



# VAJIRAM & RAVI

( Institute for Civil Services Examination )

## SEPTEMBER 2021

# *the* RECITALS

Monthly Current Affairs Magazine



BRICS Summit

Insolvency and Bankruptcy Code

# INDEX

## FEATURE ARTICLE (3-9)

- Insolvency and Bankruptcy Code
- 13th BRICS Summit

## HISTORY AND CULTURE (10-12)

- WHITRAP
- Mahakavi Subramania Bharati
- Raja Mahendra Pratap Singh
- V. O. Chidambaram Pillai
- Panj Piare
- Remains of Gupta Temple

## SOCIAL ISSUES (13-25)

- Poshan 2.0
- World Social Protection Report 2020-22
- Glue Grant Scheme
- WHO Report on Dementia
- INSPIRE Awards-MANAK
- Common Services Centres (CSC)-PSK
- Rising Complaints of Crime against Women
- ASER Report
- Shikshak Parv
- Swachh Survekshan Grameen 2021
- NCRB Report 2020
- Caste Census
- Ayushman Bharat Digital Mission
- Reforms in Urban Planning Capacity in India

## ECONOMY AND INFRASTRUCTURE (26-40)

- IMF SDR Allocation
- Sukhet Model
- Saath Initiative
- NPA Under Mudra Loans
- Shoonya Campaign
- Additional Tier-1 bonds
- Green Bonds
- SPIN Scheme
- Rail Kaushal Vikas Yojana
- Scheme for Promotion of Medical Device Parks
- Pearl Farming Promotion

- Global Innovation Index 2021
- GI Tag
- PLI Scheme For Textiles
- PLI for Auto Sector
- Account Aggregator System
- Card Tokenisation
- Bad Bank

## POLITY AND GOVERNANCE (41-51)

- Draft e-Commerce Rules 2021
- Deputy Speaker Lok Sabha
- Eat Right Station Certification
- Right to Sit
- Employment in Private Sector Bill
- Telecom Sector Reforms
- District Level Committees for Power Related Schemes
- Front of Pack (FoP) Labelling
- 3rd State Food Security Index
- Ammonium Nitrate Rules Amended
- Ladakh Resident Certificate Order 2021
- FASTER System

## INTERNATIONAL AFFAIRS (52-66)

- Food and Forex Crisis in Sri Lanka
- China Opens First Road-Rail Transport Link to Indian Ocean
- Prime Minister of Japan Stepped Down
- Chinese Intrusion into Taiwan's Air Defence Identification Zone
- AUKUS Grouping
- Iran to Allow Nuclear Surveillance by IAEA
- SDG Progress Award
- EU Unveils Indo-Pacific Strategy
- Bright Star
- India-UAE Negotiations for CEPA
- SAARC Foreign Ministers' Meeting Cancelled
- First-ever 2+2 Ministerial Dialogue Between India & Australia

- Strategic Clean Energy Partnership (SCEP)
- India & Bangladesh: Recent Developments
- Tamil Nadu-Denmark Energy Island Project
- Climate Action and Finance Mobilization Dialogue (CAFMD)

### SUMMITS AND ORGANISATIONS (67-76)

- 8th Meeting of Agricultural Experts of BIMSTEC
- 6th Eastern Economic Forum 2021
- India's Sherpa for G20 Meet
- Conference of Protectors of Emigrants (PoE)
- UN Meeting on Humanitarian Situation in Afghanistan
- China Applies to Join Asia-Pacific Trade Pact
- SCO Summit 2021
- 1st In-person Quad summit
- UN Food Systems Summit 2021

### DEFENSE AND SECURITY (77-81)

- Centre Signs Pact with Five Ultra-groups of Karbi Anglong
- Govt. Inks Peace Pact with NSCN
- Naval Aviation Gets President's Colour
- MLAs Forum -Arunachal Pradesh
- MILITARY EXERCISES
- Indian and Algerian Navies Maiden Exercise

### SCIENCE AND TECHNOLOGY (82-91)

- Breakthrough Infections
- Mu COVID Variant
- Footprints Of 3 Dinosaur Species Found
- Biological E Jab Gets Nod For Trial Among Children
- Antimalarial Vaccine
- Nipah Reappears
- Covid-19 Vaccines Fare With Delta Variant
- New Island on the Map
- India's First Dugong Conservation Reserve
- Generating Methanol from Coal
- Sheltered Vultures Now At Home
- Thawing Permafrost
- US-EU led Effort to cut Methane Emissions
- SEA CUCUMBERS

- Pollen Calendar
- Fragile X Syndrome
- Medicine From The Sky Project
- Chandrayaan-2 Findings
- Water Management System For Toxic Textile Effluents
- RTPCR Tech Transfer to MSME
- Zero-shot Learning (ZSL)
- LCA- Tejas Mk2
- Advanced Medium Combat Aircraft (AMCA)
- Plant As a Source mRNA Vaccine
- Black Tigers
- Substitute for Single Use Plastics
- Inspiration4 Mission
- Helina Completes All Trials
- New Species of Hybodont Shark
- Chang'e-5 Probe
- Ethanol Blending
- Arjun Main Battle Tank(MBT) MK-1A
- Indigenous Memory Technology
- Mars and Water Availability
- Dark Energy
- India's First Herbicide-tolerant & non-GM Rice Varieties

### ENVIRONMENT AND GEOGRAPHY (92-104)

- Red Flag over Draft NCR Plan
- Flaws in ESZ of Deepor Beel
- 160 Species of Raptors Endangered Worldwide
- Global Award For Turtle Conservation
- Koraput's Manda Buffalo Gets Unique Indigenous Tag
- IUCN World Conservation Congress 2020
- River Bhogdoi Dying A Slow Death
- Renewable Energy and Land Use in India
- Plant Discoveries 2020
- WHO New AQGs: Pollution Norms
- Kovalam And Eden Beaches Get Blue Flag Certification
- World Rhino Day
- Cyclone Gulab

## Insolvency and Bankruptcy Code

- Credit boom of 2000s led to **unsustainable accumulation of bad debt** in books of Indian banks.
- Various Earlier frameworks for resolution (given in figure besides) had proved inefficient. It was in this context that the government decided to enact the **Insolvency and Bankruptcy Code (IBC), 2016** to bring about a structural change in the framework that governs the **corporate insolvency resolution process (CIRP)** in India.
- The prime objective of IBC is to **rescue corporate debtors** in distress. It specifies a **time-bound** corporate insolvency resolution process (CIRP), which must be completed within 330 days



**Insolvency**

• Situation where the liabilities of the entities are more than its assets and unable to meet its debts

**Bankruptcy**

• Legal process where a court has declared the entity insolvent on the application made by that entity to declare itself insolvent

### About IBC



- **Coverage:** IBC deals with insolvency, bankruptcy, and liquidation of only **4 entities** namely individuals, partnership firms, limited liability partnership (LLP) and companies and does not apply to any other entities like societies, trust boards etc
- **Insolvency resolution process can be initiated by:** Firm/Debtor/Financial or Operational Creditors/ Employees
- **Triggered:** If there is a minimum default of Rs 1 Crore. This process can be triggered by way of filing an application before the NCLT.

**Corporate Insolvency Resolution Process (CIRP):** It includes necessary steps to revive the company such as raising fresh funds for operation, looking for a new buyer to sell the company etc.

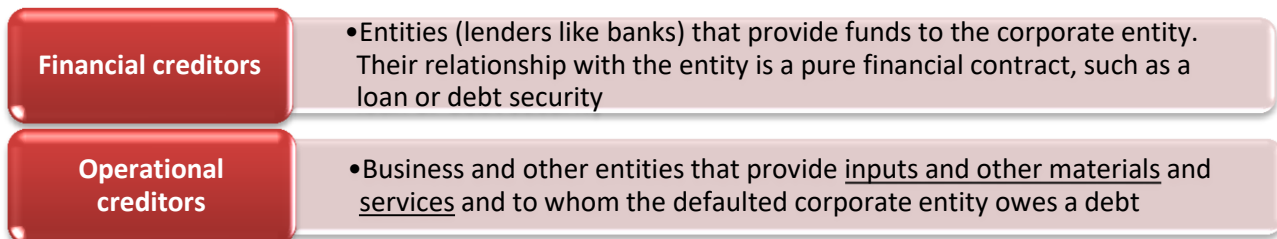


**Resolution Professional**

- Once the resolution process starts, the NCLT appoints an interim (temporary) resolution professional (**IRP**). The term of interim resolution professional continues till the appointment of the (regular) resolution professional.
- After the appointment of the IRP, the affairs of the corporate debtor (company in debt) are managed by the IRP. The IRP receives and collates the claims submitted by various creditors and constitutes a **committee of creditors (CoC)**. After that the CoC can appoint the IRP as the resolution professional or replace him with another resolution professional.

**Committee of Creditors (CoC)**

- It forms the decision-making body in the Corporate Insolvency Resolution Process (CIRP).
- As per IBC, **only Financial Creditors** can be a part of CoC. **Operational creditors cannot be a part of CoC.** Each Creditor can vote in accordance with the voting share assigned to it based on financial debts owed to the respective creditor.



**Resolution Plan**

- Once the IRP/RP collates and verifies the claims, the CoC **invites proposals** for resolution plans that could potentially be implemented.

- A resolution plan is a plan proposed for insolvency resolution of the corporate debtor.
- It may include provisions for the **restructuring of the corporate debtor**, through a **merger, demerger** etc. A resolution plan approved by **66% (reduced from 75% by amendment to IBC) of the CoC**, is then presented before the NCLT.
- If the NCLT approves the resolution plan, then it becomes binding on the corporate debtor and all the stakeholders. However, if the NCLT does not sanction the resolution plan or, the CoC is unable to finalize a resolution plan in the **designated period**, then the **tribunal orders the liquidation** of the corporate debtor.

