

- COVIRAP machine resembles a box and comes with a kit
- Kit has three master mixes which are markers of different genes to confirm the virus
- RNA samples are extracted from nasal swabs and mixed with the master mix in tubes
- Tubes are put in the machine which is set at a specific temperature and programmed to run for a fixed period
- Once the heating is over,

it's mixed with another solution and reheated

- A paper strip is dipped into reaction product
- Coloured lines develop, like in a pregnancy kit, to indicate presence or absence of virus
- A smartphone app can grab image of the strip and convey results
- COVIRAP can deliver results in an hour

### DIFFERENCES WITH RT-PCR

- While RT-PCR machines can cost up to ₹25 lakh, the COVIRAP machine cost the IIT researchers only ₹5,000
- COVIRAP test kits cost about ₹500
- RT-PCR needs to be operated by a molecular biologist
- COVIRAP can be operated with minimal training

- **Efficient:** This assay (testing) holds the **capability of detecting extremely low levels of viral loads** compared to any other method based on similar principles of testing.
  - This means that very early stages of infection can be detected, thereby isolating the patient and arresting the uncontrolled spread of infection in the community via asymptomatic patients.
- **Accuracy:** It correctly detected **108 out of the 115 positive samples** identified by an RT-PCR machine, and **83 out of 85 negative samples**, meaning that it has a **94% sensitivity and 98% specificity** in comparison to RT-PCR.
- **Other Usage:** The COVIRAP testing machine **can also perform tests other than Covid-19**. It can be used in influenza, malaria, dengue, Japanese encephalitis, TB etc, which are under the **category of isothermal nucleic acid-based tests**.

## Monoclonal Antibodies for Covid-19

### Why in News

Recently, the **International AIDS Vaccine Initiative (IAVI)** and **Serum Institute of India (SII)**, Pune has announced an agreement with **Merck**, a science and technology company, to develop **SARS-CoV-2 neutralising monoclonal antibodies (mAbs)**, which will be used to address the **Covid-19 pandemic**.

- IAVI is a **non-profit scientific research organisation** dedicated to addressing urgent global health challenges. It is headquartered in New York, USA.
- SII is the **world's largest vaccine manufacturer**.

### Key Points

#### ➤ Monoclonal Antibodies:

- Antibodies are proteins produced naturally by the immune system that target a specific foreign object (antigen). They are called **monoclonal antibodies (mAbs)** when they are **produced by clones derived from a single parent cell**.
- These are **man-made proteins** which act like a human antibody in the immune system. These are **made by cloning a unique white blood cell**.

Note:

- mAbs have **monovalent affinity**, it binds only to the **same epitope** i.e. the part of an **antigen** that is recognised by the **antibody**.
- These are designed to perform many roles which include **carrying drugs, toxins, or radioactive substances** directly to affected cells.
- mAbs are **used to treat many diseases**, including some types of **cancer**.
- **mAbs and Covid-19:**
  - Neutralising mAbs against SARS-CoV-2 were **co-invented by IAVI and Scripps Research**.
  - These are widely considered to be the promising candidates for Covid-19 treatment and prevention.
  - **Encouraging results** for Covid-19 antibody treatment have **emerged from preclinical research and from initial clinical trials**.
  - mAbs also have the **potential to play an important complementary role to Covid-19 vaccines**.
    - It can be used **both for treatment and potentially for prevention**, especially for those individuals who, due to age or medical conditions, may not benefit from vaccination.

## NAG Missile: Anti Tank Guided Missile

### Why in News

Recently, the final user trial of **3<sup>rd</sup> generation Anti Tank Guided Missile (ATGM) NAG** was carried out successfully from **Pokhran range in Thar desert (Rajasthan)**.

### Key Points

- **Developed By:** **Defence Research and Development Organisation (DRDO)**
- **Features:**
  - The NAG missile has been developed to **strike and neutralise highly-fortified enemy tanks**. It also has **night strike capabilities**.
    - ATGMs are missile systems that can strike and neutralise armoured vehicles such as tanks.
  - It has a **minimum range of 500 metres** and **maximum range of 4 km**.



- As a **third-generation 'fire and forget' category system**, NAG uses an **imaging infra-red seeker** to lock on to the target before launch.
- In the **top attack mode**, the missile is required to climb sharply after launch and travel at a certain altitude, then plunge on top of the target. In the **direct attack mode**, the missile travels at a lower altitude, directly striking the target.
- It has a capability to **defeat Main Battle Tanks (MBT)** equipped with composite and reactive armour.
- The **NAG missile carrier (NAMICA)** is a **Russian-origin BMP-II based system** with **amphibious capability**.
  - BMP-II is a mechanized infantry fighting vehicle.
- **Version of NAG ATGM:** DRDO is currently in the final stages of the development of the **helicopter-launched version of Nag ATGM**, called the **Helina**, which has undergone successful tests in 2018.
- **Significance:**
  - With this final user trial, Nag will **enter the production phase**.
    - The **missile** will be produced by Defence Public Sector Undertaking (PSU) **Bharat Dynamics Limited (BDL)**, whereas **Ordnance Factory, Medak**, will produce the **NAMICA**.
  - This means that the **Indian Army will no longer have to import this weapon from either Israel or the USA** for the range of four kilometres.
    - It was due to unavailability of a credible anti-tank weapon, that **India had to buy around 200 pieces of Spike anti-tank missiles** from Israel as emergency purchases after the **aggression by the People's Liberation Army (China) in Ladakh**.
  - Further, the army is currently using **second generation Milan 2T and Konkur ATGMs** and has been looking for about third-generation missiles, which are important for stopping advancing enemy tanks.
- **Other Missile Systems:** Missiles have been developed by India under '**Integrated Guided Missile Development Program**'.
- **Other Recent Tests:**
  - The NAG ATGM trial was in continuation of a series of missile tests conducted by the DRDO in the last one-and-a-half months.
    - Among these trials were two other ATGMs - the **Laser-Guided ATGM**, and the **Stand-Off Anti-Tank Missile (SANT)**.

Note:

- DRDO, successfully tested India's first indigenous anti-radiation missile named **Rudram**, Supersonic Missile Assisted Release of Torpedo (**SMART**) system, nuclear capable **missile Shaurya**, **Naval version of the BrahMos** and **Hypersonic Technology Demonstrator Vehicle** (HSTDV).

## PLACID Trials

### Why in News

Recently, the **PLACID Trial**, a **multicentre randomized controlled trial**, has shown that the use of **convalescent plasma** (CP) as a therapeutic for **Covid-19** patients showed no positive effects and did not improve the outcome of the patients.

- The randomised controlled trial (RCT) is a trial in which **subjects are randomly assigned to one of two groups**: one (the **experimental group**) receiving the intervention that is being tested, and the other (the **comparison group or control**) receiving an alternative (conventional) treatment.

### Key Points

#### ➤ Convalescent Plasma Therapy:

- Convalescent Plasma, extracted from the blood of patients recovering from an infection, is a **source of antibodies** against the infection.
- The **therapy** uses blood from people who have recovered from an illness to help others recover.
- Blood **donated by people who have recovered from Covid-19** has antibodies to the virus that causes it. The donated blood is **processed to remove blood cells, leaving behind liquid** (plasma) and **antibodies**. These can be given to people with Covid-19 to boost their ability to fight the virus.
- The plasma donor would **have to be a documented case** of Covid-19 and **healthy for 28 days since the last symptoms**.

#### ➤ PLACID Trial:

- It was conducted by the **Indian Council of Medical Research** (ICMR) and its aim was to **investigate CPT's effectiveness for the treatment of Covid-19**.
- It is the **first and largest randomised control trial** to be completed in the world.

#### ➤ Findings:

- The trial results indicate that there was **no difference in the 28-day mortality** (estimates of

deaths in the 28 days after entering the hospital for a specific condition) or **progression of Covid-19 from moderate to severe** in patients treated with CP along with basic standard care compared to basic standard care alone.

- While the use of **CP seemed to improve the resolution of shortness of breath and fatigue** in patients with moderate Covid-19, this **did not translate into a reduction in 28-day mortality** or progression to severe disease.

#### ➤ Impact of the Findings:

- The ICMR is now considering **removing the option of CPT from the national guidelines**.
  - CPT as a treatment for Covid-19 in India has **led to questionable practices** such as calls for donors on social media, and the sale of convalescent plasma on the black market.
  - Although CP is a safe form of treatment when transfused in accordance with the regulations, it **involves resource-intensive processes** such as **plasmapheresis** (separating plasma from the blood cells), **plasma storage**, and **measurement of neutralising antibodies** and a limited number of institutes have the capacity to undertake these procedures in a quality-assured manner.
- However, experts have held that **guidelines are not necessarily binding** and it is **too early to dismiss convalescent plasma therapy**.

## Earth Observation Satellite EOS-01: ISRO

### Why in News

India would launch its latest **earth observation satellite EOS-01** and **nine international customer satellites** from **Satish Dhawan Space Centre** in Andhra Pradesh's Sriharikota.

- The **Polar Satellite Launch Vehicle (PSLV-C49)** of the **Indian Space Research Organisation (ISRO)** will launch these ten satellites on 7<sup>th</sup> November 2020. It will be **PSLV's 51<sup>st</sup> Mission**.

### Key Points

- **EOS-01**: It is an **earth observation satellite** and is **intended for applications** in agriculture, forestry and disaster management support.

Note:

- Earth observation satellites are the satellites **equipped with remote sensing technology**. Earth observation is the gathering of information about Earth's physical, chemical and biological systems.
- Many earth observation satellites have been employed on **sun-synchronous orbit**.
- **Other earth observation satellites** launched by ISRO include RESOURCESAT- 2, 2A, CARTOSAT-1, 2, 2A, 2B, RISAT-1 and 2, OCEANSAT-2, Megha-Tropiques, SARAL and SCATSAT-1, INSAT-3DR, 3D, etc.
- **Nine Customer Satellites:** These are being launched as part of a commercial agreement with **NewSpace India Limited (NSIL)**, Department of Space.
  - NSIL, incorporated in 2019 (under the Companies Act, 2013), is a **wholly owned Government of India company**, under the administrative control of Department of Space (DOS).
  - NSIL is the **commercial arm of ISRO** with the primary responsibility of enabling Indian industries to take up high technology space related activities and is also responsible for promotion and commercial exploitation of the products and services emanating from the Indian space programme.
  - The **major business areas** of the NSIL include:
    - **Production** of Polar Satellite Launch Vehicle (PSLV) and **Small Satellite Launch Vehicle (SSLV)** through industry.
    - Production and **marketing of space-based services**, including launch services and space-based applications like transponder leasing, remote sensing and mission support services.
    - **Building of Satellites** (both Communication and Earth Observation) as per user requirements.
    - **Transfer of technology** developed by ISRO centres/ units and constituent institutions of Dept. of Space.
    - **Marketing spin off technologies** and products/ services emanating out of ISRO activities.
    - **Consultancy** services.
  - Recently, the Government of India has created the **Indian National Space Promotion and Authorization Center (IN-SPACe)**, an independent nodal agency under the Department of Space, to provide a boost to the private sector participating in space-related activities or using India's space resources.

## Superconductivity at Room Temperature

### Why in News

Recently, **researchers have created a material that is superconducting** at room temperature, however, it **only works at a pressure of 267 Gigapascals (GPa)**, which is equivalent to **about three-quarters of pressure at the centre of Earth (360 GPa)**.

### Key Points

- **Material Used:** A mixture of carbon, hydrogen and sulfur was put in a microscopic niche carved between the tips of two diamonds (**diamond anvil**) and laser light was used on them to **trigger chemical reactions**.
- **Process:**
  - As the experimental **temperature was lowered**, **resistance** to a current passed through the material **dropped** to a vanishingly small value below the **critical temperature (T<sub>c</sub>)**.
  - The **transition of the sample to become superconductive** occurred the best at **transition temperature of around 15°C at 267 GPa**.
- **Verification:** To verify that this phase was indeed a superconductor, the group ascertained that the **magnetic susceptibility** of the superconductor was that of a **diamagnet**.
  - A **superconducting material kept in a magnetic field expels the magnetic flux out** its body when cooled below the critical temperature and **exhibits perfect diamagnetism**.
  - It is also called the **Meissner effect** which simply means that **magnetic lines do not pass through superconductors** in a magnetic field.
- **Superconductors:**
  - A superconductor is a material that can **conduct electricity or transport electrons from one atom to another with no resistance**.
  - No heat, sound or any other form of energy would be released from the material when it has **reached critical temperature (T<sub>c</sub>)**, or the temperature at which the material becomes superconductive.
    - The critical temperature for superconductors is the **temperature at which the electrical resistivity of metal drops to zero**.

Note:



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- **Prominent examples** include aluminium, niobium, magnesium diboride, etc.
- **Applications:**
  - From magnetic resonance imaging (MRI) machines, low-loss power lines, ultra powerful superconducting magnets to mobile-phone towers.
  - Researchers are also experimenting with them in high-performance generators for wind turbines.
- **Limitations:**
  - Their usefulness is still **limited by the need for bulky cryogenics** (production of and behavior of materials at very low temperatures) as the common superconductors **work at atmospheric pressures**, but only if they are kept very cold.
    - Even the most sophisticated ones like **copper oxide-based ceramic materials** work only below  $-140^{\circ}\text{C}$ .
- **Significance of the Research:**
  - If researchers can stabilise the material at ambient pressure, **applications of superconductivity at room temperatures could be achieved** and will be within reach.
  - Superconductors that work at room temperature could have a **big technological impact, for example in electronics that run faster without overheating**.

#### Diamagnetism

- It is a **very weak form of magnetism** that is **induced by a change in the orbital motion of electrons** due to an applied magnetic field.
- This magnetism is **non-permanent and persists only in the presence of an external field**.
- The **magnitude of the induced magnetic moment is very small**, and its **direction is opposite to that of the applied field**.

#### Meissner Effect

- When a **material makes the transition from the normal to the superconducting state**, it **actively excludes magnetic fields** from its interior and this is called the Meissner effect.
- This constraint to zero magnetic fields inside a superconductor is **distinct from the perfect diamagnetism which would arise from its zero electrical resistance**.

## Computation Analysis of Indian Genes

### Why in News

Recently, the results from the **computation analysis of the 1029 sequenced genomes** from India has been published in the scientific journal, *Nucleic Acid Research*.

### Key Points

- Out of **55,898,122 single-nucleotide variants** in India, **32.23% are unique and found only in the samples sequenced from India**.
  - This emphasises the need for an India centric population genomics initiative.
- The **analysis was carried out by the Council of Scientific and Industrial Research (CSIR)** constituent labs, **Institute of Genomics and Integrative Biology (IGIB)**, Delhi and the **Centre for Cellular and Molecular Biology (CCMB)**, Hyderabad.
- **IndiGenomes Resource Database:**
  - It encompasses the **genomic data from over 1000 whole-genome sequences** sequenced from across India as part of the **IndiGen Programme** and represents diverse geographies and ethnicities.
    - The **IndiGen Programme** was launched in **April 2019**, under which **genome sequencing** of 1029 self-declared healthy Indians, drawn from across the country, has been completed.
    - **Objective:** To enable genetic epidemiology and develop public health technologies applications using population genome data.
  - The resource provides **access to over 55 million genetic variants representing the contemporary Indian population** with an objective to classify variants involved in **Mendelian disorder** and **improve precision medicine outcomes**.
    - The **mendelian disorder** is a type of genetic disorder, resulting due to alterations in a gene or due to abnormalities in the genome.
  - It enables the **identification of markers for carrier screening, variations causing genetic diseases, prevention of adverse events** and provides better diagnosis and optimal therapy **through mining data**.
  - This resource can provide useful insights for clinicians and researchers in comprehending

Note:



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genetics not only at the population level but at the individual level.

➤ **Background:**

- Despite having this rich genetic diversity, **India has been under-represented in global genome studies**. Further, the population architecture of India has resulted in a high prevalence of recessive **alleles** (a variant form of a gene).
- In the absence of large-scale whole-genome studies from India, the population-specific **genetic variants are not adequately captured and catalogued** in the global medical literature.
- In order to **fill the gap of whole-genome sequences** from different populations in India, CSIR initiated the **IndiGen Programme**.

**Genome**

- It is all the **genetic matter** in an organism and can be defined as an organism's complete set of **Deoxyribose Nucleic Acid (DNA)**, including all of its genes.
  - Every organism's genetic code is contained in its **DNA**, the building blocks of life.
- Each genome contains all of the information needed to build and maintain that organism.
- In humans, **a copy of the entire genome contains more than 3 billion DNA base pairs**.

**Genome Sequencing**

- It is figuring out the **order of DNA nucleotides or bases** (Adenine, Cytosine, Guanine, and Thymine) that **make up an organism's DNA**.
- **Application:**
  - In **new advancements in medical science** (like predictive diagnosis and precision medicine, genomic information) and in **disease management**.
  - Through it, researchers and clinicians can **easily detect the disease related to a genetic disorder**.
- **Importance:**
  - The study will **help understand how genes work together** to direct the growth, development and maintenance of an entire organism.
  - The **genes account for less than 25% of the DNA in the genome**, and so knowing the entire genome sequence will **help scientists study the parts of the genome outside the genes**.

## CSIR-CMERI's Municipal Solid Waste Processing Facility

### Why in News

Recently, the **Council of Scientific and Industrial Research's Central Mechanical Engineering Research Institute (CSIR-CMERI)** has developed a **Municipal Solid Waste (MSW) Processing Facility (Decentralised Solid Waste Management Plant)** to solve the problem of waste management in India.

### Key Points

➤ **Challenges in Waste Management:**

- With an **ever-increasing population** and **rapid pace of urbanisation**, India faces a huge challenge of waste management.
- The volume of waste is projected to **rise from the present 62 million tonnes to about 150 million tonnes by 2030**.
- **Indiscriminate dumping** of garbage at the current rate without appropriate scientific treatment would impose a huge **requirement of landfill area** per year.
- Studies suggest that the MSW generated in India mostly consists of a large fraction of **organic wastes** and their unscientific disposal produces **greenhouse gas (GHG)** emissions and other **air pollutants like methane (CH<sub>4</sub>)**.
- The **ineffective processing** of MSW also is the root **cause of many diseases** as the dumped landfills transform into **contamination hubs for pathogens, bacteria and viruses**.
- The most commonly used process "**composting**" also **does not yield impactful economic returns** for the entrepreneurs.
  - It requires more land space and labour, pasteurisation for effective disinfection and has restricted utilisation due to presence of heavy metals.
  - During the rainy season, managing it becomes difficult due to the presence of excessive moisture.

➤ **MSW Processing Facility:**

- It is developed following the **Solid Waste Management (SWM) Rules 2016** prescribed by the Ministry of Environment, Forests and Climate Change.

Note:



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- It has been developed with the **potential to scientifically manage the solid waste** including the **Covid-19 wastes**.
  - The facility is equipped with special disinfection capabilities to help break the Covid-19 chain through **UV-C lights** and hot-air convection methods.
- The plant is **self-sufficient** in terms of energy requirement through the installation of roof-mounted solar panels, which can also feed the surplus energy supply onto a mini-grid.
- **Objectives:**
  - To unburden the common households from the segregation responsibilities through advanced segregation techniques.
  - To achieve decentralised decimation of solid wastes.
  - To help create value-added end-products from abundantly available redundant stuff such as dry leaves, dry grass, etc.
- **Mechanism:**
  - The **mechanised segregation system segregates solid waste** into metallic waste (metal body, metal container, etc.), biodegradable waste (foods, vegetables, fruits, grass, etc.), non-biodegradable waste (plastics, packaging material, pouches, bottles etc.) and inert wastes (glass, stones etc.).
- **Significance:**
  - It opens up the opportunities to realise the dream of generating **100 GW Solar Power by 2022** and a city with a "Zero-Waste and Zero-Landfill Ecology".
  - It may become a source of job creation through both process-engagement and manufacturing, which can help support the **Micro Small Enterprises (MSEs)** and various start-ups across the nation.

### Various Waste Disposal Methods

#### ➤ Bio-degradable Waste Disposal:

- The biodegradable component of the waste is **decomposed in an anaerobic environment** popularly known as **bio-gasification**.
- In this process, biogas is liberated through the conversion of organic matter and the biogas can

be used as fuel for cooking or can also be utilised in a **gas engine for the generation of electricity**.

- The **residual slurry** from the biogas plant is converted to **compost** in a natural process known as **vermicomposting** by introducing earthworms. The vermicompost is **utilised in organic farming**.
- **Biomass Waste Disposal:**
  - Biomass waste such as **dry leaves, dead branches, dry grass** etc. are disposed of by **first shredding** it to suitable size followed by **mixing with the slurry of the biogas digester**.
  - This mixture is the feedstock for **briquette** (compressed block of coal dust or other combustible material), which is utilised as fuel for cooking and in gasifier for production of **syngas** (or **synthesis gas**), utilised in a gas engine for electricity generation.
    - Syngas is a **fuel gas mixture** consisting primarily of hydrogen, carbon monoxide, and very often some carbon dioxide.
- **Polymer Waste Disposal:**
  - The polymer waste **consisting of plastics** is being disposed of through **pyrolysis**, in which the polymer waste is **heated to a temperature of 400-600°C in an anaerobic environment in presence of a suitable catalyst**.
  - The volatile matter from the polymer waste comes out as a result of heating which on condensation gives **pyrolysis oil**.
  - The non-condensed syngas and crude pyrolysis oil after purification are **reused for heating purposes** and it helps in obtaining self-sustainability.
  - The **solid residue known as char** is mixed with the biogas slurry for production of briquette.
- **Sanitary Waste Disposal:**
  - The sanitary items including masks, sanitary napkins, diapers etc. are **disposed-off utilising high-temperature plasma gasification**.
  - The plasma gasification process uses **electricity to generate high-temperature plasma arcs** (above 3000°C) inside the plasma reactor which **converts the waste into syngas and the residual ash** can be mixed with cement for preparation of recycled bricks.
    - However, this technology is **not economically viable** as energy requirements for waste treatment using this technology is very high.



Note:



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# Environment and Ecology

## Highlights

- Increased Emissions of N<sub>2</sub>O
- Right of Passage of Animals
- Bioremediation Mechanism for Oil Spills
- Skinks of India
- Dolphins in Pearl River Estuary
- International Snow Leopard Day
- State of Global Air 2020: HEI
- Dashboard for Monitoring Air Quality
- Seagrass
- South Asian Flash Flood Guidance System
- Two New Ramsar Sites
- Shivalik Elephant Reserve: Uttarakhand
- Translocation of Corals in Mumbai
- Habitat Loss of Himalayan Brown Bear

## Increased Emissions of N<sub>2</sub>O

### Why in News

According to a recent research paper, human emissions of **nitrous oxide (N<sub>2</sub>O)** have increased by 30% between 1980 and 2016.

- The research was conducted through an international collaboration between the International Nitrogen Initiative (INI) and the Global Carbon Project of **Future Earth**, a partner of the World Climate Research Programme.

### Key Points

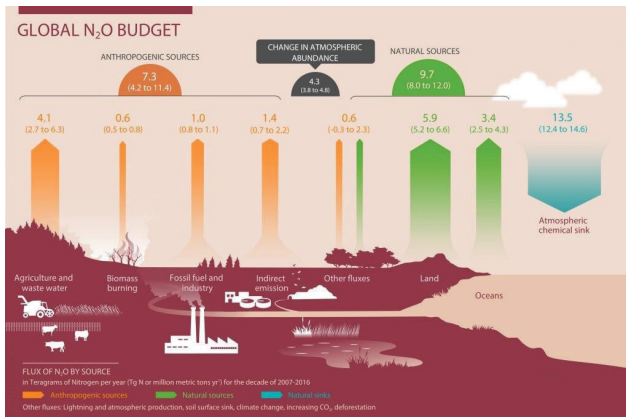
- **Nitrous Oxide (N<sub>2</sub>O):**
  - It is a **greenhouse gas (GHG)** 300 times more potent than carbon dioxide (CO<sub>2</sub>).
  - It has the third-highest concentration, after CO<sub>2</sub> and **methane (CH<sub>4</sub>)**, in Earth's atmosphere among GHGs responsible for global warming.
  - N<sub>2</sub>O is also the only remaining threat to the **ozone (O<sub>3</sub>)** layer, for it accumulates in the atmosphere over a long period of time, just like CO<sub>2</sub>.
  - It can live in the atmosphere for up to 125 years.
  - Its global concentration levels have increased from 270 parts per billion (ppb) in 1750 to 331 ppb in 2018, a jump of 20%.
    - The growth has been the quickest in the past five decades because of human emissions.
- **Research and the Study:**

- This is the most comprehensive study of global N<sub>2</sub>O emissions ever published, as it combines both natural and anthropogenic (man-made) sources.
- The study found that 43% of the total emissions came from human sources and most N<sub>2</sub>O emissions came from emerging countries like India, China and Brazil.
- Increase in its emissions means that the climatic burden on the atmosphere is increasing from non-carbon sources as well, while the major focus of global climate change negotiations is currently centred on carbon, its emissions and mitigation.
- It also highlighted the dichotomy of the **climate crisis** and global **food security**.
  - A major proportion of the N<sub>2</sub>O emissions in the last four decades came from the agricultural sector, mainly because of the use of **nitrogen-based fertilisers**.
  - The growing demand for food and feed for animals will further increase its global emissions, leading to a direct conflict between the way countries are feeding people and stabilising the climate.
- **Suggestions:**
  - There are well-established practices and technologies like crop and manure management, the **use of bio-fertilisers**, to mitigate N<sub>2</sub>O emissions which need to be utilised to their full extent.
  - Revised industrial and agricultural policies at the global level will reduce such emissions considerably.

Note:



- Reducing GHGs emissions will also have the co-benefits of reduced air and water pollution.
- There is a need to bring the non-carbon sources under the major global climate change negotiations.
- It is possible to slow down N<sub>2</sub>O emissions if countries implement the United Nations Global Campaign on Sustainable Nitrogen Management, 2019 held in Colombo, Sri Lanka.
  - The focus of the event was to finalise the Colombo Declaration, a follow up on the **UNEA 4 Resolution on Sustainable Nitrogen Management** which aims to further the dialogue on Nitrogen management.



## Right of Passage of Animals

### Why in News

Recently, the **Supreme Court** (SC) has upheld the 2011 order of the Madras High Court (HC) on the **Nilgiris elephant corridor**, affirming the right of passage of the animals and the closure of resorts in the area.

### Key Points

- **Madras HC Judgement:**
  - In **2011**, the Madras HC upheld the validity of the **Tamil Nadu government's notification** (of 2010) declaring an 'Elephant Corridor' in the Sigur Plateau of Nilgiris District.
  - It said that the **government is fully empowered** under the '**Project Elephant**' of the Union government as well as **Article 51 A(g)** of the Constitution to **notify the elephant corridor** in the state's Nilgiris district.
    - **Article 51 A(g):** It shall be the duty of every

citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures.

- Further, it upheld **directions to the resort owners and other private landowners to vacate lands** falling within the notified elephant corridor.
- **Highlights of the SC Judgement:**
  - It's the **State's duty to protect a "keystone species"** like elephants, which are immensely important to the environment.
    - Keystone species, in ecology, a species that has a **disproportionately large effect on the communities** in which it lives.
  - Elephant corridors **allow elephants to continue their nomadic mode of survival**, despite shrinking forest cover, by facilitating travel between distinct forest habitats. These corridors play a crucial **role in sustaining wildlife by reducing the impact of habitat isolation**.
  - The court also allowed the **formation of a committee** led by a retired HC judge and two other persons **to hear the individual objections** of resort owners and private landowners within the corridor space.
  - However, during the hearings, the **SC opined that the area is a fragile ecosystem**, where the will of men must give way to elephants.

**'ECOSYSTEM COULD BE UNALTERABLY UPSET'**

The precautionary principle makes it mandatory for the state government to anticipate, prevent and attack causes of environmental degradation... it was necessary for it to limit commercial activity in areas falling in the corridor

The corridors allow elephants to continue their nomadic mode of survival, despite shrinking forest cover, by facilitating travel between distinct forest habitats

In their absence, elephants would be unable to move freely, which would affect other species and the ecosystem balance of several wild habitats would be unalterably upset

— SC bench comprising CJI S A Bobde, Justices S Abdul Nazeer & Sanjiv Khanna

### ➤ Nilgiris Elephant Corridor:

- The corridor is situated in the **ecologically fragile Sigur plateau**, which connects the **Western and the Eastern Ghats** and sustains elephant populations and their genetic diversity.
  - It is situated near the **Mudumalai National Park** in the Nilgiris district.
- It has the **Nilgiri hills on its southwestern side** and the **Moyar river valley on its northeastern side**.

Note:



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- There are **about 100 elephant corridors** in India of which almost **70% are used regularly**.
  - 75% of the corridors are in the **southern, central and northeastern forests**.
  - There are an **estimated 6,500 elephants** in just the **Brahmagiri-Nilgiris-Eastern Ghats** ranges.
- **Challenges for Elephant Corridors: 'Right of Passage'**, an 800-page study released in August 2017, authored by experts and published by the **Wildlife Trust of India** (WTI) identifies and records details pertaining to 101 elephant corridors across India.
  - **Narrowing Passage Width:** Only 22% corridors are of a width of one to three kilometres in 2017, compared with 41% in 2005, pointing to how constricted corridors have become in the past 12 years.
  - **Human Encroachment:** 21.8% of corridors were free of human settlements in 2017 compared with 22.8% in 2005, and 45.5% have 1-3 settlements in 2017 compared with 42% in 2005.
  - **Intercepted Corridors:**
    - About 36.4% of the elephant corridors in northwestern India, 32% in central India, 35.7% in northern West Bengal and 13% of the elephant corridors in northeastern India have a **railway line** passing through them.
    - Almost two-thirds of the corridors have a **National or State Highway** passing through them, fragmenting habitats and hindering elephant movement further.
    - 11% of corridors have **canals** passing through them.
    - 12% are affected by the **mining and the extraction of boulders**.
  - **Land-use Along Corridors:** In terms of land use, only 12.9% of the corridors are totally under forest cover in 2017 compared with 24% in 2005.
    - Two in every three elephant corridors in the country are now **affected by agricultural activities**.
    - All the corridors in northern West Bengal (100%) and almost all in central India (96%) and northeastern India (52.2% under settled cultivation and 43.4% under slash and burn cultivation) have agricultural land.