Liquidation is the process of bringing a business to an **end by selling its assets**. Liquidation value is the total value of company's physical assets, if the company goes out of business and its assets are sold.

#### Recent Supreme Court (SC) Ruling

- SC held that the Committee of Creditors (CoC) **approved resolution** plan under the IBC submitted to the National Company Law Tribunal (NCLT) cannot be modified.
- The **adjudicating authority (NCLT/ NCLAT)** cannot allow **modifications or withdrawals** of Resolution Plans approved by the CoC at the behest of the successful Resolution Applicant, once the plan is submitted to it.

#### Performance Analysis

- **Strengthened hands of creditors** in enforcing their rightful claims against corporate debtors.
- **Behavioural change:** The threat of losing control over their company has emerged as a powerful deterrent against **wrongful promoters** not wanting to meet their financial obligations.
- **Tool to negotiate the dues of operational creditors** (typically micro, small and medium enterprises) with the larger firms. In fact, about half of the cases have been initiated by operational creditors.
- **India's 'ease of doing business Rank:** India's rank in ease of doing business improved from 155 (2017) to 63(2020) and Starting a business rank improved from 151(2017) to 136(2020).
- **Reducing bankruptcy resolution time:** Average time taken for resolution was reduced from 4.3 years in 2017 to 1.6 years in 2020.
- **Resolution of cases:** Of total 32,547 cases filed in NCLT, 19,377 have been disposed
- **Recovery Rates:** Not only were recovery rates significantly higher than earlier, but they reflected substantially lower haircuts than the small sums which could be generated through the liquidation route.
- **IBC (Amendment Bill), 2021** introduced an **alternate** insolvency resolution process for Micro, Small and Medium Enterprises (MSMEs) with defaults up to Rs 1 crore called the **Pre-packaged Insolvency Resolution Process (PIRP)**.

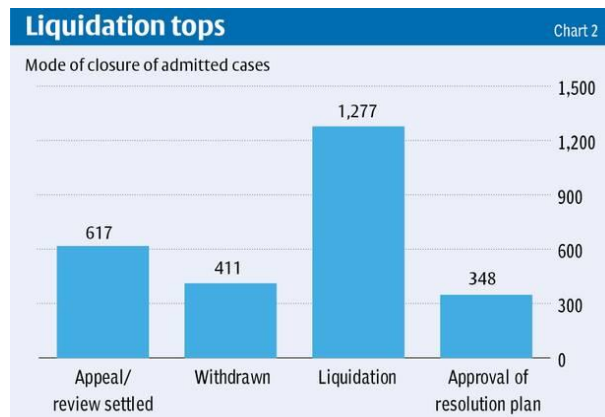
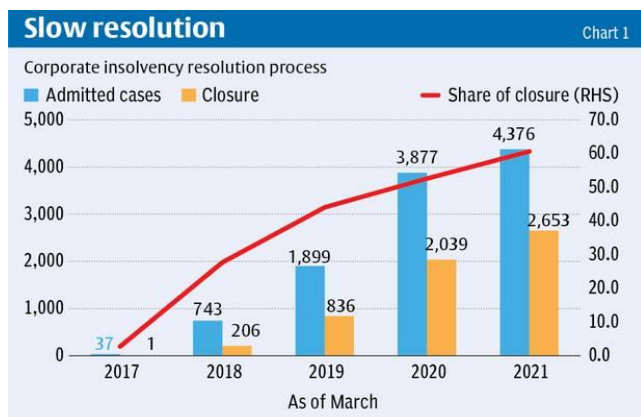
A pre-packed insolvency resolution mechanism is a process wherein a **resolution arrangement** is agreed upon between the distressed corporate debtor (CDs) and lender **before approaching** National Company Law Tribunal (NCLT) for bankruptcy proceedings.

#### Issues

- On various parameters, outcomes under the IBC have not been as favourable as envisaged. The above mentioned instances of high recovery are **more the exception than the rule**.

Public and private sector banks, non-banking financial institutions and other financial lenders have taken a cumulative haircut of 61.2% of their admitted claims, with some haircuts as high as 90-95%

- Of the 4,376 cases admitted till March 2021, only 2,653 have been closed by:
  - **Approval of a debt resolution:** 348 of those closed (Charts 1 and 2).
  - **Liquidation:** 1,277 cases closed
  - The remaining were either closed after appeal/review or withdrawn.



- **High share of liquidation** indicates that **resolution was ensured only in minority of cases.**
- Proportion of **outstanding credit recovered** through the resolution process is 39.26% which is **not** much higher than the 26% registered for cases dealt with under the **SARFAESI Act.**
- **Delays:** In cases where a resolution plan has been accepted, the average time taken stands at 459 days, higher than the 330 limit.

In most cases, this is due to delay in court proceedings, as NCLT and National Company Appellate Tribunal (NCLAT) are overburdened.

- Explanations for the outcomes not meeting expectations: Amid a slowing economy, uncertain future prospects may have reduced the number of interested buyers or depressed the bids for companies. Further, delays in either **beginning the insolvency proceedings** or **resolution process itself**, promoters have repeatedly tried to create **legal hurdles**

**Conclusion**

IBC has emerged as a credible threat and a stringent mechanism to develop credit discipline in the country. But the functioning of the Code needs to be streamlined and strengthened. The timelines for resolution need to be strictly adhered to and the capacity of the system to handle cases needs to be augmented as delays in the process destroy enterprise value. Doing so, would help to enhance ease of doing business, boost innovation and entrepreneurship, attract foreign investment

## 13th BRICS Summit

13<sup>th</sup> BRICS Summit was held under **India's Chairship**. It was **3<sup>rd</sup> time** that India hosted BRICS Summit after 2012 and 2016. This year, BRICS is also celebrating its **15<sup>th</sup> anniversary**.

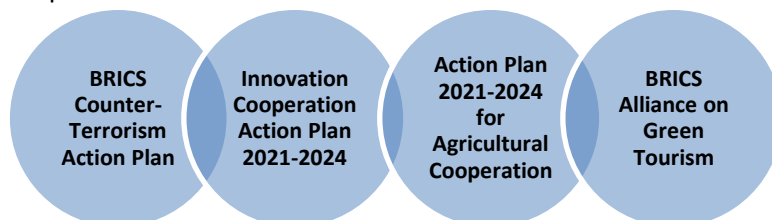
### Key Highlights

- **Theme - 'BRICS Cooperation for Continuity, Consolidation and ...'**
- India had chosen **three pillars** of intra-BRICS cooperation in 2021.

Political and Security Priorities	Economic and Financial Priorities	Cultural and People to People
<ul style="list-style-type: none"> <li>• Reform of the Multilateral System</li> <li>• Counter Terrorism Cooperation</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of <b>BRICS Economic Partnership Strategy 2020-25</b>.</li> <li>• Operationalization of the <b>BRICS Agriculture Research Platform</b>.</li> <li>• Cooperation on Disaster Resilience.</li> <li>• Innovation Cooperation.</li> <li>• Digital Health and Traditional Medicine.</li> </ul>	<p>Exchanges among Parliamentarians, young scientists, industrialist etc.</p>

- India's Chairship saw the achievement of **several new initiatives**. This included:

- ✓ 1<sup>st</sup> BRICS **Digital Health** Summit;
- ✓ 1<sup>st</sup> BRICS Ministerial Joint Statement on **Multilateral reforms**;
- ✓ Adoption of



- ✓ Agreement on cooperation in field of remote-sensing satellites;
- ✓ Virtual BRICS vaccine R & D Centre;
- ✓ Launch of '**BRICS Solutions for SDGs Awards 2021**' by BRICS Business Council
- At the conclusion of the Summit, the leaders adopted '**New Delhi Declaration**' touching upon various global issues:





New Delhi Declaration

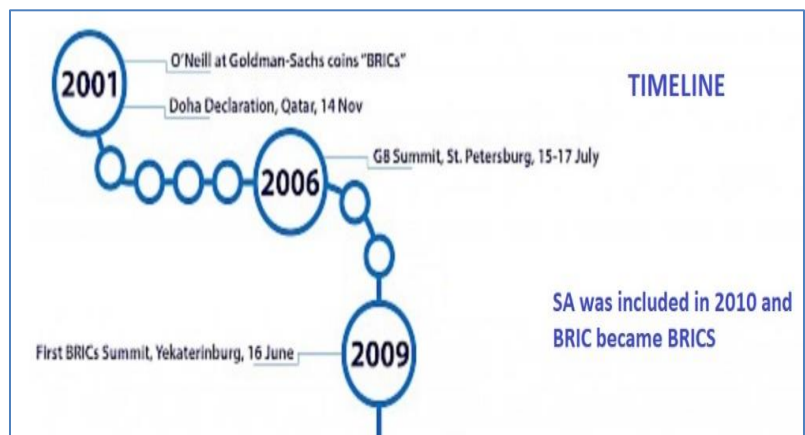
<b>Afghanistan</b>	<ul style="list-style-type: none"> <li>•Need to <u>prevent attempts by outfits to use Afghan territory as a terrorist sanctuary</u></li> </ul>
<b>Fighting Terrorism</b>	<ul style="list-style-type: none"> <li>•Counter the threat <b>on basis of respect for international law, in particular the charter of UN.</b></li> <li>•Finalization and <b>adoption of the Comprehensive Convention on International Terrorism within UN Framework.</b></li> <li>•<b>Cooperation within Financial Action Task Force</b> and its regional bodies to curb terror financing.</li> </ul>
<b>BRICS Counter-Terrorism Action Plan</b>	<ul style="list-style-type: none"> <li>•<b>Endorsed BRICS Counter-Terrorism Action Plan</b> which was adopted by national security advisers.</li> <li>•The plan is aimed at <b>implementing the strategy</b> and <u>defines the approach and actions of BRICS Nations towards counter-terrorism cooperation</u></li> <li>•<b>Ensures coordinated efforts</b> to <u>understand, identify and collaboratively respond to persistent and emerging threats</u></li> </ul>
<b>COVID-19</b>	<ul style="list-style-type: none"> <li>•Cooperation under motto of '<b>Build-back Resiliently, Innovatively, Credibly and Sustainably</b>'.</li> <li>•<b>Cooperation on study of origins of the SARS-COV-2</b></li> <li>•Regretted the <b>inequity in access to Covid vaccines, diagnostics and therapeutics.</b></li> </ul>
<b>Multilateralism</b>	<ul style="list-style-type: none"> <li>•Need to reform multilateral institution.</li> <li>•Recalled <b>UNGA resolution 75/1</b> and reiterated <b>call for reforms of principal organs of the UN.</b></li> </ul>

About BRICS

- BRICS brings together 5 major emerging economies - **Brazil, Russia, India, China and South Africa.**
- BRICS as a platform comprises 41% of the world population, has 24% of the world GDP and over 16% share in the world trade.

New Development Bank (NDB)

- NDB, also known as BRICS bank, was launched in 2015.



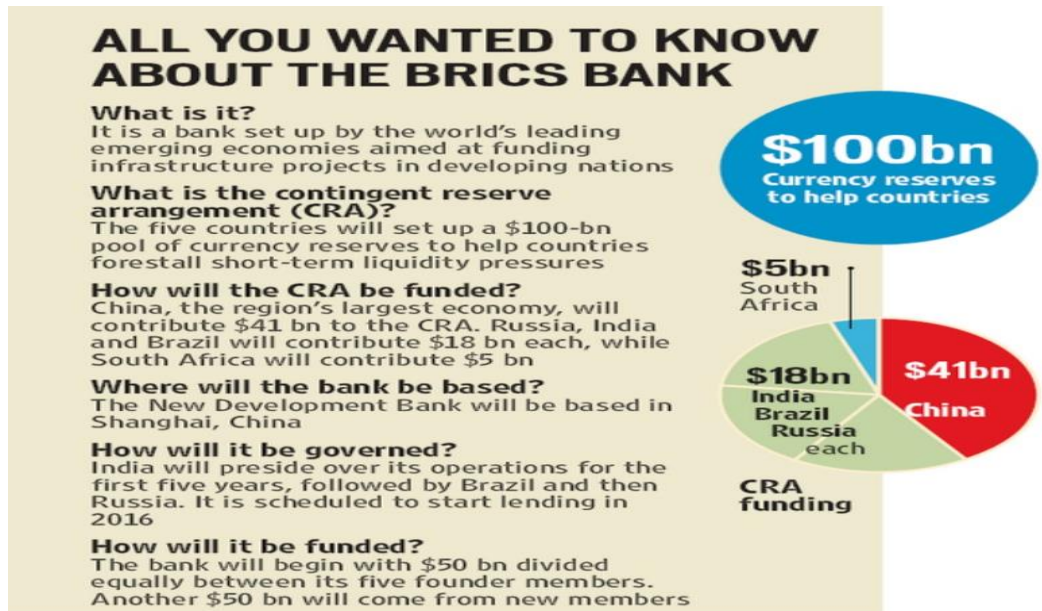
- NDB has initiated its membership expansion and started formal negotiations with prospective members in late 2020.
- In September 2021, NDB admitted UAE, Uruguay and Bangladesh as the first batch of new members.

**Role of BRICS: An Analysis**

- **New Development Bank and the Contingency Reserve Arrangement** are actually the flagship outcome of BRICS.
- BRICS which started off primarily with an economic pillar, has now diversified considerably to include security, health, science and technology, culture and civil society.
- Role of BRICS has also been very important in the context of **being a pressure group** on the question of **reform of multilateralism** and also on the question of **reform of global governance institutions.**
- BRICS sees itself as a **bridge between developing countries and developed world** and takes up issues which are very relevant to the developing countries.

**Past Significant Achievements of BRICS includes creation of:**

- New Development Bank (NDB),
- Contingent Reserve Arrangement (CRA)
- The Energy Research Cooperation Platform
- Partnership for New Industrial Revolution (PartNIR)
- The Science, Technology and Innovation Framework



**Challenges Faced by BRICS**

- Lack of a binding ideology
- Bilateral differences
- Diversity in terms of socio-cultural and political systems
- Economic slowdown faced by member countries
- China's overwhelming presence which reduces the space for other countries.

## HISTORY AND CULTURE

### WHITRAP

- Recently, World Heritage Institute of Training and Research – Asia Pacific (WHITRAP) has recognised CEPT University’s Programme in Conservation and Regeneration as a “commendable case” of **Global Innovation on World Heritage Education**.
- The Conservation Programme at CEPT was the only one from South Asia to get such recognition.
- The programme was recognised for its focus on sustainability, people-centric approach, and innovative reforms in heritage conservation.

### WHITR-AP

- WHITR-AP is a **non-profit organization** under **UNESCO** that specializes in heritage conservation. It was established in 2007 and is located in China (first one established in the developing countries).
- It is an autonomous institution that provides services to **State Parties** to 1972 World Heritage Convention (WHC) in Asia-Pacific region.
- Mission is to strengthen implementation of WHC in Asia Pacific region, through capacity building, training, research, communication & establishment of a regional network.

#### World Heritage Convention

- Created in 1972, the primary mission of WHC is to identify and protect world's **natural and cultural heritage** considered to be of Outstanding Universal Value.
- As per WHC, it is the duty of international community to protect these places for future generations.
- The Convention is governed by the World Heritage Committee - an elected body of 21 nations. India is a signatory to the convention.

### Mahakavi Subramania Bharati

- Vice President recently paid tributes to Mahakavi Subramania Bharati on his death centenary (100 years).
- Born in Ettayapuram of Tirunelveli district (present day Thoothukudi) in 1882, he was a Tamil writer, poet, journalist, Indian Independence activist and social reformer.
- He is regarded as the **father of modern Tamil style**.
- His patriotic poems led to a spirit of unity among people during the British Raj and his writings are considered a pioneer in Tamil journalism and literature.
- He worked for various newspapers, including as an assistant editor of Swadesamitran. During the fight for independence, he got involved with the extremist wing of the Indian National Congress Party.
- He fought for women’s freedom, was against child marriage, supported Dalits and stood for reforming Brahminism and religion.

### Raja Mahendra Pratap Singh

- Prime Minister recently laid the foundation stone of Raja Mahendra Pratap Singh **State University in Aligarh**.

---

## VAJIRAM & RAVI

- Born into the ruling Jat family of Mursan estate in Hathras in 1886, Mahendra Pratap Singh was a freedom fighter, revolutionary, writer, social reformer, and internationalist.
- He was an alumnus of the Muhammadan Anglo-Oriental Collegiate School later called **Aligarh Muslim University (AMU)**.
- Pratap gave up his property for educational purposes and also set up a polytechnic institute named **Prem Mahavidyalaya** in 1909. It is said to be the **country's first polytechnic**.
- In 1913 he took part in Gandhi's campaign in South Africa and remained in exile for 33 years (from 1914) as he was wanted by the British authorities.
- In 1915, he proclaimed the **first Provisional Government of India outside India** at Bagh-e-Babur in Kabul and declared himself its President.
- In 1929, he launched the World Federation in Berlin and was nominated for the Nobel Peace Prize in 1932.
- He returned to India from exile in 1946. In free India, he pursued his ideal of Panchayati Raj. He entered Lok Sabha as an Independent candidate from Mathura in 1957.

### V. O. Chidambaram Pillai

- Prime Minister recently hailed the achievements of freedom fighter Vallinayagam Olaganathan Chidambaram Pillai (VOC) on his 150th birth anniversary.
- Born in 1872 in Tamil Nadu, VOC was popularly known as **Kappalottiya Tamilan** (Tamil Helmsman) and **Sekkizuththa Semmal** (scholarly gentry who suffered at the oil press).
- He entered politics in 1905 following the partition of Bengal and was also drawn towards the Swadeshi Movement. He later became a member of the Indian National Congress.
- He founded **Swadeshi Steam Navigation Company** (SSNC) in 1906 to compete against the monopoly of the British India Steam Navigation Company.
- He also launched the **first indigenous Indian shipping service** between Tuticorin and Colombo with the SSNC, competing against British ships.
- VOC also led a movement of the working class in 1908 in the **Tuticorin Coral Mills strike**, much before Gandhi's Champaran Satyagraha (1917).

### Panj Piare

- Recently an incorrect usage of the term Panj Piare led to a controversy. Panj Piare is not just a group of **5 baptised** people but a concept and tradition founded by **10th Sikh Guru** Gobind Singh.
- **Guru Gobind Singh** established institution of Panj Piare while founding Khalsa on the day of Baisakhi in 1699. He asked for five heads for sacrifice and five men responded to his call and the Guru baptised them and called them Panj Piare.
- These five included: Bhai Daya Singh, Bhai Dharam Singh, Bhai Himmat Singh, Bhai Mohkam Singh and Bhai Sahib Singh.
- Guru Gobind Singh himself got baptised from them to show that Panj Piaras have higher authority and decision making power than anyone in the community. The Panj Piare are also seen as a manifestation of the Guru himself.

- Since then, every group of five baptised Sikhs is called Panj Piare and given the respect enjoyed by the first five Sikhs.
- Any baptised Sikh can become a Panj Piare and the unanimous decision taken by Panj Piare has to be followed by everyone in the community.

**Khalsa**

- Khalsa is a group into which committed Sikhs can be initiated to demonstrate their devotion to their faith.
- Khalsa are men and women who have undergone the Sikh baptism ceremony and who strictly follow the Sikh Code of Conduct and Conventions and wear the five prescribed articles of faith. They are **Kesh, Kangha, Kara, Kachera/Kaccha and Kirpan**.