### Asian Elephant

- **Subspecies:** There are **three subspecies** viz. the Indian, Sumatran and Sri Lankan.
  - The **Indian subspecies** has the **widest range and accounts** for the majority of the remaining elephants on the continent.
- **Threats:** Escalation of poaching, habitat loss, **human-elephant conflict** and mistreatment in captivity are some common threats to both African and Asian elephants.
- **Conservation Status:**
  - **IUCN Red List:** African elephants are “vulnerable” and Asian elephants are “endangered”.
  - **CITES Status:**
    - **Appendix II** for African elephants in Botswana, Namibia, South Africa and Zimbabwe.
    - **Appendix I** for Asian Elephants.
- **Conservation Efforts:**
  - **Project Elephant** launched by the Government of India in the year **1992** as a **Centrally Sponsored Scheme**.
    - **Elephant census** is conducted **once in 5 years** under the aegis of Project elephant.
  - **Establishment of elephant reserves** and adoption of the “**World Elephant Day**” (**12<sup>th</sup> August**) to help conserve and protect elephants in India.
  - ‘**Gaj Yatra**’ a **nationwide awareness campaign** to celebrate elephants and highlight the necessity of securing elephant corridors.
  - The **Monitoring the Illegal Killing of Elephants** (MIKE) programme, launched in **2003**, is an **international collaboration that tracks trends in information** related to the illegal killing of elephants from across Africa and Asia, to monitor the effectiveness of field conservation efforts.

## Bioremediation Mechanism for Oil Spills

### Why in News

The **National Institute of Ocean Technology (NIOT)**, **Chennai** has developed an **eco-friendly crude oil bioremediation mechanism technology** using consortia (group

Note:

of two or more species) of marine microbes **wheat bran (WB)** immobilized (**microbes controlled degradation**) on agro-residue bacterial cells.

- **Wheat bran** is the hard outer layer of the **wheat** kernel. It's stripped away during the milling process.

### Key Points

- **Eco-friendly Crude Oil Bioremediation Mechanism Technology**
  - **Bioremediation:** It can be defined as any process that uses microorganisms or their enzymes to remove and or **neutralize contaminants within the environment to their original condition.**
  - In the marine ecosystem, deep sea **hydrocarbonoclastic** (ability to degrade hydrocarbon) microbial consortium plays an important role in breaking down **oil in the event of a spill.**

### Oil Spill

- It is an **accidental/uncontrolled release** of crude oil, gasoline, fuels, or other oil by-products into the environment. Oil spills can pollute land, air, or water, though it is mostly used for oceanic oil spills.
  - The recent **MV Wakashio spill off Mauritius** — about 1,000 tonnes of oil spilled into a sanctuary for rare wildlife after the Japanese ship struck a coral reef in 2020.
- **Cause:** They have become a major environmental problem, chiefly as a result of **intensified petroleum exploration and production** on continental shelves and the transport of large amounts of oils in vessels.
- **Measure:** Cleaning up of the oil spillage from the oceans **without damaging the marine ecosystem** is becoming an increasingly challenging task.
  - **Containment Booms:** Floating barriers, called booms are used to restrict the spread of oil and to allow for its recovery, removal, or dispersal.
  - **Skimmers:** They are devices used for physically separating spilled oil from the water's surface.
  - **Sorbents:** Various sorbents (e.g., straw, volcanic ash, and shavings of polyester-derived plastic) that absorb the oil from the water are used.
  - **Dispersing agents:** These are chemicals that contain surfactants, or compounds that act to break liquid substances such as oil into small droplets. They accelerate its natural dispersion into the sea.

- The microbial community serves as **energetic primary degraders** of a complex mixture of petroleum hydrocarbons into various aldehydes, ketones and acidic metabolites.
- These hydrocarbon degrading bacteria don't depend on hydrocarbons for survival, but have a metabolic mechanism where they use petroleum products as **carbon and energy source** and thus, help cleaning up oil spills.
- The **complete breakdown and degradation** of crude oil is achievable using **wheat bran marine bacterial consortia** (which are **low-cost non-toxic** agro-residues) in an environmentally sustainable manner.
- **Advantages of Immobilized State:**
  - They are more **effective in their immobilised state** than the free bacteria cells in degrading the oil spills.
    - They could remove 84 % of the oils within 10 days. The free bacterial cells degraded a maximum of 60 % of the crude oil at optimised conditions.
  - They are more **versatile and resistant** to adverse conditions.
  - They have **efficacy in treating accidental bulk discharge of oil** in marine environments through non-toxic clean-up technology.

## Skinks of India

### Why in News

Recently, the **Zoological Survey of India (ZSI)** has published a study on skinks (a kind of lizard), titled "**Skinks of India**".

### Key Points

- **Skinks:**
  - With **1,602 species** of skinks across the world, it is the **largest family of lizards**, having long bodies, relatively small or no legs, no pronounced neck and glossy scales.
  - It is **found around** homes, garages, and open spaces



Note:

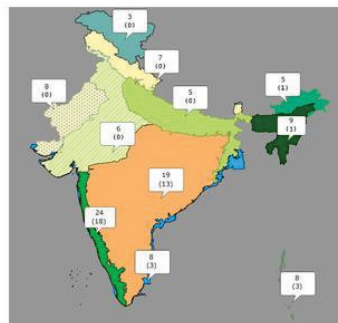


such as sparks and school playgrounds, and around lakes.

- Skinks are **non-venomous, highly alert, agile and fast-moving** and actively **forage for a variety of insects and small invertebrates**.
- They have a **prominent role in maintaining ecosystems**, however, **not much is known about their breeding habits, and ecology** because identification of the species can be confusing.
- In India, **skinks are found in all kinds of habitats** ranging from the Himalayas to the coasts and from dense forests to the deserts.

#### ➤ Study:

- It gives a **phylogenetic** (evolutionary development) and **bio-geographical analysis** of the distribution of these species in all the **11 bio-geographic zones of India**.



Biogeographic Zones of India  
Zones: 1. Eastern Himalaya, 2. Andamans & Nicobars, 3. North East, 4. Sess. And., 5. Trans. Himalaya, 6. Western Ghats, 7. Deccan Peninsula, 8. Desert, 9. Gangetic Plain, 10. Central Himalaya, 11. Coastal.  
SKINK SPECIES DISTRIBUTION IN DIFFERENT BIOGEOGRAPHIC ZONES OF INDIA (ENDEMIC SPECIES IN BRACKETS)

- India is **home to less than 4% of the skinks** across the globe. **62 species of skinks** are found in India and about **57% of them (33 species)** are **endemic**.
- India is home to **16 genera of skinks, four of which are endemic**. The four genera of skinks are:
  - **Sepsophis**: Sepsophis punctatus is endemic to the **northern part of Eastern Ghats**.
  - **Barkudia**: They are limbless skinks found in the **hills and coastal plains of the eastern coast**.

#### Zoological Survey of India

- **Established in 1916**, it is a subordinate organisation of the **Ministry of Environment, Forest and Climate Change**.
- It is a national centre for **faunistic survey** and exploration of the resources leading to the **advancement of knowledge** on the exceptionally **rich faunal diversity of the country**.
- It has its **headquarters at Kolkata** and **16 regional stations** located in different geographic locations of the country.

- **Barkudia insularis** is believed to be found only in the Barkud Island in Chilka lake in Odisha.
- **Barkudia melanosticta** is endemic to Visakhapatnam.
- **Kaestlea**: They are also known as **blue-tailed ground skinks** and are endemic to the **Western Ghats**.
- **Ristella**: They are also known as **Cat skinks** and endemic to the **southern part of Western Ghats**.

## Dolphins in Pearl River Estuary

### Why in News

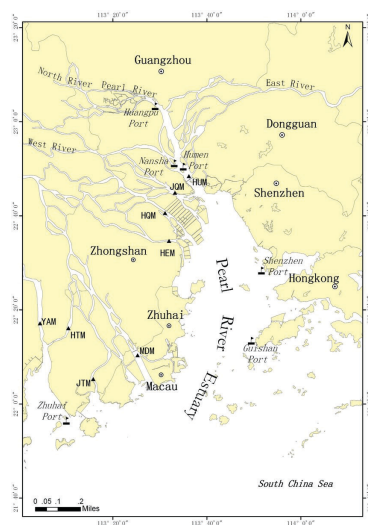
According to a recent report, **Chinese pink dolphins** are making a comeback in the **Pearl River Estuary (PRE)**.

- **Indo-Pacific humpback dolphins** are also known as **Chinese white dolphins or pink dolphins**, reflecting the colour of their skin.

### Key Points

#### ➤ Pearl River Estuary:

- It includes **Hong Kong, Macau** as well as the **mainland Chinese cities** of Shenzhen, Guangzhou and Dongguan. Around 22 million people live in the area.
- The **Pearl River Delta**, the low-lying area surrounding the PRE where the Pearl River flows into the **South China Sea**, is one of the world's **most densely urbanised, heavily industrialised and busiest shipping lanes** on Earth.



#### ➤ Current Scenario and Reasons Behind:

- Dolphins use **echolocation** to find their way in the water and the ships often disturb them in finding their way and even kill them.
- **Echolocation** is a technique used by bats, dolphins and other animals to **determine the location of objects using reflected sound**.

Note:



- This allows the animals to **move around in pitch darkness**, so they can navigate, hunt, identify friends and enemies, and avoid obstacles.
- However, dolphin numbers in the waters between Hong Kong and Macau have seen a rebound in 2020 because **Covid-19 pandemic** has **stopped ferries and hence reduced their traffic**.
- The number of pink dolphins in the waters has **roughly increased by a third** according to scientists.
- **Indo-Pacific Humpback Dolphin:**
  - **Scientific Name:** *Sousa Chinensis*.
  - **Habitat Range:**
    - Its total range is in coastal waters **from central China southward throughout Southeast Asia and westward to the Bay of Bengal**, with highest densities in and around estuaries.
    - The distribution is **fragmented** such that these dolphins are apparently **absent from fairly long stretches of coastline**. It is not always clear whether the fragmentation is 'natural' or caused by human activities.
  - The **World Wildlife Fund for Nature (WWF)** says the population in the PRE is believed to be around 2,500, but falling numbers of young could reduce numbers in future.
  - They have **seen a decline in their numbers in the past 15 years by 70-80%**.
  - **Threats:**
    - Agricultural, industrial, and urban pollution.
    - Overfishing.
    - Marine construction including bridge-building and land creation for airport expansion and residential/office development.
    - Transport including fast ferries.
    - Selling into captivity at marine "entertainment" parks and aquariums worldwide.
  - **Effects:**
    - Loss of suitable habitat, the mortality of dolphins from entanglements and vessel strikes, and the possible effects of chemical, sewage and noise pollution on their health.



- **Conservation:**
  - **IUCN Status:** **Vulnerable**.

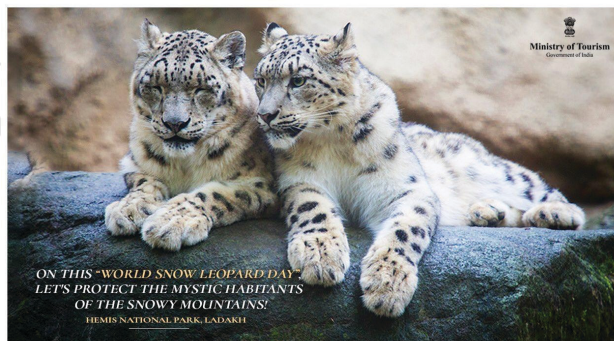
## International Snow Leopard Day

### Why in News

Every year, the International Snow Leopard Day is observed on 23<sup>rd</sup> October.

### Key Points

- **Aim:** To raise awareness on conservation and protection of snow leopards.
- **Background:** The day came into being on **23<sup>rd</sup> October 2013**, with the adoption of the **Bishkek Declaration** by 12 countries on the conservation of snow leopards.
  - The **12 countries** included India, Nepal, Bhutan, China, Mongolia, Russia, Pakistan, Afghanistan, Kyrgyzstan, Kazakhstan, Tajikistan, and Uzbekistan.
  - The **Global Snow Leopard and Ecosystem Protection Programme (GSLEP)** was also launched on the same day to **address high-mountain development issues using conservation of the snow leopard as a flagship**.



### Snow Leopard

- **Top Predator:** They are also known as **Ghost of the mountains** and act as **an indicator of the health of the mountain ecosystem** in which they live, due to their position as the **top predator** in the food web.
- **Habitation:**
  - High altitudes in the steep mountains of **Central and Southern Asia**, and in an extremely cold climate.
  - They inhabit the **higher Himalayan and trans-Himalayan landscape** in the states/union territories

Note:

of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.

- India is a unique country to have a good presence of 5 big cats, including Snow Leopard. The other 4 are Lion, Tiger, Common Leopard, Clouded Leopard.
- **Snow Leopard Capital of World: Hemis, Ladakh.**
  - Hemis National Park is the biggest national park of India.
- **Threat:**
  - Reduction in prey populations.
  - Illegal poaching.
  - Increased human population infiltration into the species habitat.
  - Illegal trade of wildlife parts and products, etc.
- **Protection:**
  - IUCN Red List: Vulnerable
  - CITES: Appendix I
  - CMS: Appendix I, which includes species threatened with extinction.
  - Indian Wildlife (Protection) Act 1972: Schedule I, which provides absolute protection and offences under this have the highest penalties.
- **Conservation Efforts Launched by India:**
  - Snow Leopard is in the list of 21 critically endangered species for the recovery programme of the Ministry of Environment Forest and Climate Change.
  - HimalSanrakshak: It is a community volunteer programme, to protect snow leopards, launched on 23<sup>rd</sup> October 2020.
  - In 2019, First National Protocol was launched on Snow Leopard Population Assessment which has been very useful for monitoring populations.
  - SECURE Himalaya: Global Environment Facility-United Nations Development Programme (GEF-UNDP) funded the project on conservation of high altitude biodiversity and reducing the dependency of local communities on the natural ecosystem.
    - This project is now operational in four snow leopard range states, namely, Jammu and Kashmir, Himachal Pradesh, Uttarakhand, and Sikkim.
  - Project Snow Leopard: It was launched in 2009 to promote an inclusive and participatory approach to conserve snow leopards and their habitat.
  - Snow Leopard Conservation Breeding Programme: It is undertaken at Padmaja Naidu Himalayan Zoological Park, Darjeeling, West Bengal.

## State of Global Air 2020: HEI

### Why in News

Recently, a global study, **State of Global Air 2020** (SoGA 2020) has been released by the **Health Effects Institute (HEI)**.

- It highlights that **air pollution is the largest risk factor for death** among all health risks and it is the **first-ever comprehensive analysis of air pollution's global impact on newborns**.
- HEI is an **independent, nonprofit research institute** funded jointly by the USA's Environmental Protection Agency and others.

### Key Points

- **India, Bangladesh, Pakistan and Nepal** are among the top ten countries with the **highest PM<sub>2.5</sub> (particulate matter) exposures in 2019** and all of these countries experienced increases in outdoor PM<sub>2.5</sub> levels between 2010 and 2019.
- **India is also among the top ten countries with highest ozone (O<sub>3</sub>) exposure in 2019**. Also, among the 20 most populous countries, India recorded the highest increase (17%) in O<sub>3</sub> concentrations in the past ten years.
- **Long-term exposure to outdoor and household (indoor) air pollution** contributed to over 1.67 million annual deaths from stroke, heart attack, **diabetes**, lung cancer, chronic lung diseases, and **neonatal diseases**, in India in 2019.
- **Important Government Initiatives:**
  - **Pradhan Mantri Ujjwala Yojana** (Household LPG programme).
  - **National Clean Air Programme**.
  - Introduction of **BS-VI** emission standards.
  - Implementation of the **Graded Response Action Plan** (GRAP).
- **Infant Related Data:**
  - High PM contributed to the **deaths of more than 1,16,000 Indian infants** who did not survive their first month.
    - Infants in the first month of life are already at a **vulnerable stage** and a growing body of scientific evidence-supported studies in India indicates that **particulate air pollution exposure during pregnancy is linked to low birth weight and preterm birth**.