**Remains of Gupta Temple**

- Archaeological Survey of India (ASI) recently discovered remains of an ancient temple dating back to Gupta period (5th century) in a village in Uttar Pradesh's **Etah district**.
- The stairs of the temple had '**shankhalipi**' inscriptions, which was deciphered as '**Sri Mahendraditya**', which was the **title of Kumaragupta I**.
- As per ASI, the stairs led to a structural temple. Guptas were the first to build structural temples, distinctly different from the ancient rock-cut temples.
- The discovery is significant since only two other structural temples from the Gupta age have been found so far — Dashavatara Temple (Deogarh) and Bhitargaon Temple (Kanpur Dehat).

**Shankhalipi Script**

- Shankhalipi or "**shell-script**" is a term used by scholars to describe **spiral characters** assumed to be derivatives of Brahmi script that look like **conch shells or shankhas**.
- Both Shankhalipi and Brahmi are used primarily for names and signatures.
- Shell script is found in inscriptions across north-central India dated **between the 4th and 8th centuries**.
- The script was discovered in 1836 in Uttarakhand's Barahat by **James Prinsep**, who was the founding editor of the Journal of the Asiatic Society of Bengal.
- Shell inscriptions have also been reported in Indonesia's Java and Borneo. Scholars have tried to decipher shell script but have not been successful till now.

**Kumaragupta I**

- Kumaragupta I was the son and successor of Chandragupta II, who ruled until 455<sup>th</sup> AD. He was the **founder of Nalanda University**.
- Towards the end of his reign a tribe in the Narmada valley, the Pushyamitras, rose in power to threaten the empire. He was succeeded by his son Skandagupta.

**Poshan 2.0**

- Recently, the **Ministry for Women and Child Development** inaugurated Poshan 2.0 and urged all **Aspirational Districts** to establish a **Poshan Vatika (nutrition garden)** during the Nutrition Month (Poshan Mah) from 1st September.
- A month-long celebration of the POSHAN Abhiyan mission places special attention on Severe Acute Malnourished (SAM) children. It includes month-long activities focused on antenatal care, optimal breastfeeding, **Anaemia**, growth monitoring, girls' education, diet, **right age of marriage**, hygiene etc.
- Poshan Vatika's main objective is **to ensure supply of nutrition through organically home grown vegetables and fruits simultaneously ensuring that the soil must also remain healthy.**

**Key Points of Poshan 2.0**

- It was announced in Union Budget 2021-22 by merging **SNP (Supplementary Nutrition Programmes)** and **POSHAN Abhiyaan**. It subsumed **4 existing** centrally sponsored schemes of **umbrella Integrated Child Development Service (ICDS)** -



- It focuses on **1,000 days** between a mother's pregnancy and 2<sup>nd</sup> birthday of girls, and addressing their **nutritional deficiencies** through **fortification** and provision of **take-home rations**.
- Introduction of **community-based programmes** for tackling severe acute malnutrition.
- The guidelines place **accountability for the first time** at **district level** with nutrition indicators included in the KPIs (key performance indicators) of district magistrates/district collectors.
- **POSHAN tracker:** The Ministry of Women and Child Development has developed this **new software tool**. The aim is to streamline the supply side of the scheme.
  - ✓ This will replace earlier ICDS CAS (common application software) because the data generated by it was not usable.
  - ✓ The software will ensure **real-time updates** identifying last-mile beneficiaries.
  - ✓ Provide holistic view of **distribution** and access of nutrition services by Anganwadi centres and AWWs (Anganwadi workers).
  - ✓ The tracker carries a module that enables AWWs to identify and provide support to orphaned children [due Covid-19].

**Why The Focus On Nutrition**

- In 2018, an ASSOCHAM study revealed that a loss of **4% GDP is incurred annually for the country due to malnutrition**. The report also found that when children suffering from malnutrition grow up and start earning, they earn 20% less than those who have had healthy childhoods.
- As per ICDS-RRS (Rapid Reporting System), over **9.3 lakh severely acute malnourished (SAM) children** between six months and six years have been identified in the country till November, 2020. Over 40% of such children were found in Uttar Pradesh alone.

**For details on Poshan Abhiyan, Please refer The Recitals July 2021.**

## World Social Protection Report 2020-22

Recently, International Labour Organisation (ILO) has released World Social Protection Report 2020-22.

### Concept

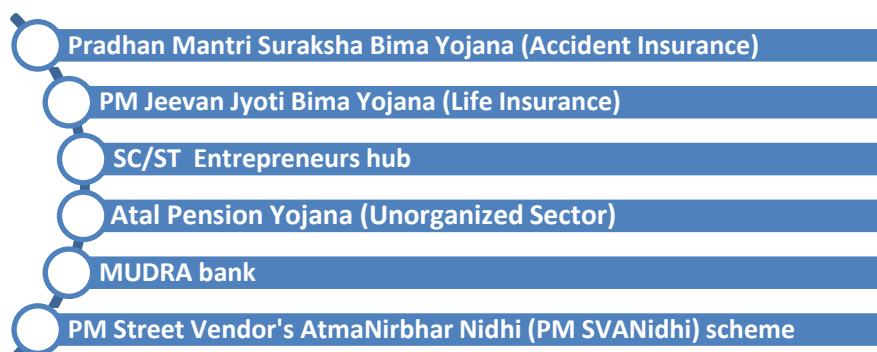
- Social Security refers to comprehensive protection extended by the **society and state** to its members to enable them overcome various contingencies and lead a dignified life.
- It includes access to health care, and income security measures related to old age, unemployment, sickness, disability, work injury, maternity or the loss of main breadwinner in a family.

### Highlights Of The Report

- Globally 4.1 billion people (53%) were living without social safety net of any kind.
- In 2020, **only 46.9% of the global population benefitted from at least one protection** under the ambit of social security.
- COVID-19 pandemic has revealed and exacerbated the **social protection gap** between countries with high and low-income levels. The pandemic response was uneven and insufficient.
- **Regional Inequalities in Social Protection**
  - **Europe and Central Asia having the highest rates of coverage** - 84% of people are covered by at least one benefit. While America (64.3%), Asia and the Pacific (44%), the Arab States (40%), and Africa (17.4%) have marked coverage gaps.
- **Disparity in Social Security Expenditure:** Countries spend on average 12.9% of GDP on social protection (excluding health).
  - ✓ High-income countries (16.4%), upper-middle-income countries (8%), lower-middle income countries (2.5%), and low-income countries (1.1%).
- **Limited Protection to Women, Children And Disabled Peoples:**
  - One in four children (26.4%) receives a social protection benefit.
  - Just 45% of women with newborns receive a cash maternity benefit.
  - One in three people with severe disabilities (33.5%) worldwide receive a disability benefit.
- A mere 18.6% of unemployed workers worldwide have effective coverage for unemployment and thus actually receive unemployment benefits.

### What Government of India Is Doing

Several initiatives have been taken up by the Government of India to eliminate poverty, inequality and to empower the marginalized sections of the society by expanding the social security net through schemes and Programmes like:



India is focusing on improving the social security net. The **Code of Social Security, 2020** is a welcome step in this regard.

*For Code on Social Security, please refer The Recitals- June 2021*

### Glue Grant Scheme

45 Central universities will kick off the implementation of academic credit bank and the glue grant meant to encourage **multidisciplinary** in UG courses.

#### Objective

- Institutions in the same city would be encouraged to **share resources, equipment and even allow their students to take classes from each other.**
- The idea behind glue grant scheme is - these institutions can have better synergy, while also retaining their internal autonomy.
- This is the first step at multidisciplinary. Ultimately, faculty will be able to design joint courses, and you could see a Delhi University (DU) student able to take a few classes at IIT-Delhi, or vice versa.
- Institutions need not duplicate work, but would build on each other's expertise.

#### Academic Bank of Credit (ABC)

- Credits are one of the methods used to determine and document that students have met academic requirements. Credits are awarded upon completing and passing a course.
- Academic Bank of Credit is a virtual storehouse which will keep records of academic credits secured by students for courses being pursued by them.

### WHO Report on Dementia

WHO has released a report titled '**Global Status Report On Public Health Response To 'Dementia'**'. The report takes stock of progress made towards **2025 global targets** for dementia laid out in the WHO's 'Global Dementia Action Plan' 2017.

#### Key Highlights Of The Report

- Currently, more than 55 million people are living with dementia. This number is estimated to rise to 78 million by 2030 and to 139 million by 2050.
- Only a quarter of countries worldwide have a national strategy for supporting people with dementia and their families.
- Disability-adjusted life years (DALYs) due to dementia are 60% higher in women than in men.
- The Western Pacific Region has the highest number of people with dementia (20.1 million), followed by the European Region.

#### Dementia Is A Syndrome

- Usually of a chronic or progressive nature that leads to **deterioration in cognitive function** beyond what might be expected from the usual consequences of ageing.
- It is one of the leading causes for dependency and disability among old aged people.
- It affects memory, thinking, orientation, comprehension, calculation, learning capacity, language, and judgement.
- It results from a variety of diseases and injuries that primarily or secondarily affect the brain such as Alzheimer's disease or stroke.

#### Concern for India

- With demographic ageing, India is expected to have one of the largest numbers of elders with dementia in next 2-3 decades.



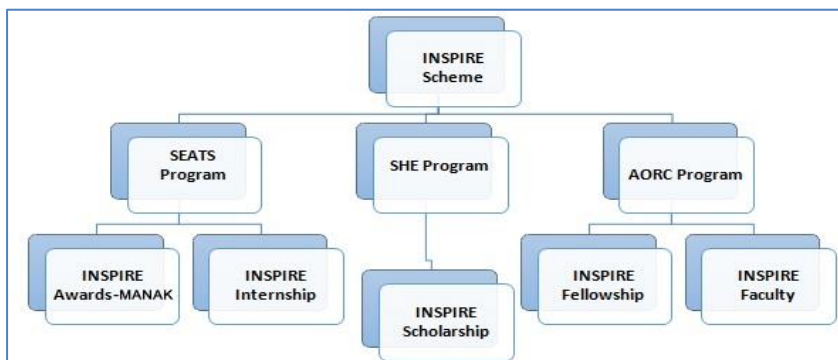
- Such increased numbers of people with dementia have a marked impact on the states' healthcare systems, families (emotional and financial burden, poor quality of life) and the society at large (directly through government expenditure or indirectly through loss of productivity).
- It should be using a collaborative community-based care model to enable such a service to be universally available, accessible, equitable, effective and affordable to the population at large.

### INSPIRE Awards-MANAK

8<sup>th</sup> National Level Exhibition and Project Competition (NLEPC) for INSPIRE Awards – MANAK (**M**illion **M**inds **A**ugmenting **N**ational **A**spiration and **K**nowledge), showcased the **innovative ideas** from 581 students representing various States/UT's.

### Innovation In Science Pursuit for Inspired Research (INSPIRE) Scheme

- It is an innovative scheme proposed by **Department of Science & Technology (DST)** for attraction of talent. It was launched in December, 2008.
  - **Objective:** To **attract youth talent** at an **early stage** and build the required critical **human resource pool** for expanding the Science & Technology system and R&D base.
  - It has **3 programs** and five components.
- i) Scheme for Early Attraction of Talents for Science (**SEATS**)
  - ii) Scholarship for Higher Education (**SHE**)
  - iii) Assured Opportunity for Research Careers (**AORC**).
- INSPIRE Awards- MANAK is one of its components.



### About INSPIRE Awards - MANAK

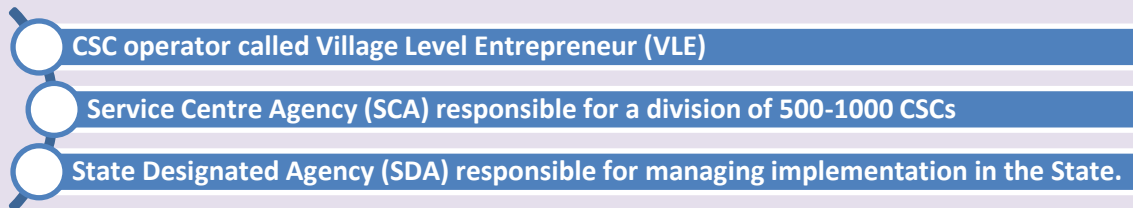
- The scheme is aligned with the '**Start-up India**' initiative and comes under **DST**.
- The scheme aims to motivate students in the age group of **10-15 years** and studying in **classes 6 to 10** to become future **innovators and critical thinkers**.
- Award of **Rs.10,000** is disbursed into bank accounts of winning students under Direct Benefit Transfer scheme.
- It does not believe in conducting **competitive exams** for identification of talent at any level. It relies on the efficacy of the existing educational structure for identification of talent.
- The whole purpose of the program is to **ignite a million young minds**, making them part of larger innovation-driven science and technology development within the country.
- Once the original ideas and innovations rooted in Science and Technology by students get incubated, it will foster a culture of creativity & innovative thinking to address the societal needs.

### Common Services Centres (CSC)-PSK

- Common Services Centres (CSC) has received approvals to manage and operate Passport Seva Kendra (PSK) kiosks in **rural areas**.
- Village-level entrepreneurs (VLEs), who operate the CSCs, will be entrusted with **collecting documents, photographs and other details necessary** for the passport process as well as the **initial non-police verification**.
- The pilot for the programme was launched at a few CSCs in Haryana and Uttar Pradesh. Full-fledged services will be rolled out nationwide soon.
- At present, CSCs are allowed only to fill and upload application forms for others, pay applicable fee on an applicant's behalf and schedule an appointment for them.

#### About CSC

- It is a strategic cornerstone of **National e-Governance Plan (NeGP)** as part of its commitment in **National Common Minimum Programme**.
- It is conceptualized as Information and Communications Technology (ICT) enabled **front end service delivery points** for delivery of Government, Social and Private Sector services in the areas of agriculture, health, education etc.
- The CSC, a special purpose vehicle of the Ministry of Electronics and Information Technology (**MeitY**), has over the past 3 years tied up with partners, both in **public and private** sector.
- PPP (Public Private Partnership) model of CSC scheme envisages a 3-tier structure.



- **CSC 2.0** was launched in 2015 to expand programme's outreach to **all 2.5 lakh gram panchayats**.

### Rising Complaints of Crime against Women

National Commission for Women (NCW) has informed that there was **46% rise** in complaints of crimes against women in the first eight months of 2021 over the corresponding period of last year.

- Rise in complaints is because the commission has been regularly conducting **awareness programs** due to which the public is now more aware about its work.
- In July, as many as 3,248 complaints were received by the NCW which is highest in a month since June 2015
- **Complaint received under various Heads in the decreasing order are:** *Right to live with dignity > domestic violence > harassment of married women or dowry harassment > outraging modesty of women or molestation > rape and attempt to rape > cyber crimes*
  - The right to live with dignity clause takes into account **emotional abuse** of women.
  - Domestic violence has intensified since the outbreak of COVID-19.
- **State wise: Uttar Pradesh (10,084) > Delhi (2,147) > Haryana (995) > Maharashtra (974)**. Over half of these were from Uttar Pradesh.

NCW was set up as a statutory body in January 1992 under the National Commission for Women Act, 1990. Its mission is to strive towards enabling women to achieve equality and equal participation in all spheres of life.

### ASER Report

- This is the first survey to indicate how learning levels have been impacted because of schools being shut during pandemic. The study was conducted in March 2021 among 18,385 children between the ages of **5 and 16** across 24 districts of **Karnataka**.
- Although the original plan was to conduct this exercise in several states, it could successfully be completed in only Karnataka, before the second wave of COVID hit the country

### Key Findings

<b>Drop in skills</b>	<ul style="list-style-type: none"> <li>• <b>Reading and numeracy skills</b> among children have taken a big hit, <b>especially among students in primary classes.</b></li> </ul>
<b>Recognizing Letters in Kannada</b>	<ul style="list-style-type: none"> <li>• <b>In Class 4:</b> % who can't recognise even a letter in Kannada, went from <b>5.1% (2018) to 12% (2020).</b></li> <li>• <b>In Class I:</b> This percentage went from <b>40.3% (2018) to 56.8% (2020).</b></li> </ul>
<b>Text reading</b>	<ul style="list-style-type: none"> <li>• <b>The highest level of text</b> given in the ASER reading assessment is from <b>Class 2.</b></li> <li>• <b>Only 9.8% children in Class 3</b> in both <b>government and private schools</b> could read the text, <b>down from 18.3% in 2014.</b></li> <li>• This dip is sharper for private schools <b>from 23.3% in 2014 to 9.9% now.</b></li> </ul>
<b>Higher class</b>	<ul style="list-style-type: none"> <li>• The learning loss was <b>less acute in higher classes compared to primary section</b></li> <li>• <b>For Class 8:</b> learning in terms of reading <b>fell from 70.6% (2014) to 66.4% in 2020.</b></li> </ul>
<b>Numeracy skills</b>	<ul style="list-style-type: none"> <li>• Percentage of children in Class 1 who cannot recognise digits between 1 and 9 <b>went up from 29.7% in 2014 to 42.6% in 2020.</b></li> <li>• <b>For Class 5:</b> This figure was <b>2.3% in 2014 and now stands at 4.6%</b></li> <li>• Percentage of Class 4 students who can do simple division went down from <b>12.1% to 3.6% in the same period.</b></li> </ul>

The findings from the survey offer crucial pointers for a possible roadmap as schools reopen after more than a full academic year.

### Annual Status of Education Report (ASER)

- ASER has been conducted every year **since 2005** in all rural districts of India.
- It is also the only annual source of information on **children's learning outcomes** available in India today.
- Unlike most other large-scale learning assessments, ASER is a **household-based rather than school-based survey.** All children to be included – those who have never been to school or have dropped out, as well as those who are in government schools, private schools, religious schools or anywhere else.

Testing	Sampling
<ul style="list-style-type: none"> <li>Children in the age group 5-16 are tested in basic reading and basic arithmetic.</li> <li>The highest level of reading tested corresponds to what is expected in Std 2.</li> <li>In 2012, this test was administered in 16 regional languages.</li> <li>Every year, some additional tests are also administered.</li> <li>In addition, basic household information is collected every year.</li> <li>In recent years, this has included household size, parental education, and information on household assets.</li> </ul>	<ul style="list-style-type: none"> <li>In each rural district, 30 villages are sampled.</li> <li>In each village, 20 randomly selected households are surveyed.</li> <li>This process generates a total of 600 households per district, or about 3,00,000 households for the country as a whole.</li> <li>Information on schooling status is collected for all children living in sampled households who are in the age group 3-16.</li> </ul>

### Shikshak Parv

Recently, Prime Minister addressed teachers and students during the inaugural conclave of 'Shikshak Parv'. He highlighted that the transformation being ushered in the education sector is not just policy-based but **also participation based**.

#### About Shikshak Parv, 2021

- Ministry of Education (MoE) is celebrating Shikshak Parv, 2021 from **September 5-17** in recognition of the **valuable contributions of teachers** and to take National Education Policy (NEP) 2020 a step forward.
- Theme for 2021:** Quality and Sustainable Schools: Learnings from Schools in India.
- Theme of Shikshak Parv has been identified keeping in view **three** of the five pillars of Azadi Ka Amrit Mahotsav celebrations.