Note:

- More than half of these deaths were associated with **outdoor PM2.5** and others were linked to the **use of solid fuels such as charcoal, wood, and animal dung for cooking**.
  - Although there has been a **slow and steady reduction in household reliance on poor-quality fuels**, the air pollution from these fuels continues to be a key factor in the deaths of these youngest infants.
- **Significance of the Study:**
  - **Addressing impacts of air pollution** on adverse pregnancy outcomes and newborn health is **important for low- and middle-income countries**, not only because of the high prevalence of low birth weight, preterm birth, and child growth deficits but because it **allows the design of strategic interventions** that can be directed at these vulnerable groups.
- **Air Pollution and Covid-19:**
  - Although the link between air pollution and **Covid-19** is not completely established, there is **clear evidence linking air pollution and increased heart and lung disease**.
  - Also, there is growing **concern that exposure to high levels of air pollution during winter months** in South Asian countries and East Asia could **exacerbate the effects of Covid-19**.
- **Current Pollution Status:**
  - **Average pollution levels in India are declining** over the past three years but these have been **marginal**, particularly in the **Indo-Gangetic plains which see extremely high PM pollution especially during winter**.
  - After a **decline in pollution due to the nationwide lockdowns** after March, pollution levels are again rising and **air quality is dipping to the 'very poor' category** in several cities.

## Dashboard for Monitoring Air Quality

### Why in News

Recently, CarbonCopy and Respirer Living Sciences (environmental organisations) have released a **dashboard** which presents a **comparative picture of particulate matter (PM) for 122 Indian cities** since 2016.

- The dashboard establishes a **three-year rolling average trend for PM2.5 and PM10 levels** across the cities from **2016 to 2018**.
- 122 cities are referred to as **non-attainment cities** under the **National Clean Air Programme** (NCAP).
- The recent **State of Global Air 2020** revealed that **India had faced the highest exposure to toxic air** in the world in 2019.

### **Particulate Matter**

- Also called **particle pollution**, it is a term for a mixture of solid particles and liquid droplets found in the air.
- **It includes:**
  - **PM10:** Inhalable particles, with diameters that are generally 10 micrometres and smaller.
  - **PM2.5:** Fine inhalable particles, with diameters that are generally 2.5 micrometres and smaller.
- **Source:**
  - Some are emitted directly from a source, such as **construction sites, unpaved roads, fields, smokestacks or fires**.
  - Most particles form in the atmosphere as a result of **complex reactions of chemicals** such as sulfur dioxide and nitrogen oxides, which are pollutants emitted from power plants, industries and automobiles.
- **Harmful Effects:**
  - PM exposure has been **linked to a variety of problems**, including irregular heartbeat, aggravated asthma, decreased lung function and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.
  - PM10 pose the greatest problems, because they can get deep into the lungs, and some may even get into the bloodstream.

### **National Clean Air Programme**

- It was launched in 2019 to **address air pollution in 122 cities**. These cities are referred to as **non-attainment cities** as they **did not meet the national ambient air quality standards** for the period of 2011-15 under the **National Air Quality Monitoring Programme** (NAMP).

### **Key Points**

- **About the Dashboard:**

Note:



- It is a **NAMP based dashboard**, built on data from the **Central Pollution Control Board's National Ambient Air Quality Monitoring (NAAQM) Network** which was started in 1984-85 and covers 344 cities/towns in 29 states and 6 UTs.
  - Under the NAMP, each station records about 104 observations a year covering **four pollutants**: sulphur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), suspended particulate matter (SPM), and respirable suspended particulate matter (RSPM).
  - **State pollution control boards** and the **National Environmental Engineering Research Institute (NEERI)**, Nagpur **carry out the monitoring**, and the **Union Ministry of Environment, Forest and Climate Change** oversees the operation under the NCAP.
- **Other Monitoring Systems:**
  - **System of Air Quality and Weather Forecasting And Research:**
    - It was introduced by the Ministry of Earth Science and also known as SAFAR.
    - It aims to **provide location-specific information on air quality** in near real-time for greater **metropolitan cities** of India.
  - **Air Quality Index:**
    - AQI is a tool for **effective communication of air quality status to people** in terms, which are easy to understand.
    - There are **six AQI categories**, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe. AQ sub-index has been evolved for **eight pollutants** (PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, SO<sub>2</sub>, CO, O<sub>3</sub>, NH<sub>3</sub>, and Pb) for which short-term (up to 24-hours) **National Ambient Air Quality Standards** are prescribed.
    - **Graded Response Action Plan (GARP)** for Delhi-NCR has been prepared for implementation under different AQI categories.
- **Significance:**
  - A majority of **health models** which establish the relationship between air pollution and public health are **based on western models due to a lack of health data available in the Indian context**.
  - When this data can be made available, it will give a true sense of the **burden of respiratory diseases in the country by geographical distribution**.

#### ➤ **Performance on PM<sub>2.5</sub> Level:**

- A total of **59 of 122 cities** had PM<sub>2.5</sub> data available.
- **Noida ranked the worst** with 119, followed by Agra, Delhi, Lucknow, Ghaziabad, Muzaffarpur, Kanpur, Chandigarh, Howrah and Kolkata.

#### ➤ **Performance on PM<sub>10</sub> Level:**

- **Delhi ranked as the most polluted state** on an average of 3 years' PM<sub>10</sub> monitoring data, followed by **Jharkhand** and **Uttar Pradesh**.
- **Maharashtra**, which has the **maximum number of non-attainment cities** in the NCAP, has seen air quality worsen since 2016.
  - The state capital, Mumbai, for instance, witnessed a year-on-year increase in PM<sub>10</sub> levels from 119 in 2016, to 151 in 2017 and 165 in 2018.
- **Tuticorin in Tamil Nadu** has recorded **progressive and substantial improvements in PM<sub>10</sub> levels** between 2016 and 2018, by 24% in 2017, in comparison to 2016 levels, and another 23% in 2018 in comparison to the previous year.

## Seagrass

### Why in News

Recently, the **restoration process of seagrasses** has been taken up by Tamil Nadu in the **Gulf of Mannar**.

### Key Points

#### ➤ **Seagrasses:**

- These are **flowering plants that grow submerged in shallow marine waters** like bays and lagoons.
- These have **tiny flowers** and **strap-like or oval leaves**.

#### ➤ **Evolution:**

- **Terrestrial plants** evolved about **850 million years ago** from a group of green **algae** and seagrasses evolved from terrestrial plants that recolonised the ocean **70-100 million years ago**.

#### ➤ **Food Production:**

- Like terrestrial plants, seagrasses also **require**



Note:



sunlight for photosynthesis from which these manufacture their own food and release oxygen.

➤ **Reproduction:**

- **Sexual Reproduction Method:** The pollen from the flower of the male plant is transferred to the ovary of the female flower through this method.
  - This is known as **submarine pollination**. Most species undergo this process and complete their life cycle underwater.
- **Asexual Reproduction Method:** Seagrasses can also reproduce asexually by **branching off at their rhizomes** (modified subterranean plant stem that sends out roots and shoots from its nodes).
  - Because of this character, they can recover after being cut by grazers or disturbed by storms.

➤ **Order and Species:**

- There are **60 species** belonging to four families in the **order Alismatales**.
- Some of the important seagrasses are **Sea Cow Grass** (*Cymodocea serrulata*), **Thready Seagrass** (*Cymodocea rotundata*), **Needle Seagrass** (*Syringodium isoetifolium*), **Flat-tipped Seagrass** (*Halodule uninervis*), etc.

➤ **Habitat:**

- Though seagrasses **inhabit all types of substratas** (layers) from mud to rock, the lush green seagrass beds are **found extensively in muddy and sandy substratas**.
- These occur all **along the coastal areas of India** and are abundant in the **Palk Strait** and Gulf of Mannar in Tamil Nadu.

➤ **Significance:**

- Seagrasses are considered '**Ecosystem Engineers**' as they are known for providing many ecosystem services and are also called '**the lungs of the sea**' as they release oxygen into the water through photosynthesis.
- **Sequesters up to 11% of the organic carbon** buried in the ocean even though they occupy only 0.1% of the ocean floor and **absorb 83 million tonnes of carbon from the atmosphere annually**.
  - Seagrasses can capture carbon from the atmosphere **up to 35 times faster than tropical rainforests**.
- **Help maintain water quality** by trapping fine sediments and suspended particles in the water column and increase water clarity.

- **Filter nutrients released from land-based industries** before they reach sensitive habitats like **coral reefs**.
  - **Prevent soil erosion** as the extensive vertical and horizontal root systems of seagrasses stabilise the sea bottom.
  - **Provide food as well as habitat** for fishes, octopuses, shrimp, blue crabs, oysters, etc.
    - Endangered marine organisms like **dugong** (Sea Cow), **green turtle**, etc, **graze directly** on seagrass leaves.
    - **Bottle-nosed dolphins feed on the organisms** that live in seagrass areas.
    - **Detritus** (natural waste) of decomposed dead seagrass **supplies food for worms, sea cucumbers, crabs, etc.**
    - **After decomposition**, it releases **nutrients like nitrogen and phosphorus** which are absorbed by seagrasses and phytoplankton.
  - **Protect juvenile and small adult fish from large predators** and also protect worms, crabs, starfishes, sea cucumbers, sea urchins, etc, **from strong currents**.
  - **Provide ideal nursery sites** for important commercial marine life like squids and cuttlefish.
- **Threats:**
- Seagrass beds are facing **decline all over the world at the rate of 2-5% annually**.
    - Around 30,000 square kilometres of seagrass has been lost during recent decades at a global level.
  - These face **natural disturbances** like grazing, storms, **ice-scouring** (abrasion and erosion of seabeds by glaciers) and **desiccation** (extreme dryness).
  - **Human disturbances** like **eutrophication**, mechanical destruction of habitat, overfishing, release of nutrients, coastal engineering construction, pollution, etc are destructive for them.

## South Asian Flash Flood Guidance System

### Why in News

Recently, the **India Meteorological Department** (IMD) has launched the **South Asian Flash Flood Guidance System** (FFGS), which is **aimed at helping disaster management teams and governments make timely evacuation plans** ahead of the actual event of flooding.

Note:

- A dedicated FFGS centre will be established in New Delhi, where weather modelling and analysis of rainfall data observations from member countries will be done.

### Key Points

- **Flash Floods:**
  - These are **sudden surges in water levels** during or following an intense spell of rain.
  - These are **highly localised events of short duration** with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.
  - The flood situation **worsens in the presence of choked drainage lines or encroachments** obstructing the natural flow of water.
- **Concerns:**
  - **Forecasting** flash floods is very difficult as an **event can occur within three to six hours** and the **water run-off quantity is very high**.
  - **Frequency of extreme rainfall events has increased** due to **climate change** and **South Asia is highly prone** to flash floods.
  - Data suggest that across the world, **about 5,000 people die annually** due to flash floods.
  - Despite such **high mortality**, there was **no robust forecasting or warning system** for flash floods.
- **South Asian Flash Flood Guidance System:**
  - It has been developed by **US-based Hydrologic Research Centre** after the **World Meteorological Organisation** (WMO) and few South Asian countries put forth their views and the urgent need for such a warning system.
- **Warning Mechanism:**
  - Based on the **rainfall and potential flooding scenario**, flash flood **warnings will be issued** to respective nations.
  - **Flash flood threat warning** will be issued **six hours** in advance, whereas **flood risk warning** will be issued **24 hours** in advance. **Warnings about watershed level** will be issued **12 hours** in advance.
- **India's Role:**
  - **India is leading the delegation** of nations, including **Bhutan, Sri Lanka, Bangladesh and Nepal**, in **sharing hydrological and meteorological data** towards preparing flash flood forecasts.

- India's **National Disaster Management Authority** (NDMA) and the **Central Water Commission** (CWC) partnered in developing the system.

## Two New Ramsar Sites

### Why in News

Recently, **Kabartal Wetland** (Bihar) and **Asan Conservation Reserve** (Uttarakhand) have been designated as **Ramsar sites**, making them '**Wetlands of International Importance**'.

- Earlier in 2020, India **designated 10 more wetlands as a Ramsar site**, taking the total number from 27 to 37.
- With 2 more inclusions, the **total number of Ramsar sites in India is 39**, the **highest in South Asia**.

### Key Points

- **Kabartal Wetland:**
  - Also known as **Kanwar Jheel**, it covers 2,620 hectares of the Indo-Gangetic plains in the Begusarai district of Bihar.
  - It acts as a **vital flood buffer** for the region besides providing livelihood opportunities to local communities.
  - **Significant biodiversity** is present here, with 165 plant species and 394 animal species recorded, including 221 bird species. It is also a **valuable site for fish biodiversity** with over 50 species documented.
  - It is an **important stopover along the Central Asian Flyway**, with 58 migratory waterbirds using it for rest and refuel.
  - **Five critically endangered species** inhabit the site, including **three vultures** viz. the **red-headed vulture** (*Sarcogyps calvus*), **white-rumped vulture** (*Gyps bengalensis*) and **Indian vulture** (*Gyps indicus*) and two waterbirds, the **sociable lapwing** (*Vanellus gregarius*) and **Baer's pochard** (*Aythya baeri*).
  - **Major threats** to the site include water management activities such as drainage, water abstraction, damming and canalisation.
- **Asan Conservation Reserve:**
  - ACR is a **444-hectare stretch of the Asan River** running down to its confluence with the **Yamuna River** in Dehradun district of Uttarakhand. It is **Uttarakhand's first Ramsar Site**.

Note:

- The damming of the river by the **Asan Barrage in 1967** helped to create some of the site's bird-friendly habitats.
- These habitats **support 330 species of birds** including the **critically endangered red-headed vulture, white-rumped vulture** and **Baer's pochard**.
- Other non-avian species present include **49 fish species**, one of these being the **endangered Putitora mahseer** (*Tor putitora*).
  - Fish use the site for **feeding, migration and spawning** (the process of releasing the eggs and sperm).

#### Ramsar Sites

- **Ramsar Convention on Wetlands** is an **intergovernmental treaty** adopted in **1971** in the Iranian city of Ramsar, on the southern shore of the Caspian Sea.
  - Those **wetlands which are of international importance** are declared as **Ramsar sites**.
  - It **came into force for India on 1<sup>st</sup> February 1982**.
- **Mission:** Conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".
- **Montreux Record** is maintained as part of the Ramsar List.
  - It is a **register of wetland sites** on the 'List of Wetlands of International Importance' where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference.
  - At present, **two wetlands** of India are in Montreux Record: **Keoladeo National Park** (Rajasthan) and **Loktak Lake** (Manipur).
  - **Chilika Lake** (Odisha) was placed in the record but **later removed** from it.