**New Education Policy (NEP) 2020**

<p><b>FOR SCHOOLS</b>  <b>From 10+2 to 5+3+3+4:</b> Current 10+2 structure in which policy covered schooling from Class 1 to 10 (age 6-16) and then Class 11-12 (age 16-18) gives way to 5 years of foundational education, 3 of preparatory, 3 of middle &amp; 4 years of secondary schooling</p> <p><b>Multi-Stream:</b> Flexibility to choose subjects across streams; all subjects to be offered at two levels of proficiency</p> <p><b>Diluted Board:</b> Board exams to test only core competencies; could become modular (object and subjective) and will be offered twice a year</p> <p><b>Multilingual:</b> 3-language policy to continue with preference for local language medium of instruction till class 8</p> <p><b>Bag-Less Days:</b> School students to have 10 bag-less days in a year during which they are exposed to a vocation of choice (i.e. informal internship)</p>	<p><b>FOR COLLEGES</b>  <b>SAT-Like College Test:</b> National Testing Agency to conduct common college entrance exam twice a year</p> <p><b>4-Year Bachelor:</b> 4-year multi-disciplinary bachelor's programme to be preferred; mid-term dropouts to be given credit with option to complete degree after a break</p> <p><b>No Affiliation:</b> Over next 15 years colleges will be given graded autonomy to give degrees, affiliation with universities to end, so would deemed university status</p> <p><b>Fee Cap:</b> Proposal to cap fee charged by private institutions of higher learning</p> <p><b>Going Global:</b> Top-rated global universities to be facilitated to come to India, top Indian institutions to be encouraged to go global</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



#### 5 New Initiatives

PM launched **five initiatives** in the education sector for **accessible education** on this occasion

<b>Indian Sign Language</b>	<ul style="list-style-type: none"> <li>• <b>Dictionary</b> of 10,000 words for the Children and persons with hearing impairments</li> </ul>
<b>Talking Books</b>	<ul style="list-style-type: none"> <li>• Audiobooks for visually impaired</li> </ul>
<b>School Quality Assessment and Accreditation Framework (SQAAF)</b>	<ul style="list-style-type: none"> <li>• To provide <b>global parameters</b> as standards in schools affiliated to CBSE.</li> <li>• It would address the deficiency of the absence of a common scientific framework for dimensions like curricula, pedagogy, assessment, infrastructure, inclusive practices and governance process</li> </ul>
<b>NISHTHA teachers' training programme for NIPUN Bharat</b>	<ul style="list-style-type: none"> <li>• <b>National Initiative for School Heads' and Teachers' Holistic Advancement</b></li> <li>• Every teacher and head teacher is expected to participate in <b>at least 50 hours</b> of Continuous Professional Development (CPD) every year for their own professional development, driven by their own interest {For Nipun Bharat, refer July Recitals}</li> </ul>
<b>Vidyanjali PORTAL</b>	<ul style="list-style-type: none"> <li>• Facilitating education <b>volunteers, donors and CSR contributors</b> for school development. Vidyanjali portal will help the country take advantage of community participation to help students.</li> </ul>

**Vidyanjali Scheme**

Launched in 2017, Vidyanjali has **two verticals** in which volunteers can support and strengthen the government and government aided schools.

<b>Participate in school Service/Activity</b>	<ul style="list-style-type: none"> <li>• <b>Volunteers can participate in co-scholastic services/activities with relevant knowledge and skill set and bridge the knowledge / skill / human resource gap in the institute.</b></li> </ul>
<b>Contribute in Assets/Material/Equipment</b>	<ul style="list-style-type: none"> <li>• <b>Volunteers can contribute to school for strengthening the school infrastructure</b></li> </ul>

**Swachh Survekshan Grameen 2021**

Jal Shakti Ministry launched **Swachh Survekshan Grameen 2021** or rural cleanliness survey 2021

Swachh Survekshan Urban comes under the Ministry of Housing and Urban Affairs (MoHUA).

**About**

- It comes under Swachh Bharat Mission (Grameen) **Phase-II** which is from **2020-21 to 2024-25**.
- **Department of Drinking Water and Sanitation (DDWS)** will undertake Swachh Survekshan Grameen 2021 countrywide to support **acceleration of ODF Plus** interventions
  - ✓ OFD plus is to increase momentum for improving ODF Sustainability as well as **Solid and Liquid Waste Management (SLWM) activities** across the villages in the country.
  - ✓ It is an **upgradation** of ODF status in which construction of adequate toilets was required.

- DDWS had commissioned Swachh Survekshan Grameen (SSG) on two occasions earlier in 2018 and 2019.
- As part of the 2021 rural cleanliness survey, as many as 17,475 villages spanning across 698 districts would be covered
- Weightage to Different Elements



**Achievement**

It has triggered behavior change for ending open defecation, leading to construction of over 10 crore toilets and achievement of Open Defecation Free (ODF) India. The vision further led to Jal Jeevan Mission (JJM) for addressing water security. Phase II of SBM (G) aims at achieving the goal of comprehensive cleanliness or Sampurna Swachhata by addressing ODF Sustainability and SLWM issues.

**NCRB Report 2020**

Recently, National Crime Records Bureau (NCRB) released the Crime in India Report 2020. NCRB data reflects the number of cases **registered by police** and hence hinges on the **responsiveness of police personnel** on the ground.

**Traditional Crimes**

- Due to the complete lockdown from March 23-May 31 last year, number of cases registered for **traditional crimes** such as those against women, children and senior citizens, theft, burglary, robbery and dacoity, **dropped** by ~ 2 lakh.
- Murder registered a **marginal increase** of 1% even as offences falling under the category of “**violent crimes**” **decreased** by 0.5%.
- **Delhi is the most unsafe city for women**

**Offences against the State**

- Include cases related to sedition and waging war against the nation, those falling under provisions of the **Unlawful Activities Prevention Act (UAPA), Official Secrets Act and Damage to Public Property Act**.
- 80.6% of cases were registered under Prevention of Damage to Public Property Act, suggesting state crackdown on violent protests — followed by 14.2% cases under Unlawful Activities Prevention Act (UAPA)
- UP was the only major state to record an **increase**. All other big states have registered a decrease. This was mostly due to ‘**Damage to Public Property**’ cases registered during the anti- CAA protests.
- **UAPA cases:** J&K > Manipur> Jharkhand > Assam > UP
- UP was the only state in the top 5 with no **ongoing insurgency** to record such high numbers.

**Other Crimes**

- **Communal Riots:** Delhi > Bihar >Haryana >Jharkhand >Maharashtra >Gujarat  
Uttar Pradesh did not record a single case of communal violence in 2020

- **Caste conflict:** Bihar> Maharashtra >UP > Karnataka> Tamil Nadu
- **Agrarian riots:** The year saw unprecedented protests against the **three farm laws** passed by the Centre, recorded 2,188 agrarian riots, a jump from 1,579 in 2019.
  - ✓ Punjab reported **zero cases** of agrarian riots and Haryana (34).
  - ✓ Highest cases have been reported from Bihar> Maharashtra > Karnataka> UP > Jharkhand
- **Andolan/morcha:** It is Kerala that has recorded the highest number
- **Attacks on police personnel** decreased, a drop of almost 40%.
- **Promoting Enmity Between Groups:** Tamil Nadu > UP > Telangana > Assam
- **Environment Related Offences:** Increased by **78.1%** in the country in 2020.
- **Cyber Crime:** Rate of cyber-crime (incidents per lakh population) also increased from 3.3% in 2019 to 3.7% in 2020.

### Caste Census

The government has made it clear in Supreme Court that a caste census of the **Backward Classes** is “administratively difficult and cumbersome”. The government’s assertion came in response to a writ petition filed by the State of Maharashtra to gather Backward Classes’ **caste data** in the State while conducting **Census 2021**.

#### Arguments Given

- Accuracy Questionable:** The Centre reasoned that even when the census of castes was taken in the pre-Independence period, the data suffered in respect of “**completeness and accuracy**”. It said the caste data enumerated in the Socio-Economic and Caste Census (SECC) of 2011 is “**unusable**” for official purposes as they are “replete with technical flaws”
- Exclusion Is A Conscious Policy Decision:** It clarifies that exclusion of information regarding any caste other than Scheduled Castes and Scheduled Tribes from the purview of the census is a conscious policy decision.
- Population census has never been the ideal instrument:** The government said caste-wise enumeration in the Census was **given up** as a matter of policy from 1951.
  - ✓ It said there was a policy of “**official discouragement of caste**”.
  - ✓ There is a “grave danger” that the “basic integrity” of census data would be compromised as many people may not register themselves in the census in the event of **hiding their caste**. Even the fundamental population count may get “distorted”
- It is too late now** to enumerate caste into the Census 2021. Planning and preparations for the census exercise starts almost four years earlier. The phases of Census 2021 had been finalised after detailed deliberations with ministries, data users, recommendations from technical advisory committees, etc. Preparatory work was already in place.

#### Arguments In Favour

- Help in identifying poor households and implement anti-poverty programmes.**
- Legal imperative, considering courts’ requirement of quantifiable data for reservation matters.
- Preserving caste-based affirmative action programmes or welfare schemes.

**SECC 2011**

- It was conducted for the first time since 1931.
- Covers every Indian family, both in rural and urban India, and ask about their:
  - ✓ **Economic status:** To allow authorities to come up with a range of indicators of deprivation which could be used to define a poor.
  - ✓ **Caste name:** To allow the government to re-evaluate which caste groups were economically worse off and which were better off.

**Ayushman Bharat Digital Mission**

PM launched the **Ayushman Bharat Digital Mission** for the entire country almost a year after it was implemented on pilot basis in six Union Territories.

**Vision:** To create a national digital health **integrated ecosystem** that supports universal health coverage in an efficient, accessible, inclusive, affordable, timely and safe manner.