## Shivalik Elephant Reserve: Uttarakhand

### Why in News

Recently, the Ministry of Environment, Forest and Climate Change (MoEFCC) has asked the Uttarakhand government to **consider avoiding sensitive areas of the**

**Shivalik Elephant Reserve while exploring land** suitable to use for the expansion of Dehradun's Jolly Grant Airport.

### Key Points

- **Background:** The **area proposed for the expansion**, is a **part of the Shivalik Elephant Reserve** and it falls **within a 10-km radius of Rajaji National Park**.
- **Protests:** Children and social activists have tied protective strings around the trees marked to be cut, similar to the **Chipko movement** of the 1970s, when villagers in Chamoli hugged trees to stop contractors from felling them.
- **Concerns:**
  - The expansion will **threaten hundreds of species** of fauna in **Thano** (near Rajaji National Park) and the **elephant corridor nearby**.
  - The State **also falls in seismic Zone-IV and V**, as per the **Earthquake Zoning Map**. Uprooting trees in Thano will lead to **soil erosion**, a factor that exacerbated the **2013 Kedarnath floods**.
  - Earlier, **social activists criticised Chardham Pariyojana** on environmental grounds.
    - It is a programme taken up by the **Ministry of Road Transport and Highways** for connectivity improvement for Chardham (Kedarnath, Badrinath, Yamunotri and Gangotri) in Uttarakhand.
  - Recently, the **Supreme Court (SC)** upheld the 2011 order of the Madras High Court (HC) on the **Nilgiris elephant corridor**, affirming the **right of passage of the animals** and the closure of resorts in the area.
- **Shivalik Elephant Reserve:**
  - It was **notified in 2002** under the **Project Elephant**.
    - Project Elephant was launched by the Government of India in 1992 as a **Centrally Sponsored Scheme**.
    - **Objectives:**
      - Protect elephants, their habitat and corridors.
      - Address issues of man-animal conflict.
      - Welfare of captive elephants.
  - The **Kansora-Barkot Elephant Corridor** is located near to it.
  - It is considered to have **one of the highest densities of elephants** found in India.
- **Indian Elephant:**
  - **Scientific Name:** *Elephas maximus*.
  - **Habitat:** Central and southern Western Ghats,

Note:



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North-east, eastern and northern India and in some parts of southern peninsular India.

- As per the **Elephant Census 2017**, Karnataka has the **highest population** of Indian elephants.
- **Conservation Status:**
  - **Wildlife (Protection) Act, 1972:** Schedule I.
  - **CITES:** Appendix I.
  - **IUCN Red List:** Endangered.

➤ **Rajaji National Park:**

- **Location:** Haridwar, along the foothills of the Shivalik range, spans 820 square kilometres.
- **Background:** Three sanctuaries in the Uttarakhand viz. Rajaji, Motichur and Chila were amalgamated into a large protected area and named Rajaji National Park in the year 1983 **after the famous freedom fighter C. Rajgopalachari**, popularly known as “Rajaji”.
- **Features:**
  - This area is the **North-Western Limit of the habitat of Asian elephants**.
  - Forest types include sal forests, riverine forests, broad-leaved mixed forests, scrubland and grassy.
  - It possesses as many as 23 species of mammals and 315 bird species such as elephants, tigers, leopards, deers and gorals, etc.
  - It was declared a **Tiger Reserve** in 2015.
  - It is **home to the Van Gujjars**, one of the few **forest-dwelling nomadic** communities in the country, in the winters.

➤ **Other Protected Areas in Uttarakhand:**

- Jim Corbett National Park (first National Park of India).
- Valley of Flowers National Park and Nanda Devi National Park which together are a **UNESCO World Heritage Site**.
- Govind Pashu Vihar National Park and Sanctuary.
- **Gangotri National Park**.
- Nandhaur Wildlife Sanctuary.

## Translocation of Corals in Mumbai

### Why in News

The **National Institute of Oceanography** will carry out the **translocation of 18 coral colonies** from the coast of Mumbai under the **Mumbai Coastal Road Project**.

### Key Points

➤ **Corals:**

- These exhibit characteristics of plants, but are **marine animals** that are related to jellyfish and anemones.
- They are made up of **genetically identical organisms called polyps**, which are tiny, soft-bodied organisms.
  - At their base is a hard, protective limestone skeleton called a **calicle**, which forms the **structure of coral reefs**.
- These **polyps have microscopic algae called zooxanthellae** living within their tissues. The **corals and algae have a mutualistic** (symbiotic) **relationship**, under which
  - Coral provides the zooxanthellae with the compounds necessary for photosynthesis.
  - In return, the zooxanthellae supply the coral with organic products of photosynthesis, like carbohydrates, which are utilised by the coral polyps for the synthesis of their calcium carbonate skeletons.
  - **Zooxanthellae are also responsible for the unique and beautiful colours of corals.**
- There are 2 types of corals:
  - **Stony, shallow-water corals**, the kind which builds **reefs**.
  - **Soft and deep water corals**, which live in dark cold waters.

➤ **Coral Reefs:**

- These begin when a **polyp attaches itself to a rock on the seafloor**, then **divides or buds into thousands of clones**. The polyp **calicles connect to one another, creating a colony** that acts as a single organism.
- As **colonies** grow over hundreds and thousands of years, they **join with other colonies and become reefs**.
- Coral reefs **cover less than 1% of the ocean floor** but they are among the **most productive and diverse ecosystems** on Earth. They are referred to as the “**Rainforests of the Sea**” for their biodiversity.
- **Benefits:**
  - Coral reefs are like underwater cities that support marine life.
  - According to the **United Nations Environment Programme** (UNEP), they provide at least half

Note:



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a billion people around the world with food security and livelihoods.

- Coral reefs also act as **'wave breaks'** between the sea and the coastline and minimise the impact of sea erosion.
- According to a **recent study of the University of Queensland (UQ), Australia**, more life can be supported by dead coral remains than live corals.

#### ○ Protection:

- In India, they are under **Schedule I of the Wildlife Protection Act (WPA), 1972**.

#### ○ Threats:

- **Climate change** remains one of the biggest threats to corals.
- Around the world, this threat has been visible in the **"bleaching" of corals**.

#### ➤ Coral Bleaching:

- It is a process in which **corals**, under stress from warm weather, **expel the algae that give corals their brilliant colours** and live in their tissues and produce their food.
- The **Great Barrier Reef off the coast of Australia** has suffered six mass bleaching events due to warmer than normal ocean temperatures in 1998, 2002, 2006, 2016, 2017 and now in 2020.
- It is a **UNESCO World Heritage site** and home to one of the largest collections of coral reefs on the planet.

#### ➤ Biorock Technology:

- It is a method to **restore coral reefs** using **bio rock or mineral accretion**.
- Under the technology, low voltage electrical currents are applied through seawater, causing **dissolved minerals to crystallise on structures**, growing into a **white limestone** ( $\text{CaCO}_3$ ) similar to that which naturally makes up coral reefs and tropical white-sand beaches.
- **Biorock**, also known as **Secret or Seament**, refers to the substance formed by electro-accumulation of minerals dissolved in seawater.

#### ➤ Coral Translocation:

- The translocation of corals is at a **nascent stage along the Indian coastline**. It is difficult and has not been very successful in India.
- **Pilot projects at various sites including, Lakshadweep Islands and the Andaman Islands**

**have been undertaken** to study the survival rate, method and site of translocation, and creation of high heat-resistant coral colonies, etc.

- Transplanted corals are **more susceptible to storm surges and bleaching from warming ocean waters**.
- Experts are of the view that **for a high survival rate, it is important to translocate corals in a place with similar environmental characteristics** such as depth, current flow, amount of light, and pressure.

## 11 SPECIES OF CORALS IN MUMBAI

➤ Corals are invertebrate animals belonging to a group called Cnidaria, that can be found in rocky intertidal regions or on the ocean floor

➤ Corals are usually classified as 'hard' and 'soft' corals. Hard corals are reef-building ones. Soft corals, which include seas fans, don't have the rock-like calcareous skeleton; instead they grow wood-like cores for support and fleshy rinds for protection. Soft corals live in colonies that often resemble brightly coloured plants or trees



➤ The city has 11 species of corals, according to a survey by Marine Life of Mumbai, nine of which are hard corals. The National Institute of Oceanography identified 18 colonies at Haji Ali and Worli, comprising six species

➤ Coral restoration and translocation has been tried in many parts of the world with varied success. In India, there have been projects in Lakshadweep, Gujarat, Andaman & Nicobar Islands and Sindhudurg

## Habitat Loss of Himalayan Brown Bear

### Why in News

Recently, a study conducted by scientists of the **Zoological Survey of India** on the **Himalayan brown bear** (*Ursus arctos isabellinus*) has predicted a **significant reduction in suitable habitat and biological corridors** of the Himalayan brown bear **due to climate change**.

### Key Points

- The study titled **'Adaptive spatial planning of protected area (PA) networks for conserving the Himalayan brown bear'** was carried out in the **western Himalayas**. It has predicted a **decline of about 73%** of the bear's habitat by the year 2050.
- The total habitat loss can make 8 out of 13 PA completely uninhabitable by 2050.
- The **western Himalaya** where significant **brown bear population is distributed** is most **vulnerable to global warming** as this elevation belt is **getting warmer** faster than other elevation zones of Himalayas.

Note:



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- To keep a check on this, scientists have recommended preemptive **spatial planning of PAs in the Himalayan region** for the long-term viability of the species.
  - The spatial planning of PAs is **aimed at minimising the risks and uncertainty of climate change**.
  - **Spatial Planning** is an activity centered on making decisions relating to the location and distribution of land use activities. It allows monitoring of changes, both in climate and socio-economic situations.

### ***Himalayan Brown Bear***

- **Range:** North-western and central Himalaya, including India, Pakistan, Nepal, the Tibetan Autonomous Region of China and Bhutan.
- **Habitat:** High altitude open valleys and pastures.
  - **Status:** **IUCN Red List - Critically endangered.**
    - **CITES** - Appendix I
    - **Indian Wildlife (Protection) Act of 1972** - Schedule 1
  - **Food:** Omnivorous.
  - **Threat:** Human-animal conflict, rapid habitat loss, poaching for fur, claws and organs and, in some rare cases, bear baiting.



Note:

# History

## Highlights

- Sir Syed's Day

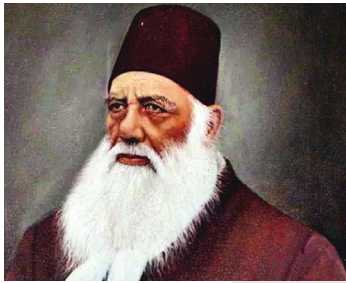
## Sir Syed's Day

### Why in News

Sir Syed's Day is observed on **17<sup>th</sup> October** to mark the **birth anniversary of Sir Syed Ahmad Khan**.

### Key Points

- **Early Life:** Sir Syed Ahmad Khan **was born in 1817** in a family that was close to the Mughal court, he was a **man of many distinctions**, a civil servant, journalist, educationist, social reformer and historian among others.
  - He served **the British administration** before the revolt of 1857.
  - He had also written a pamphlet titled "**The Causes of the Indian Revolt**" to explain the reasons for the revolt from a **Indian perspective**.
- **Educationist:** Sir Syed is, first and foremost, known for his **pioneering role in transforming the educational opportunities for Muslims**.
  - He realised that Muslims could only make progress if they took to modern education. For this, he started **the Aligarh movement**.
- **Social Reformer:** He also pushed for social reforms and was a champion of democratic ideals and freedom of speech.
  - He was **against religious intolerance, ignorance and irrationalism**. He **denounced purdah, polygamy and easy divorce**.



- **Tahzebul Akhlaq** (Social Reformer in English), a **magazine founded by him**, tried to awaken **people's consciousness on social and religious issues** in a very expressive prose.

### ➤ Critical of National Movement:

- In his later years, Sir Syed encouraged the Indian Muslims **not to join the National Movement**. He felt that education and not politics was needed by them.
- In a way he encouraged the forces of communalism and separatism at this stage.

### Aligarh Movement

- It was a **systemic movement aimed at reforming the social, political and educational aspects** of the Muslim community.
- The movement undertook to modernise Muslim's education **by adapting English as a medium of learning** and **western education** rather than just focusing on traditional teachings.
- Sir Syed **established the Scientific Society in 1864**, in Aligarh to translate Western works into Indian languages to prepare the Muslims to accept Western education and to inculcate scientific temperament among the Muslims.
  - **The Aligarh Institute Gazette**, a magazine published by Sir Syed was an organ of the Scientific Society.
- In 1877, he founded the **Muhammadan Anglo Oriental College** on the pattern of Oxford and Cambridge universities. The college later grew into **Aligarh Muslim University**.
- The Aligarh Movement helped in the Muslim revival. It **gave them a common language — Urdu**.



Note:

# Art & Culture

## Highlights

- Kala Sanskriti Vikas Yojana

## Kala Sanskriti Vikas Yojana

### Why in News

Recently, the Ministry of Culture has issued guidelines for **holding cultural events/activities in virtual/online mode** under various scheme components of Kala Sanskriti Vikas Yojana (KSVY).

### Key Points

- The **Covid-19 pandemic** and the resultant **lockdowns** have had a substantial **impact on the performing arts and cultural sector** with in-person exhibitions, events, and performances either cancelled or postponed.  
**Example: Behrupiyas.**

- The guidelines will **enable artists to avail benefits under KSVY** even if they are not able to stage programs in the physical format as before and will **ensure continued financial assistance**.
- **Kala Sanskriti Vikas Yojana (KSVY)** is an **umbrella scheme** under the Ministry of Culture for the **promotion of art and culture** in the country.

- It is a **central sector scheme**.
- The ministry implements **many schemes under KSVY**, where the grants are sanctioned/approved for holding programs/activities.
  - **Scheme of Financial Assistance for Promotion of Art and Culture.**
  - **Scheme of Financial Assistance for Creation of Cultural Infrastructure.**
  - **Scheme for Safeguarding the Intangible Cultural Heritage**, which aims to promote the **13 intangible cultural heritage of India**, recognised by the **United Nations Educational, Scientific and Cultural Organization (UNESCO)**.

### 13 ICH traditions recognised by UNESCO

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



Note:



# Geography

## Highlights

- Wheat Variety MACS 6478
- Tsunami Early Warning System in India
- Tectonically Active Zone of Himalayas
- Typhoon Molave: Vietnam

## Wheat Variety MACS 6478

### Why in News

The wheat variety called **MACS 6478** has **doubled the crop yield** for farmers in Karanjkhop, a village in Maharashtra.

### Key Points

- **Developed By:** Scientists from **Agharkar Research Institute (ARI), Pune**- an autonomous institute of the Department of Science and Technology (DST).
- **Features:**
  - A **common wheat or bread wheat** (*Triticum aestivum*).
    - Other popular wheat varieties are **durum wheat** (*T. durum*) and **club wheat** (*T. compactum*).
  - **Hybrid Crop**, i.e. produced by the cross-breeding of two genetically different varieties or species. Hybrids are often spontaneously and randomly created in nature when open-pollinated plants naturally cross-pollinate with other related varieties (not genetically modified).
  - **Matures in 110 days** and is **resistant to** most races of **leaf and stem rust**.
    - This is **against the normal maturing attained after 140 to 150 days**, required for wheat varieties cultivated commonly in northern India.
  - This **amber colored medium sized grain** contains **14% protein, 44.1 ppm (parts per million) zinc** and **42.8 ppm iron** which is higher than other cultivated varieties.
  - Farmers get a **yield of 45-60 quintal per hectare** with the new variety as against earlier average yield ranging 25-30



quintal per hectare when they cultivated Lok 1, HD 2189 and other old varieties.

### ➤ Other ARI Wheat Variety (MACS 4028):

- This **bio-fortified durum variety** has very high protein (14.7%), iron (46.1 ppm) and zinc (40.3 ppm) content, compared to the corresponding levels of 8-10%, 28-32 ppm and 30-32 ppm in normally-grown varieties.
  - **Biofortification** is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology.
- Maturing in just over **100 days**, it is **suitable for cultivation in rainfed and low fertility conditions in Maharashtra and Karnataka**.
- It was **chosen for a UNICEF-funded Farming System for Nutrition project**, operated through the **Indian Council of Agricultural Research's (ICAR) Krishi Vigyan Kendras (KVK)**, as part of the **National Nutrition Strategy**.
- ARI has also bred **MACS 2971**, a high-yielding variety of the traditionally cultivated dicoccum (also known as 'khopli') wheat that is rich in dietary fibre.
- The **Karan Vandana** (DBW 187) wheat variety, developed by the **Indian Institute of Wheat and Barley Research (IIWBR)** under the **Indian Council of Agricultural Research (ICAR)**, is used for cultivation in North Eastern Plains Zones.

## Tsunami Early Warning System in India

### Why in News

According to experts from the **Indian National Centre for Ocean Information System (INCOIS)**, India is much

Note:

safer against tsunami threats than it was in 2004, due to the establishment of the state-of-the-art **Indian Tsunami Early Warning System (ITEWS)**.

### Key Points

#### ➤ Indian Tsunami Early Warning System:

- It was **established in 2007** and is based at and operated by INCOIS, Hyderabad.
- It is an **integrated effort** of different organisations including the Department of Space (DOS), Department of Science and Technology (DST), the Council of Scientific and Industrial Research (CSIR), Survey of India (SOI) and National Institute of Ocean Technology (NIOT).
- ITEWS comprises a **real-time network of seismic stations**, tide gauges and a **24x7 operational tsunami warning centre** to detect tsunamigenic earthquakes, to monitor tsunamis and to provide timely advisories to vulnerable communities.
- Indian scientists can detect large undersea earthquakes in the Indian Ocean in real-time and provide a tsunami warning in 10-20 minutes after the earthquake occurs.
  - In 2004, India did not have any tsunami warning capability nor any public knowledge of tsunami in the Indian Ocean.
- India is among the first few centres to **introduce quantitative tsunami forecasts**.
  - **Intergovernmental Oceanographic Commission-United Nations Educational, Scientific and Cultural Organisation (UNESCO-IOC)** accredited ITEWC as **Tsunami Service Provider (TSP)** for **28 Indian Ocean Rim (IOR) countries, along with Indonesia and Australia in 2011**, for issuing regional warnings.
- **Recent Focus on Tsunami Warning Capability:**
  - On **enhancing community awareness and response** through several **capacity-building activities, biennial Indian Ocean wide tsunami drills** and **piloting of the UNESCO-IOC Tsunami Ready initiative**.
    - **Tsunami Ready is a community performance-based programme** to promote tsunami preparedness through the active collaboration of public, community leaders, and national and local emergency management agencies.
      - **Venkatraipur** (Ganjam district) and **Noliasahi** (Jagatsinghpur district), both in **Odisha, are now Tsunami Ready**.

#### ● Objective:

- Improve the coastal community's preparedness for tsunami emergencies.
- Minimise the loss of life and property.
- Ensure a structural and systematic approach in building community preparedness through fulfilling the best-practice indicators.
- INCOIS is **establishing a network of 35 stations to estimate the tectonic plates' movements in real-time** and measure the vertical displacements under the sea directly.

#### Indian National Centre for Ocean Information System

- It was **established in 1999** as an **autonomous body** under the **Ministry of Earth Sciences**.
- **INCOIS** through **ITEWC** is the **nodal agency for providing tsunami advisories to India**.
- It coordinates with the **Disaster Management Officials (DMOs)** for implementation of **Tsunami Ready**.
- It conducts **IOWave Tsunami mock exercises biannually** to strengthen the readiness to handle emergency situations with stakeholders.
- INCOIS also identifies the **Potential Fishing Zones (PFZ)** for the fishermen community.
- It has also **made improvement in overcoming the cloud cover** through the usage of geostationary satellites and numerical modelling.
- INCOIS has also partnered with **Indian Space Research Organisation (ISRO)** and **Airports Authority of India (AAI)** to **develop satellite-based message broadcasting services** through the indigenous navigational satellite communication system '**NAVIC**'.

## Tectonically Active Zone of Himalayas

### Why in News

Recently, a group of scientists from the **Wadia Institute of Himalayan Geology (WIHG)**, Dehradun have found that the **Indus-Tsangpo Suture Zone (ITSZ) of Himalaya** is **tectonically active**.

- The suture zone of Himalaya was conventionally thought to be locked.

Note:

- WIHG is an **autonomous institute** under the **Department of Science and Technology** (DST), Government of India.
- **Tectonics** is the **scientific study of the deformation of the rocks** that make up the Earth's crust and the forces that produce such deformation.
  - It deals with the **folding and faulting** associated with mountain building, the large-scale, **gradual upward and downward movements** of the crust and **sudden horizontal displacements** along faults.

### Key Points

- **Geological Features that Support the Finding:**
  - Sedimentary beds are tilted and thrust broken.
  - Rivers are associated with uplifted terraces.
  - Bedrock shows brittle deformation at much shallower depths.
- These deformed geological features were **dated using the technique of Optically Stimulated Luminescence** (OSL) and data of **seismicity** and **denudation rate** was also reviewed.
  - **Optically-Stimulated Luminescence:** It is a late **quaternary** (geological time period that encompasses the most recent 2.6 million years) dating technique used to date the last time quartz sediment was exposed to light. As sediment is transported by wind, water or ice, it is exposed to sunlight and zeroed of any previous luminescence signal.
  - **Seismicity:** It is the worldwide or local distribution of **earthquakes** in space, time, and magnitude. More specifically, it refers to the measure of the frequency of earthquakes in a region.
  - **Denudation:** It is a long term process in which the wearing and tearing of the surface of the Earth take place. It includes all those processes that lower relief and acts both chemically (**chemical weathering**) and physically (**mechanical weathering**).
- **The region of the ITSZ has been neo-tectonically active since the last 78000-58000 years.**
  - The ITSZ is a suture zone in the **Ladakh region** and marks the limit of the **Indian plate** where it **collides with the Eurasian plate** and is subducted below the latter.
  - The ITSZ can be traced for **more than 200 km** and a wide variety of rock association along the ITSZ indicates that the collision at the plate boundary was of very **complex nature**.

- The ITSZ was conventionally believed to be a locked zone till now.
- This will have **major implications** in terms of earthquake study, prediction, understanding the seismic structure of the mountain chains well as its evolution.

### Suture Zones

- A suture zone is a **linear belt of intense deformation**, where distinct terranes, or tectonic units with different plate tectonic, metamorphic, and paleogeographic histories join together.
- These zones also **provide the only record of deep oceanic crust** and of **ancient seafloor processes** for roughly the first 90% of Earth's history.
- Their study provides a means to understand the end-product of **plate tectonic processes** in time and space. In plate tectonics, sutures are seen as the remains of subduction zones together with the terranes possibly representing fragments of different tectonic plates.
- The suture zone is often **represented on the surface by a mountain range comprising intensely deformed rocks**.
- The **Iapetus Suture from Great Britain**, which is now concealed beneath younger rocks, and **Indo-Tsangpo Suture** well exposed in the Himalayas are some of the best examples of suture zones.

## Typhoon Molave: Vietnam

### Why in News

Recently, **Vietnam** has been hit by Typhoon Molave, one of its biggest storms in two decades.

- Vietnam is **prone to natural disasters** in the rainy season between June and November, with central coastal provinces commonly impacted, but the storms have notably worsened in recent years.



Note:

**Key Points**

- Typhoon is a **regionally specific name** for a strong **tropical cyclone**.
  - Tropical cyclones are known as:
    - **Typhoons** in the **northwest pacific ocean**.
    - **Hurricanes** in the **North Atlantic Ocean**.
    - **Willy-willies** in the **north-western Australia**.
    - **Tropical Cyclones** in the **Indian Ocean Region**.
- A tropical cyclone is a **generic term** used by meteorologists to describe a **rotating, organised**

**system of clouds and thunderstorms** that originates over tropical or subtropical waters and has closed, low-level circulation.

- Tropical cyclones **rotate counterclockwise in the Northern Hemisphere**.
- These are measured by the **Saffir-Simpson Hurricane Wind Scale**.
- **Naming of Typhoons:** The **Regional Specialised Meteorological Centre (RSMC) Tokyo, Typhoon Centre** assigns a tropical cyclone a name. The name **'Molave'** is contributed by the **Philippines**.



Note:



# Social Issues

## Highlights

- Global Hunger Index 2020
- SC on Crimes and Violence Against Women
- India and Sex Ratio
- Report on Food Consumption: WWF
- New Abortion Laws in Poland
- Child Care Leaves for Single Male Parent

## Global Hunger Index 2020

### Why in News

India has been ranked at **94 among 107 countries** in the **Global Hunger Index (GHI) 2020**.

#### Global Hunger Index

- **Annual Report:** Jointly published by **Concern Worldwide and Welthungerhilfe**.
  - It was first produced in 2006. It is published every October. The 2020 edition marks the **15<sup>th</sup> edition of the GHI**.
- **Aim:** To comprehensively measure and track hunger at the global, regional, and country levels.
- **Calculation:** The GHI scores are calculated each year to assess progress and setbacks in combating hunger. It is calculated on the basis of four indicators:
  - **Undernourishment:** Share of the population with insufficient caloric intake.
  - **Child Wasting:** Share of children under age five who have low weight for their height, reflecting acute undernutrition.
  - **Child Stunting:** Share of children under age five who have low height for their age, reflecting chronic undernutrition.
  - **Child Mortality:** The mortality rate of children under the age of five.
- **Scoring:**
  - Based on the values of the four indicators, the GHI determines hunger on a 100-point scale where **0 is the best possible score** (no hunger) and **100 is the worst**.
  - Each country's GHI score is classified by severity, from low to extremely alarming.

### Key Points

- **Global Scenario:**
  - **Worldwide Hunger:** Represented by a GHI score of 18.2 (moderate level), down from a 2000 GHI score of 28.2 (serious).
  - **Factors:**
    - The **Covid-19** pandemic and the resulting economic downturn, as well as a massive outbreak of **desert locusts** in the Horn of Africa and other crises, are exacerbating food and nutrition insecurity for millions of people.
      - It needs to be noted that 2020 GHI scores do not reflect the impact of Covid-19 on hunger and undernutrition.
    - The above mentioned crises come on top of existing hunger caused by conflict, climate extremes, and economic shocks (random, unpredictable events).
  - **Region-wise Performance:** Africa South of the Sahara and South Asia have the highest hunger and undernutrition levels among world regions, with 2020 GHI scores of 27.8 and 26.0, respectively—both considered serious.
  - **SDG 2 Progress:** The world is not on track to achieve the second **Sustainable Development Goal** - known as Zero Hunger for short - by 2030.
- **Indian Scenario:**
  - **Overall Performance:**
    - With a score of 27.2, India has a level of hunger that is "serious".
    - It ranks 94 out of 107 countries in the Index. In **2019**, India's rank was 102 out of 117 countries.
  - **Comparison with Other Countries:**
    - India features behind Nepal (73), Pakistan (88), Bangladesh (75), Indonesia (70) among others.

Note:

- Out of the total 107 countries, only 13 countries fare worse than India including countries like Rwanda (97), Nigeria (98), Afghanistan (99), Liberia (102), Mozambique (103), Chad (107) among others.
- **Performance on the Indicators:**
  - **Undernourishment:** 14% of India's population is undernourished (2017-19). It was 16.3% during 2011-13.
  - **Child Wasting:** 17.3% (2015-19), it was 15.1% in 2010-14.
  - **Child Stunting:** 34.7%, it has improved significantly, from 54% in 2000 to less than 35% now.
  - **Child Mortality:** 3.7%, it was 5.2% in 2012.

### Where India stands

The Global Hunger Index score is computed using four indicators — undernourishment, child wasting, child stunting and child mortality. A country's GHI score is classified by severity — low (green), moderate (yellow) and serious (red).



RANK	COUNTRY	2020 SCORE
1-17*	China	<5
64	Sri Lanka	16.3
73	Nepal	19.5
75	Bangladesh	20.4
78	Myanmar	20.9
88	Pakistan	24.6
94	India	27.2
99	Afghanistan	30.3

\*17 countries have scores of less than 5 and are collectively ranked 1-17

### Suggestions

- Governments, private actors, and NGOs should carefully coordinate their responses to overlapping food and health crises and work with community organizations to make sure interventions are culturally acceptable, reach the most vulnerable, and preserve local ecosystems.
- Food should be priced not only by its weight or volume but also by its nutrient density, its freedom from contamination, and its contribution to ecosystem services and social justice.
- Governments should expand access to maternal and child health care, as well as education on healthy diets and child feeding practices.
- Supporting smallholder farmers in becoming sustainable and diversified producers; governments and NGOs must seek to improve those farmers' access to agricultural inputs and extension services, coupling local and indigenous agricultural knowledge with new technologies.
- Existing human rights-based multilateral mechanisms and international standards—such as the Committee on World Food Security—must be strengthened to support inclusive policy making and sustainable food systems.

## SC on Crimes and Violence Against Women

### Why in News

Recently, the **Supreme Court** (SC) has said that crimes against women continued in a “never-ending cycle” in India.

### Key Points

- **Current Judgement:**
  - The **judgement dealt with the statutory scheme of the Protection of Women from Domestic Violence Act, 2005.**
    - It has allowed women fighting domestic violence cases, the right to reside in the ‘shared household’ even if her husband had no legal right to the house and the same was owned by the father-in-law or mother-in-law.
  - **Making the Act Comprehensive:** The court observed that the **relief granting right to residence to a married woman under the domestic violence law by a criminal court is relevant and could be considered** even in civil proceedings seeking her eviction from the matrimonial home (the residence in which a husband and wife have lived together).
    - The wife would have the **right to claim the “shared household”** of the joint family under the **Domestic Violence Act, 2005.**
      - **Section 2(s)** of the domestic violence act defines “**shared property**”, as the property owned by a woman's husband, or by the joint family of which the husband is a member.
- **Reversed Earlier Judgement:** The court **reversed the law** held by a previous decision of the SC in **December 2006 in SR Batra v Taruna Batra**, where on similar facts it refused permission to the wife to continue staying in her husband's house as it was owned by her mother-in-law. This **part of the ruling was held wrong** in law as it did not give full meaning to the 2005 act.
- **Least Reported Form of Cruel Behaviour:** The court noted that the **domestic violence in India is rampant yet underreported.** Women in India faced violence and discrimination in one form or the other in their various roles as daughter, sister, wife, mother, partner or single woman.

Note:



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- The **National Family Health Survey-4 (NFHS-4), 2015-16** suggests that **30% of women in India in the age group of 15-49** have experienced physical violence.
- As per the **UN Women**, globally in 2019-20, **243 million women and girls** (aged 15-49) across the world have been **subjected to sexual or physical violence** by an intimate partner.
  - Less than 40% of women who experience violence sought the help or reported the crime.
  - Less than 10% of those women seeking help, go to the police.
- **Reasons: Women continue to be vulnerable to these crimes because of:**
  - Non-Retaliation.
  - Absence of laws addressing their rights comprehensively.
  - Ignorance of the existing statutes.
  - Societal attitude, stigma and conditioning also make women vulnerable to domestic violence and these are the main factors for under-reporting of cases.
  - This set of circumstances ensured that a majority of women preferred to suffer in silence, not out of choice but of compulsion.

#### Acts of Domestic Violence

- **Physical** violence, such as slapping, hitting, kicking and beating.
- **Sexual** violence, including forced sexual intercourse and other forms of sexual coercion.
- **Emotional (psychological)** abuse, such as insults, belittling, constant humiliation, intimidation, threats of harm, threats to take away children.
- **Controlling behaviours**, including isolating a person from family and friends, monitoring their movements and restricting access to financial resources, employment, education or medical care.