- ✓ It will enable individuals to discover hospitals, laboratories and pharmacies across the country. The health record of every citizen will be digitally protected.
- ✓ The difficulty of maintaining long trails of paper-based health records or standing in long queues at health facilities, etc. will no longer be a burden
- ✓ **Implementing Agency: National Health Authority (NHA)**

**Components**

<b>Health ID</b>	• It will be used for the purposes of <b>uniquely identifying persons, authenticating them</b> , and threading their health records <b>only with the informed consent of the patient</b> to help hospitals, insurance firms, and citizens access health records electronically when required
<b>Electronic medical record (EMR) web app</b>	• <b>Comprehensive digital version</b> of a patient's chart ( <b>medical and treatment history</b> ) from a single health facility. It is to create a <b>web application</b> that operates on a <b>set of standards</b> (interoperability and medical terminologies).
<b>Health Facility Registry (HFR)</b>	• Comprehensive repository of health <i>facilities</i> (including hospitals, clinics, diagnostic laboratories and imaging centers, pharmacies, etc) across different systems of medicine.
<b>Healthcare Professionals Registry (HPR)</b>	• <b>Comprehensive repository of all healthcare professionals</b> involved in delivery of healthcare services across <b>modern and traditional systems of medicine</b>
<b>Personal Health Record-System (PHR)</b>	• It will enable an individual to manage information about his/her healthcare. This includes viewing of records comprising of health data, lab reports, treatment details, discharge summaries across one or multiple health facilities.
<b>Ayushman Bharat Digital Mission Sandbox</b>	• It will act as a framework for <b>technology and product testing</b> that will help organisations, including private players intending to be a part of ecosystem (Health Information Provider or Health Information User) or efficiently link with building blocks of Ayushman Bharat Digital Mission



**Concerns**

- Lack of a data protection bill could lead to the misuse of data by private firms.
- Denied healthcare due to faults in the system is a cause of concern.

**Reforms in Urban Planning Capacity in India**

NITI Aayog has launched a report “Reforms in Urban Planning Capacity in India” on measures to ramp up urban planning capacity in India.

**Urbanization in India**

<b>Urbanisation Level</b>	<ul style="list-style-type: none"> <li>• It is <b>31.1% (2011 Census)</b></li> <li>• <b>Distribution and pace of urbanisation is not uniform across country.</b></li> <li>• <b>Over 75% of the urban population of the country is in 10 States.</b></li> </ul>
<b>Share in world</b>	<ul style="list-style-type: none"> <li>• <b>India’s urban population is 11% of that of the world.</b></li> <li>• However, in absolute numbers, the urban population in India is more than highly urbanised countries/regions</li> </ul>
<b>GDP contribution</b>	<ul style="list-style-type: none"> <li>• <b>Urbanisation contributes nearly 60% to India’s GDP.</b></li> </ul>
<b>Employment Target</b>	<ul style="list-style-type: none"> <li>• <b>Total workforce estimated to be 0.64 billion by 2030, of which 0.26 billion to be employed in urban areas</b></li> </ul>
<b>National Infrastructure Pipeline (NIP)</b>	<ul style="list-style-type: none"> <li>• <b>Urban sector has a significant share of 17% in the NIP</b></li> </ul>

**Report Made Several Recommendations**

1. **Programmatic Intervention for Planning of Healthy Cities:** Every city must aspire to become a ‘Healthy City for All’ by 2030. The report recommends a Central Sector Scheme ‘**500 Healthy Cities Programme**’, for a period of 5 years, wherein priority cities and towns would be selected jointly by the states and local bodies.
2. **Programmatic Intervention for Optimum Utilization of Urban Land:** All the cities and towns under the proposed ‘Healthy Cities Programme’ should strengthen development, control, and regulations based on scientific evidence to maximize the efficiency of urban land
3. **Ramping Up of Human Resources:** To combat the shortage of **urban planners** in the public sector, states/UTs may need to expedite the filling up of **vacant positions** of town planners
4. **Ensuring Qualified Professionals for Undertaking Urban Planning:** States may need to undertake requisite amendments in their recruitment rules to ensure the entry of qualified candidates into town-planning positions.
5. **Re-engineering of Urban Governance:** The key aspects that would need to be addressed in this effort are: i) clear division of the roles and responsibilities of various authorities, appropriate revision of rules and

regulations, etc., ii) creation of a more dynamic organizational structure, standardisation of job descriptions of town planners and other experts, and iii) extensive adoption of technology for enabling public participation and inter-agency coordination.

6. **Revision of Town and Country Planning Acts:** Most prepare and notify master plans for implementation. However, many need to be *reviewed and upgraded*. Therefore, the formation of an **apex committee at the state level** is recommended to undertake **regular review** of planning legislations (including town and country planning or urban and regional development acts or other relevant acts).
7. **Demystifying Planning and Involving Citizens:** The committee strongly recommends a 'Citizen Outreach Campaign' for demystifying urban planning.
8. **Steps for Enhancing the Role of Private Sector:** These include the adoption of fair processes for procuring technical consultancy services, strengthening project structuring and management skills in the public sector
9. **Steps for Strengthening Urban Planning Education System**
10. **Measures for Strengthening Human Resource and Match Demand–Supply:** Constitution of a 'National Council of Town and Country Planners' as a statutory body of the Government of India. Also, a 'National Digital Platform of Town and Country Planners' is suggested to be created within the National Urban Innovation Stack of MoHUA.

## ECONOMY AND INFRASTRUCTURE

### IMF SDR Allocation

- International Monetary Fund (IMF) has recently made an allocation of Special Drawing Rights (SDR) 12.57 billion (latest exchange rate equivalent to around \$17.86 billion) to India. After this, India's total SDR holding is SDR 13.66 billion.
- This comes after the IMF had recently approved a general allocation of about SDR 456 billion, out of which India's share is about 2.75%

### Special Drawing Rights (SDR)

- SDR is an international reserve asset, created by the IMF in 1969.
  - ✓ It was created as a **supplementary international reserve asset** in the context of the Bretton Woods **fixed exchange rate system**.
  - ✓ The collapse of Bretton Woods system in 1973 and the shift of major currencies to **floating exchange rate** regimes lessened the reliance on the SDR.
  - ✓ Nonetheless, SDR allocations plays a role in providing liquidity and supplementing member countries' official reserves, as was the case amid the global financial crisis
- It was created in response to the shortfall of gold and US dollars, which were the only means of international trade.
- IMF makes SDR allocation to its members **in proportion to their existing quotas** in IMF. A member country's quota determines its maximum financial commitment to IMF and its **voting power**.
- The **value of SDR** is based on a weighted basket of **five currencies**— U.S. dollar, Euro, Chinese Renminbi, Japanese Yen, and the British Pound Sterling.
- SDR basket is reviewed every **5 years** to ensure that it reflects the relative importance of currencies in the world's trading and financial systems.
- SDR value in terms of the U.S. dollar is determined daily based on the spot exchange rates.

### Role of SDR

- SDR is neither a currency nor a claim on the IMF. It serves as the unit of account of the IMF and other international organizations.
- SDR holdings is one of the components of the foreign exchange reserves (FER) of a country. Thus, SDR allocations help to provide liquidity and reduce reliance of countries on more expensive domestic or external debt for building reserves.
- IMF member states can exchange SDRs for freely usable currencies like US dollars.

### Criteria For A Currency To Be Included In SDR Basket

Currencies included in the SDR basket have to meet **two criteria**:

- **Export Criterion:** A currency meets the export criterion if its issuer is an IMF member or a monetary union that includes IMF members, and is also one of the top five world exporters.
- **Freely usable criterion:** It has to be widely used to make payments for international transactions and widely traded in the principal exchange markets. Freely usable currencies can be used in Fund financial transactions

**International Monetary Fund (IMF)**

- IMF is an international financial institution, headquartered in Washington, D.C., consisting of 190 countries. It was formed in 1944 at the Bretton Woods Conference.
- Its primary purpose is to ensure the stability of the international monetary system.
- It aims to encourage global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world

**Sukhet Model**

- The Prime Minister recently praised the Sukhet model of Bihar's Madhubani district. The model is named after Sukhet village, where it is being implemented by Dr Rajendra Prasad Central Agriculture University.
- Under it, **dung** and **household waste** are collected from households and then it is converted into vermicompost (organic manure).
- In exchange, income generated from the sale of organic manure is used to provide LPG cylinders for free to these households, once every two months.

**Benefits**

- It ensures a pollution-free environment at home, waste disposal, monetary assistance for LPG cylinders and availability of organic fertiliser to the local farmers.
- It is transforming the lives of rural women by facilitating access to modern cooking solutions.
- The plan is to expand this model to other districts of Bihar. Implementing it in all the villages of Bihar can generate annual wealth of over Rs 10,000 crores.
- Generate employment for local youth and make villages' soil nutrient self-sufficient.

**Saath Initiative**

- A **Rural Enterprises Acceleration Programme** titled *Saath for women* was recently launched for Self Help Groups (SHGs) in Jammu and Kashmir (J&K).
- It is an initiative of the Jammu & Kashmir Rural Livelihood Mission (UMEED).
- Four lakh women are connected to around **48,000 SHGs** in J&K. However, there is lack of knowledge about marketing, packaging and branding, along with low profits.
- The workshops will focus on mentoring, innovation, value creation, market linkages of products and convert these businesses into Higher Order Enterprises. Further, it aims to create 11,000 more SHGs in the coming year.
- Workshops will be conducted under it to train women in 10 different sectors including agriculture, animal husbandry, handicraft, handloom etc.
- Initially, workshops will be held for 5000 women, out of which 500 will be selected for intensive training and further 100 will be selected for mentoring.

**Jammu & Kashmir Rural Livelihood Mission (JKRLM)**

- Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM) is implemented as JKRLM (UMEED programme) in J&K.
- DAY-NRLM is a **centrally sponsored scheme** that aims at eliminating rural poverty through promotion of multiple livelihoods for rural poor households across the country.