## India and Sex Ratio

### Why in News

Recently, **C Rangarajan** (former Chairman, Prime Minister's Economic Advisory Council) has argued that there is an urgent **need to reach young people both for reproductive health education and services** as well as to cultivate gender equity norms.

- His arguments are based on the **Sample Registration System (SRS)** Statistical Report (2018) and the **United Nation Population Fund (UNFPA) State of World Population 2020**.

#### Sample Registration System Report

- SRS is the **largest demographic sample survey in the country** that among other indicators provide **direct estimates of sex ratio, fertility rate etc.** through a nationally representative sample.
- It is brought by the **Office of Registrar General**.

#### United Nation Population Fund

- The UNFPA is **aimed at improving reproductive and maternal health worldwide**.
- It is headquartered in **New York**.

### Key Points

- **Sex Ratio at Birth:**
  - **Biologically normal sex ratio** at birth is 1,050 males to 1,000 females or 950 females to 1,000 males.
    - Sex ratio is measured as the number of females per 1,000 males.
  - The SRS Report 2018 shows that **sex ratio at birth in India declined marginally** from 906 in 2011 to 899 in 2018.
  - The **UNFPA State of World Population 2020** estimated the sex ratio at birth in India as 910, which is **on the lower side of the index**.
  - This is a cause for concern because this **adverse ratio results in a gross imbalance** in the number of men and women and its **inevitable impact on marriage systems** as well as other harms to women.
- **Total Fertility Rate:**
  - According to SRS Report 2018, Total Fertility Rate (TFR) has **been declining in India for some time now**. It declined from 2.4 to 2.2 during the period between 2011 and 2018.
    - **Fertility is likely to continue to decline** and it is estimated that replacement TFR of 2.1 would soon be reached for India as a whole.
    - TFR is the **number of children a mother would have at the current pattern of fertility during her lifetime**.
    - The **replacement rate** is the average number of children born per woman, at which a population exactly replaces itself from one generation to the next, without migration.

Note:



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- Many people believe that the **population would stabilise or begin to reduce in a few years once replacement fertility is reached.**
- **However**, this is not so because of the **population momentum effect**, a result of more people entering the reproductive age group of 15-49 years due to the past high-level of fertility.
  - For instance, the replacement fertility level was reached in Kerala around 1990, but its annual population growth rate was 0.7% in 2018, nearly 30 years later.
- **Challenges Involved:**
  - **Regressive Mindset:** There is considerable son preference in all states, except possibly in Kerala and Chhattisgarh. This son's preference is derived from a regressive mindset.
  - **Misuse of Technology:** Cheaper technology like ultrasound helps in sex selection.
  - **Failure in Implementation of Law:** The **Prenatal Conception and Prenatal Determination Act (PC-PNDT), 1994** which punishes healthcare professionals for telling expectant parents the sex of a child with imprisonment and hefty fines, has failed to control the sex selection.
    - Reports found **major gaps in the training of personnel implementing PC-PNDT.** Poor training meant that they were **unable to prepare strong cases against violators** to secure convictions.
  - **Illiteracy:** Illiterate women in the reproductive age group of 15-49 years have higher fertility than literate women.
- **Government Initiatives:**
  - The sharp decline in sex ratio as pointed by **Census 2011** data called for urgent action.
  - **Beti Bachao Beti Padhao Scheme** was launched in **2015 in Panipat, Haryana** to address the issue of decline in child sex ratio and related issues of empowerment of girls and women over a life cycle continuum.
  - It is a tri-ministerial effort of the ministries of **Women and Child Development, Health and Family Welfare** and **Education** (earlier the Ministry of Human Resource Development).
- **Suggestions:**
  - **Increasing female education and economic prosperity** will help to improve the ratio.

- **Rollout campaigns on sensitisation towards women and children**, making women safety cells, ensuring the safety of women on public transport systems, making cyber-crime cells are some other initiatives that need to be taken.
- In view of the complexity of son preference resulting in gender-biased sex selection, **government actions need to be supplemented by improving women's status in the society.**
- **Reaching out to young people could reduce the effect of population momentum** and accelerate progress towards reaching a more normal sex-ratio at birth.

## Report on Food Consumption: WWF

### Why in News

Recently, the **World Wildlife Fund (WWF)** has published the report "**Bending the Curve: The Restorative Power of Planet-Based Diets**".

- The report offered a **detailed analysis of food consumption patterns** in 147 countries and six regions and the **national dietary guidelines (NDGs)** across 75 countries. For each country and region, the impacts of diets were **assessed on various environmental and health indicators.**

### Key Points

- **Food consumption patterns vary widely** and can best be characterised by **massive inequality.**
  - **Different consumption patterns are observed in the richest and poorest countries**, with European countries consuming approximately 600 grams per day more food (1,800 g/day) than African countries (1,200 g/day).
  - Although **under-nutrition and obesity affect almost all countries**, the rate of underweight people is up to 10 times higher in the poorest countries as compared to other countries.
  - The rate of overweight/obese people is up to five times higher in the richest countries.
- **Major Concerns:**
  - **Premature deaths** in low- and middle-income countries **due to unhealthy diets, under-consumption as well as over-consumption.**

Note:



- India needs to be extra careful in figuring out the changes in the diet because there could be an **increase in biodiversity loss** due to a shift to a healthier and planet-friendly diet and **extensively increased consumption**.

- The country has to **first increase consumption of fruits, vegetables and dairy** to meet its nutritional requirements.

#### ➤ Suggestions:

- There is a need to strike a **balance in how countries consume their food as well as a shift to a plant-based diet** which is the need of the hour.
  - However, this dietary **shift will impact different countries differently**. While some countries will need to reduce their consumption of animal-source foods, others may need to increase them.
- The shift will not only **improve human health by preventing over-consumption** of any food but will also **reverse the biological loss** that has occurred until now and **improve environmental health**.
  - The shift to more plant-based diets will **cut down carbon emissions** by 30%, wildlife loss by 46%, agriculture land use by 41% and premature deaths by 20%.
- A **sustainable environment and human health can be achieved** by following a few **lifestyle changes** that include **eating foods which are**:
  - More sustainable.
  - More plant-based food and less animal-based.
  - Healthy and locally grown and minimally processed.
  - More diverse instead of just one kind.
- Countries **should not solely depend on the domestic production and biodiversity-rich countries**, including India, **should import** food from higher-yielding and less biodiverse nations.

#### ➤ New Launch:

- The WWF has launched a new platform known as **Planet-Based Diets Impact and Action Calculator**.
  - One can calculate their consumption and **find out the impact caused by their diet on the environment**.
- The platform **also shows national level impacts**. This will **help people living anywhere in the world to make a conscious decision** by finding out if their diet is good for them as well as their environment.

## New Abortion Laws in Poland

### Why in News

Recently, **women in Poland** have been protesting a court ruling that drastically restricts their **right to access safe and legal abortions**.

### Key Points

#### ➤ Poland's Abortion Laws:

- The existing **1993 abortion law permits the termination of pregnancy on the grounds of foetal defects**.
- These are **already considered some of the strictest laws in Europe** and after the enactment of the court's decision, **abortions will only be permitted in cases of rape, incest, or if there is a threat to the mother's life**.

#### ➤ Background:

- **Poland's Constitutional Tribunal** ruled that an **existing law was unconstitutional** because the **Polish constitution assures a right to life** and the abortion based on a foetal malfunction was a directly forbidden form of discrimination.
- Tribunal held that **permitting abortions** in the case of foetal deformities **legalised "eugenic practices** with regard to an unborn child, thus denying it the respect and protection of human dignity."
- **Eugenics** is the **practice or advocacy of improving the human species** by selectively mating people with specific desirable hereditary traits.
- It **aims to reduce human suffering** by "breeding out" disease, disabilities and so-called undesirable characteristics from the human population.

#### ➤ Similar Instances:

- **Earlier in 2016** too, thousands of women went on strike in **protest against a draft law for a complete ban on abortions**.
- The draft law was **proposed by an anti-abortion citizens' group** and was initially **supported by the Catholic Church**. It suggested **stringent punishments** like jail upto 5 years for the women and also the doctors performing the abortion.
- However, the **Church later backed out** when bishops said they **could not support the proposal to jail women who underwent an abortion**.

#### ➤ Implications of the Latest Ruling:

- Fewer than 2,000 legal abortions are carried out in

Note:



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### Abortion

- It is defined as the **termination of pregnancy by various methods**, including **medical surgery** before the fetus is able to sustain independent life.

### Abortion Laws in India

- Abortions in India are regulated by the **Medical Termination of Pregnancy (MTP) Act, 1971**.
- Under the law (**section 3** of the MTP Act 1971), the **doctor can perform an abortion in the following conditions**:
  - If the pregnancy would be **harmful to the life of the patient or affects her physical or mental health**. The doctor will need to consider the circumstances of the patient to figure out if the pregnancy will harm her mental health, on a case to case basis.
  - If there is a good chance that the **child would suffer from physical or mental abnormalities** which would leave him or her seriously handicapped.
  - If pregnancy occurred as a **result of a failure of contraception** (only applicable to married women).
  - If pregnancy is a **result of sexual assault or rape**.
- **Termination of Pregnancy**:
  - If the pregnancy has **not exceeded 12 weeks**, **only one doctor** is needed to sign-off.
  - If the pregnancy **has exceeded 12 weeks and is below 24 weeks**, **two doctors** are needed.
  - The **gestation period does not matter** if a doctor feels that an immediate abortion must be conducted **to save the life of the patient**.
  - The doctor who determines if it is necessary to perform an abortion and performs it **needs to be a 'registered medical practitioner' under the law**.
- In **January 2020**, the Union Cabinet approved **amendments to the MTP Act**, allowing women to seek abortions as part of the reproductive right and gender justice.
- The amendment **raised the upper limit of MTP from 20 weeks to 24 weeks** for women including rape survivors, victims of incest, differently-abled women and minors.

Poland each year, a **majority of which are due to foetal defects**. So the ruling **essentially translates to a near complete ban** on abortions in the country.

- Abortions in cases of rape, incest or where

there is a threat to the mother's life account for **merely 2% of all legal terminations**.

- An estimated **80,000 to 1,20,000 Polish women either go abroad or seek illegal abortions every year** due to the country's **strict laws** or the **stigma** associated with it.
  - It is feared that the **number could surge even further** if terminations due to malformed fetuses are outlawed.
- **Global Reactions**:
- Regional and global organisations like the **Council of Europe**, **Amnesty International**, the **Center for Reproductive Rights** and **Human Rights Watch** criticised the ruling.

## Child Care Leaves for Single Male Parent

### Why in News

**Male government employees** who are single parents will now be **eligible for child care leave**.

- **Single male parents**, include unmarried employees, widowers and divorcees, who may be expected to take up the responsibility of caring for a child single-handedly.

### Key Points

- **Aim**: Ease-of-living for government servants.
- **Features**: Child care leave can be **granted at 100% of the leave salary for the first 365 days** and **80% of leave salary for the next 365 days**.
  - In case of a **disabled child**, the **condition** of availing child care leave up to the age of 22 years of the child has been removed and now **it can be availed for a disabled child of any age**.
- **Child Care Leave**: It is treated as **earned leave** and is generally granted to women employees.
  - Women employees having **minor children** (children up to 18 years of age) may be granted child care leave for a **maximum period of two years** during their entire service for taking care of up to two minor children.
  - The child care leave is granted either for rearing children or to look after any of the needs of children like examination, sickness etc.



Note:

# Security

## Highlights

- Naval Version of BrahMos Tested
- INS Kavaratti
- Integrated Theatre Command
- 59th Raising Day of the ITBP
- 36th NSG Raising Day

## Naval Version of BrahMos Tested

### Why in News

Recently, a naval version of the **BrahMos supersonic cruise missile** has been successfully test-fired from **INS Chennai** (an **indigenously built stealth destroyer**) of the Indian Navy in the Arabian Sea.

### Key Points

- **BrahMos** is a joint venture between the **Defence Research and Development Organisation of India** (DRDO) and the **NPOM of Russia**.
  - Brahmos is named after the rivers **Brahmaputra** (India) and **Moskva** (Russia).
- It is a **supersonic missile travelling at a speed of Mach 2.8** (nearly three times the speed of sound).
  - It is the **world's fastest** supersonic cruise missile.
- It is a **multiplatform** i.e it can be launched from land, air, and sea and multi capability missile with pinpoint accuracy that works in **both day and night irrespective of the weather conditions**.
  - It is, therefore, **used by all three defence forces**, the Army, Navy and the Air Force.
- It operates on the **"Fire and Forget"** principle i.e it does not require further guidance after launch.
- It is the **heaviest weapon to be deployed on Sukhoi-30 MKI fighter aircraft**, with a weight of 2.5 tonnes.
- Its **range** has been recently enhanced from **300 km to 450-600 km**.
  - Increasing the missile's range became possible after India's induction into the **Missile Technology Control Regime** (MTCR) in June 2016.

- The missile **features indigenous Booster and Airframe Section**, along with many other indigenous sub-systems.
- **Advantages:**
  - BrahMos has been **deployed in Ladakh** as well as the **Eastern Sector in Arunachal Pradesh** to tackle any threats in the **ongoing standoff with China**.
  - Enhanced use of indigenous technologies will give a **boost to India's Atmanirbhar Bharat**.
  - Increasing indigenous content in defence systems has also been a prime focus of **Defence Acquisition Procedure, 2020** and **draft Defence Production and Export Promotion Policy 2020**.
- **Recent Defence Testings:**
  - India also carried out a successful test-firing of **'Shaurya'**, which is a **laser-guided anti-tank guided missile and nuclear-capable hypersonic missile**
  - The successful test firing of **Rudram-1** was seen as a major milestone as it is **India's first indigenously developed anti-radiation weapon**.

## INS Kavaratti

### Why in News

Recently, **INS Kavaratti** has been formally inducted into the Indian Navy at the **Naval Dockyard in Eastern Naval Command (ENC), Visakhapatnam**.

### Key Points

- It is **named after the capital of the Lakshadweep group** of islands.
- It is the **last of the four indigenously built Anti-Submarine Warfare (ASW) stealth corvettes** built under **Project 28 (Kamorta class)**, by **Garden Reach Shipbuilders and Engineers (GRSE), Kolkata**.

Note:

- The ship is regarded as **one of the most potent ASW stealth corvettes** to have been constructed in India as it joins three other ships of the same class **INS Kamorta, INS Kadmat and INS Kiltan**, at the ENC.
  - Its induction is a game-changer in the eastern seaboard, especially with the **Chinese submarines trying to increase their presence in the Indian Ocean**.
- It has **enhanced stealth features** resulting in **reduced Radar Cross Section (RCS) achieved by the superstructure along with optimally sloped surfaces**.
  - INS Kavaratti and INS Kiltan are the **first two major warships** in the country to have the unique feature of the **superstructure made of carbon fibre composite material**.
- It has **high indigenous content** with the **state-of-the-art equipment** and systems to fight in **Nuclear, Biological and Chemical (NBC) warfare conditions**.
  - Some of the major equipment/ systems developed indigenously include **Combat Management System, Torpedo Tube Launchers and Infra-Red Signature Suppression System**, etc.
  - The high level of indigenisation incorporated in the production accentuates the objectives of **Atmanirbhar Bharat Initiative**.
- The ship is the **reincarnation of the erstwhile Aruna Class missile corvette** of the same name, **INS Kavaratti-P 80**, a ship that played an important role in the **liberation of Bangladesh in 1971**.
- There is one **joint command in Andaman and Nicobar Islands**.
  - It is the **first Tri-Service theatre command** of the Indian Armed Forces, based at **Port Blair**.
  - It was **created in 2001** to safeguard India's strategic interests in Southeast Asia and the **Strait of Malacca** by increasing rapid deployment of military assets in the islands.
- The other tri-service command, the **Strategic Forces Command (SFC)**, looks after the delivery and operational control of the country's nuclear assets.
- **Recent Developments:** The **appointment of the CDS** and the creation of the **Department of Military Affairs (DMA)** are momentous steps towards the integration and advancement of defence forces.
  - **Chief of Defence Staff:**
    - It is the single-point military adviser to the government as suggested by the **Kargil Review Committee in 1999**.
    - CDS oversees and coordinates the working of the three Services.
    - As the head of DMA, CDS is vested with the authority in prioritising inter-service procurement decisions.
  - **Department of Military Affairs:**
    - The DMA is headed by the CDS.
    - Work exclusively pertaining to military matters will fall within the purview of the DMA. Earlier, these functions were the mandate of the Department of Defence (DoD).
- The **next logical step** in the process of defence reforms is the **formation of Integrated Theatre Commands** to synergise the capabilities and combat potential of the three services during war and peace.
- **Teams headed by the Vice Chiefs** of the three services have been **constituted to study and submit recommendations on the formation** of various integrated commands.
  - The study on the air defence command is in an advanced stage of completion.
- **Integrated Theatre Command:**
  - An integrated theatre command **envisages a unified command of the three services**, under a **single commander**, for **geographical theatres (areas)** that are of **strategic and security concern**.

## Integrated Theatre Command

### Why in News

As part of defence reforms, after the appointment of the **Chief of Defence Staff (CDS)**, the government is working on the formation of the **Integrated Theatre Commands**.

### Key Points

- **Current Situation:**
  - The Indian armed forces currently have **17 commands**. There are 7 commands each of the Army and the Air Force. The Navy has 3 commands.
    - Each command is **headed by a 4-star rank military officer**.

Note:



- The commander of such a force will be **able to bear all resources at their disposal**, from the Army, the Indian Air Force, and the Navy, with seamless efficacy.
- It will **not be answerable to individual services**.
- Integration and jointness of the three forces will **avoid duplication of resources** and the resources available under each service will be available to other services too.
- The services will **get to know one another better, strengthening cohesion** in the defence establishment.
- The **Shekatkar committee** has **recommended the creation of 3 integrated theatre commands** viz. northern for the China border, western for the Pakistan border, and southern for the maritime role.

## 59<sup>th</sup> Raising Day of the ITBP

### Why in News

The **Indo-Tibetan Border Police (ITBP)** celebrated its 59<sup>th</sup> Raising Day on 24<sup>th</sup> October 2020.

### Key Points

- Indo-Tibetan Border Police (ITBP) Force is a **Central Armed Police Force** functioning under the **Ministry of Home Affairs**, Government of India.
  - **Other Central Armed Police Forces** are: **Assam Rifles (AR)**, **Border Security Force (BSF)**, **Central Industrial Security Force (CISF)**, **Central Reserve Police Force (CRPF)**, **National Security Guards (NSG)** and **Sashastra Seema Bal (SSB)**.
- The ITBP was **raised on 24<sup>th</sup> October, 1962 during the India-China War** and is a border guarding police force specializing in high altitude operations.
  - Presently, ITBP is **deployed on border guarding duties from Karakoram Pass in Ladakh to Jachep La in Arunachal Pradesh** covering **3488 km of Indo-China Border**.
    - ITBP Border Out Posts are of the height upto 18,750 feet where the temperature dips down minus 40 degree Celsius.

- The Force is also deployed for **Anti Naxal operations** and other **internal security duties**.
- ITBP was **initially raised under the Central Reserve Police Force (CRPF) Act, 1949**. However, in 1992, parliament enacted the **ITBP Act** and the rules were framed in 1994.

## 36<sup>th</sup> NSG Raising Day

### Why in News

National Security Guard (NSG) Raising Day is celebrated on **16<sup>th</sup> October**.

### Key Points

- **Formation:** The decision to form an anti-terror federal contingency force was taken in 1984 when militancy in Punjab was at its peak. The **NSG came into existence** through the **National Security Guard Act, 1986**.
- **Anti Terrorist Force:** They are been given the specific role to handle all the facets of terrorism in any part of the country as a **federal contingency force**.
  - They are also informally referred to as the '**Black Cats**' because of their menacing, all-black uniforms.
- **Two Complementary Elements:**
  - **Special Action Group (SAG)** comprising Army personnel.
  - **Special Rangers Group (SRG)** comprising personnel drawn from State Police and Central Armed Police Force.
- **Model:** It is modelled on the elite anti-terror forces **GSG-9 of Germany** and **SAS of the United Kingdom**.
- **Deployment:** Since its raising, the NSG has been used in Punjab in 1986 and Jammu & Kashmir. It played a significant role in thwarting Mumbai terror attacks (26/11 attacks).
- **Not For VIP:** In January 2020, the Centre decided to **remove the NSG from providing security to VIPs**, a task which it was not supposed to perform when it was originally formed.



Note:

# Miscellaneous

## Highlights

- Frontier Technologies Cloud Innovation Center
- Electronic Exchange of Customs Data
- India International Science Festival 2020
- Nazca Lines: Peru
- Indira Rasoi Yojana: Rajasthan
- Kochi-Muziris Biennale
- International Press Institute

## Frontier Technologies Cloud Innovation Center

### Why in News

Recently, the **NITI Aayog** and **Amazon Web Services (AWS)** have announced the establishment of a **Frontier Technologies Cloud Innovation Center (CIC)**, the first of its kind in India.

- **AWS is a subsidiary of Amazon**, multinational tech and online-shopping giant.
- It provides on-demand **cloud computing platforms** and **Application Programming Interfaces (API)** to individuals, companies, and governments, on a metered pay-as-you-go basis.

### Key Points

- CIC is part of the **AWS CIC Global Program**, which provides an **opportunity for government agencies, nonprofits and educational institutions, to come together** on pressing challenges, apply design thinking, test new ideas, and access the technical expertise of AWS.
- **Frontier Technologies CIC will identify and prioritise projects** as well as **collaborate with local leaders**, including subject matter experts at the state and district levels, to solve critical challenges.
  - Local enterprises, start-ups, researchers, and universities in India can experiment and build prototypes on AWS Cloud.
- It is aligned to the visions of **Aatmanirbhar Bharat Mission** and the **Atal Innovation Mission**.
- **Aims of Frontier Technologies CIC:**

- To **address societal challenges** through digital innovation.
- To **enable budding innovators and start-ups** and help in piloting state-of-the-art, cloud-centric digital innovations by leveraging emerging technologies such as **artificial intelligence (AI)**, **Internet of Things (IoT)**, **robotics**, etc.
- To **identify and deploy leading-edge technologies to drive continuous innovation** in delivering citizen services.

## Electronic Exchange of Customs Data

### Why in News

Recently, the **India Post** and **United States Postal Service** have signed an **agreement** for the **electronic exchange of customs data** related to postal shipments between the two countries.

### Key Points

- **Objective:** To facilitate '**ease of exports**' for small and large exporters through postal channels from different parts of the country.
- **Features:**
  - The agreement will make it **possible to transmit and receive electronic data of international postal items prior to their physical arrival at the destination** and would **enable customs clearance of postal items in advance** in line with the evolving global postal framework.
  - Exchange of **Electronic Advance Data (EAD)** will be a key driver towards **promoting mutual trade** with emphasis on the exports.

Note:

- The **USA is the top export destination for India** (~17%) which is also reflected in the exchange of goods through postal channels.
- In 2019, around 20% of international **Express Mail Service (EMS)** and 30% of letters and small packets transmitted by India Post were destined to the USA whereas 60% of the parcels received were originated from the USA.

➤ **Benefit:**

- This will **fulfil a major demand of the export industry to expedite customs clearances of export items** and will contribute towards making India an Export Hub for the world.
- The agreement will also **improve the performance of postal services** in terms of reliability, visibility and security.

**India Post**

- It is the **trade name for the Department of Posts**, a government-operated postal system in India under the **Ministry of Communications**.
- With 1,55,531 Post Offices, it has the **most widely distributed postal network** in the world.
- **Functions:**
  - Delivering mails, accepting deposits under **Small Savings Schemes**, providing life insurance cover under **Postal Life Insurance (PLI)** and **Rural Postal Life Insurance (RPLI)** and providing retail services like bill collection, sale of forms, etc.
  - It also **acts as an agent for the Government** in discharging other services for citizens such as the **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)**, wage disbursement and old age pension payments.

## India International Science Festival 2020

### Why in News

The 6<sup>th</sup> edition of the **India International Science Festival (IISF)** will be held virtually in 2020.

- The **5<sup>th</sup> edition** was held in Kolkata in 2019.

### Key Points

- **IISF:** It is a festival to **celebrate the achievements of India's scientific and technological advancements** with

students, innovators, craftsmen, farmers, scientists and technocrats from India and abroad.

- It was **launched in 2015** to **promote Science and Technology** and demonstrate how science could lead India towards a developed nation within a short span of time.
- **Aim:** To **engage the public with science** and show the ways how science, technology, engineering and mathematics (STEM) provide solutions to improve people's lives.
- **Organising Agencies:** **Ministry of Science & Technology** and **Ministry of Earth Sciences** in association with **Vijnana Bharati (VIBHA)** organise IISF **every year**.
- **IISF 2020:** The **Council of Scientific and Industrial Research (CSIR)** will spearhead the IISF 2020 with support of all other concerned ministries and departments.
  - CSIR is **funded by the Ministry of Science and Technology**.

### Vijnana Bharati

- **Swadeshi Science Movement** was started in **Indian Institute of Science- Bengaluru** by a few eminent scientists under the guidance of **Prof. K I Vasu**.
- In **1991**, it was decided to launch the Swadeshi Science Movement at all India Level and named it Vijnana Bharati.
- It's one of the **objectives** is to motivate young scientists towards greater creativity and originality.
- It is headquartered in **New Delhi**.

## Nazca Lines: Peru

### Why in News

Recently, a giant cat geoglyph was discovered on a hill at the famous **Nazca Lines** site in Peru.

### Key Points

#### ➤ The Nazca Lines:

- These are a group of geoglyphs known for the **depictions of larger-than-life animals, plants and imaginary beings**.



Note:

- Geoglyphs are the **large designs made on the ground** by creators using elements of the landscape such as stones, gravel, dirt or lumber.
- These are believed to be the **greatest known archaeological enigma**, owing to their **size, continuity, nature and quality**.
- The site is **around 450 km away from capital Lima**.
- **Drawn more than 2 millennia ago** on the surface of southern Peru's arid Pampa Colorada, the geoglyphs feature different subjects, but mainly plants and animals.
  - The figures include pelicans (the largest ones sized around 935 feet long), Andean Condors (443 feet), monkeys (360 feet), etc.
  - **Variety of geometric shapes** such as triangles, trapezoids and spirals, and some have been associated with astronomical functions.
- **Discovery and Heritage Site:** The Lines were **first discovered in 1927**, and were declared a **World Heritage Site by UNESCO in 1994**.
- **The Cat Geoglyph:**
  - **Cultural Linkage:** It dates from 500 BC – 200 AD (**Paracas age**). The cat geoglyph is believed to be **older** than the ones previously found at Nazca.
  - The **Paracas culture** was an Andean society existing between approximately 800 BCE and 100 BCE, with an extensive knowledge of irrigation and water management. It was in present day Peru in the Paracas Desert region.
  - Representations of felines of this type are frequent in the iconography of ceramics and textiles of the Paracas society.



## Indira Rasoi Yojana: Rajasthan

### Why in News

Recently, over 50 lakh people have benefited from **Indira Rasoi Yojana** (a kitchen scheme), in Rajasthan. The scheme was launched in August 2020.

### Key Points

- **Aim:** To **provide nutritious food to the poor and needy** twice a day at concessional rates.
- Under the scheme, each plate serves 100 grams of pulses and vegetables each, 250 grams of chapati and pickles.
- It aligns with the **World Food Day's 2020 theme** to grow, nourish and sustain together.
- **Implementation:** The **local voluntary organisations** have been roped in for establishing the centres near the places such as bus stands, railway stations and hospitals and for successful implementation of the scheme.
- **Background:** The current Rajasthan government scrapped the previous **Annapurna Rasoi Yojana** which was offering breakfast and lunch on the lines of Tamil Nadu's Amma Unavagam (mother's canteen).
- **Monitoring:** A **committee headed by the District Collector** is monitoring the implementation of the scheme. A **special app** has also been created for monitoring the food quality.
- **Target:** The scheme targets to serve 1.34 lakh people per day in the state. Till now the scheme has benefitted 50.30 lakh persons across the State.

## Kochi-Muziris Biennale

### Why in News

In the wake of the **pandemic**, the **5<sup>th</sup> edition of the Kochi-Muziris Biennale** has been **postponed** to **1<sup>st</sup> November 2021**, which was earlier set to be inaugurated on 12<sup>th</sup> December 2020.

### Key Points

- The Kochi-Muziris Biennale is an **art exhibition and festival** that is the **largest of its kind in South Asia** and is organised by the **Kochi Biennale Foundation** at Kochi, Kerala.
  - The Foundation is a **non-profit charitable trust** engaged in **promoting art and culture and educational activities** in India.
  - It works throughout the year to **strengthen contemporary art infrastructure** and to **broaden public access to art** across India through a diverse range of programmes.
- In mythology, **Muziris was a port city**, among the earliest of its kind in the world and when **Kerala established itself as a major center for spice**, the ancient port of Muziris **emerged as its hub**.

Note:



drishti



- Currently, the **Muziris Heritage Project** is one of the biggest conservation projects in India, where the state and the central governments have come together to conserve a rich culture that is as old as 3000 years or more.
- The biennale **exhibits artworks across a variety of mediums** including film, installation, painting, sculpture, new media and performance art and also offers seminars, screenings, music, workshops and educational activities for school children and students.

## **International Press Institute**

### **Why in News**

Recently, the **International Press Institute (IPI)** has highlighted that the impunity with which crimes against journalists are committed continued to rise as governments had failed to probe the cases.

- This move comes ahead of the **International Day to End Impunity for Crimes against Journalists** which is celebrated on **2<sup>nd</sup> November** every year.
- The **United Nations General Assembly** proclaimed the day in the General Assembly Resolution of **December 2013**.

- It urged the Member States to **implement definite measures countering the culture of impunity**.
- The date was chosen in **commemoration of the assassination of two French journalists in Mali on 2<sup>nd</sup> November 2013**.

### **Key Points**

- IPI is a **Vienna-based global network of editors, media executives and leading journalists** who share a common dedication to quality, independent journalism.
- **Formation:**
  - In 1950, to promote and protect press freedom and to improve the practices of journalism, 34 editors from 15 countries gathered at **Columbia University** and formed the global organisation.
    - The year **2020** marks its **70<sup>th</sup> anniversary**.
  - The **original Secretariat was set up in 1951 in Zürich** (Switzerland), which was shifted to **London in 1976** and then to **Vienna in 1992**.
- **Objectives:**
  - To promote conditions that **allow journalism to fulfil its public function**, the most important of which is the media's **ability to operate free from interference and without fear of retaliation**.
  - To **defend media freedom and the free flow of news** wherever they are threatened.

Note:

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**Key Points**

**Details**


**Summary**

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