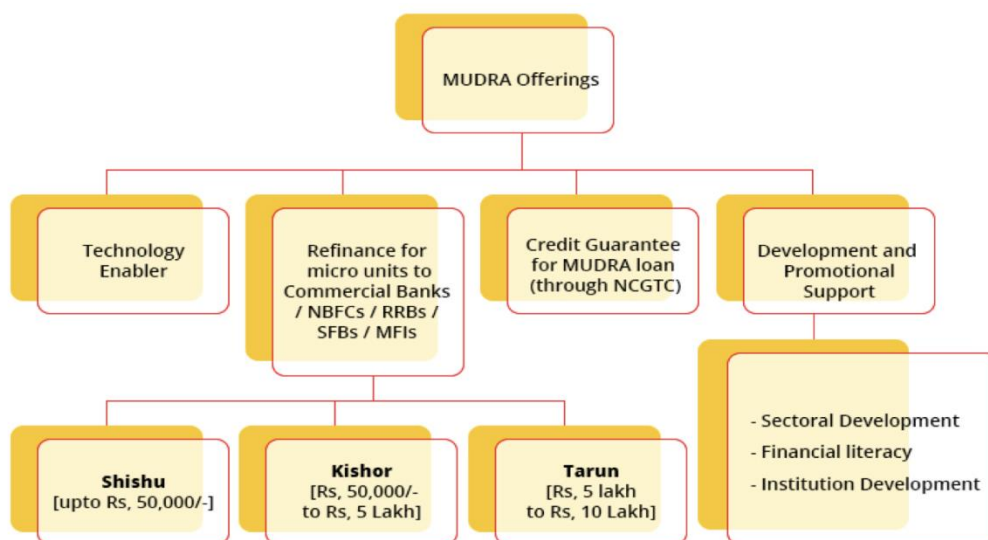
**NPA Under Mudra Loans**

- **Public sector banks** are experiencing a sharp increase in non-performing assets (NPAs) under Mudra loans.
- Mudra loans had shown a decent recovery rate in initial years of the scheme, but have been rising steadily in the last 18 months. The proportion of these NPAs has increased to 20% by June 2021 from around 6% in March 2020.
- Asset-backed Mudra loans, like those taken for buying income-earning equipment and vehicles, used to be the best in terms of repayment, but now NPAs have increased in this category as well.

**Reasons For Increase In NPAs**

- The rise in NPAs comes alongside an **increase in loan disbursement** under the scheme - from Rs 2.46 lakh crore in 2017-18 to Rs 3.29 lakh crore in 2019-20. In the same period, NPAs have increased from Rs 7,277 crore to Rs 18,835 crore.
- The RBI has been cautioning banks to adequately assess borrowers’ repayment capacity under the scheme. However, **banks are also under pressure to give more loans**, which leads to faulty loan disbursement and increase in NPAs.
- **Covid** has had a negative impact on *incomes and the repayment capacity* of borrowers.
- The **Credit Guarantee Fund for Micro Units (CGFMU)**, set up by the Central Government, provides lenders a guarantee against loan losses in Mudra loans, but the rise in NPAs is higher than the cover provided.
- In April last year, **Government had increased the guarantee to 75% of NPAs** in Mudra loans, from 50% earlier. But, *limit on guarantee pay-out has been kept at 15% of total loans*.

**Pradhan Mantri Mudra Yojana (PMMY)**



- PMMY was launched in 2015, for providing collateral-free loans up to 10 lakh to the non-corporate, non-farm small/micro enterprises.
- **Three loan products (Shishu, Kishor, Tarun)** have been created to signify the stage of growth/development and funding needs of the beneficiary:

**Achievements**

- It has **helped to fund the unfunded**. Almost 24% of the loans have been given to new entrepreneurs; 68% to women entrepreneurs; and 51% to SC/ST/OBC borrowers.
- As per the Ministry of Labour and Employment, PMMY has helped in **generation of 1.12 crore net additional employment** from 2015 to 2018. Out of this, women accounted for 62% of jobs

### Shoonya Campaign

NITI Aayog and Rocky Mountain Institute (RMI) has recently launched the Shoonya campaign to promote **zero-pollution delivery vehicles** by working with consumers and industry. The campaign will target to fully electrify vehicles in **urban deliveries segment** in the next **two years**.

#### Rocky Mountain Institute

- Rocky Mountain Institute (RMI) is a US based non-profit organization founded in 1982.
- It engages businesses, communities, institutions, and entrepreneurs to accelerate the adoption of market-based solutions that cost-effectively shift from fossil fuels to renewable energy.

#### Reasons For Launching The Campaign

- Urban freight vehicles account for **10% of freight transportation-related CO<sub>2</sub> emissions** in India, which are expected to grow by 114% by 2030. Electric Vehicles (EVs) emit no tailpipe emissions, which can contribute immensely to an improved air quality.
- Moreover, **EV manufacturing emits 15-40 %less CO<sub>2</sub>** compared to internal combustion engine vehicles and has lower operational cost.
- Transitioning to clean transportation is critical as India continues to move towards a sustainable and resilient future.

#### Campaign Details

- A **corporate branding and certification programme** will be launched to recognise and promote industry's efforts towards transitioning to EVs for final-mile deliveries.
- An **online tracking platform** will share the campaign's impact through **data** such as:



#### Benefits

- Promote **awareness** about health, environmental and economic benefits of EVs.
- Faster transition to green technologies will broaden the **charging infrastructure** and vendor base for EVs across the country.
- Decarbonising transport which emits ~23% of energy-related CO<sub>2</sub> that feeds global warming.
- Boost to research in field of alternatives technologies like lithium, cobalt.
- Reduce oil imports while solving the challenge of energy scarcity.
- Employment generation

#### Challenges

- India lacks the widespread **charging infrastructure** required to increase adoption of EVs. The cost of establishing these charging infrastructures is quite high.
- The lithium-ion battery is the most widely used energy source for EVs. India doesn't produce lithium, due to which it is **dependent on imports for lithium-ion batteries**.

- EVs have **higher servicing costs** and higher levels of skills are needed for servicing. India currently lacks the dedicated training courses for such skill development.

#### Other Initiatives For Growth Of EVs

- Government has already announced several measures to incentivise adoption of EVs through the **FAME 2 Scheme**, by extending lower excise duties and GST.
- Government has also launched a **National Mission on Transformative Mobility and Battery Storage** to develop strategies for transformative mobility and **Phased Manufacturing Programmes** for EVs, EV Components and Batteries.
- Industry stakeholders such as e-commerce companies, fleet aggregators, original equipment manufacturers (OEMs) and logistics companies have been scaling up their efforts towards last-mile delivery electrification.

#### Additional Tier-1 bonds

- Recently, State Bank of India (SBI) raised ₹4,000 crore via **Basel Complaint** Additional Tier 1 (AT1) bonds at a slightly higher interest rate of 7.72% (compared to other bonds).
- Bonds are investment **securities** where an investor lends money to a company or a government for a set period of time, in exchange for **regular interest payments**. Once the bond reaches maturity, the bond issuer returns the investor's money (principal amount).
- Bond prices are **inversely correlated with interest rates**: when rates go up, bond prices fall and vice-versa

#### About AT1 Bonds

- AT1 bonds are **unsecured, perpetual bonds with no predetermined maturity date**, issued by financial institutions to fulfil their capital adequacy requirements.
- Though these bonds never mature, they are issued with a **call option**.
  - ✓ The call option gives issuers of AT1 bonds, usually banks, **the right (but not an obligation) to buy these bonds back from investors** by paying the principal amount to investors.
  - ✓ The issuer of such bonds may call or redeem the bonds if it is **getting money at a cheaper rate**, especially when **interest rates are falling**.
- Also, the holders of AT1 bonds **do not have a put option**, which means, investors cannot return these bonds to the issuing bank and get back the principal amount.
- Like other bonds, AT1 bonds pay a

#### Capital Adequacy Rate (CAR)

- It is the ratio of a **bank's capital** in relation to **its risk weighted assets and current liabilities**. In other words, it measures how much capital a bank has with it as a % of its total credit exposure (loans).
- Bank regulators enforce this ratio to ensure **credit discipline** in order to protect depositors and promote stability and efficiency in the financial system.
- CAR was formulated under the **Basel III accord** of 2009 after the global financial crisis of 2008.
  - ✓ Basel III is a set of financial reforms developed by Basel Committee on Banking Supervision (BCBS), to strengthen regulation, supervision, and risk management in banking industry.
  - ✓ As per Basel III, banks must maintain a **capital adequacy ratio of at least 8%**.
- However, in India, RBI norms mandate that India's public sector banks maintain a CAR of 12% and scheduled commercial banks should maintain a CAR of 9%.

**fixed rate** of interest at regular intervals. However, if banks face bankruptcy or capital shortage, they can dismiss the principal amount and not pay interest.

- AT1 bonds can also be **listed and traded on exchanges**. So, if an AT1 bond holder needs money, he/she can sell it in the market.
- AT1 bonds are regulated by RBI. If the RBI feels that a bank needs to be rescued, it can ask the bank to cancel its outstanding AT-1 bonds without consulting its investors.

### Green Bonds

- Power Finance Corporation Ltd (PFC), the leading non-banking finance corporation (NBFC) in the power sector, has successfully issued its **first Euro Green Bond** worth €300 million. Maturity time is 7 years.
- It is the first ever **Euro denominated** Green bond issuance from India.
- Moreover, it is the first ever Euro issuance by an **Indian NBFC**.
- Green Bonds, also known as **Climate Bonds**, are issued to exclusively raise money for climate and environmental projects in the areas of renewable energy, clean transportation, sustainable water management etc.
- Green bonds may also offer **tax incentives**, such as tax exemption and tax credits to attract investors.
- It also provides issuers **access to a specific set of global investors** who invest only in green ventures. With an increasing focus of foreign investors towards green investments, it can also help in *reducing the cost of capital*.
- Fund-raising through green bonds was done first in 2007 by the European Investment Bank.
- **World Bank** is a major issuer of green bonds.
- Green Bonds were first issued in India in 2015 by Yes Bank. As of 2021, India has the second-largest emerging green bond market after China.

### SPIN Scheme

- Khadi and Village Industries Commission (KVIC) has recently launched SPIN (**Strengthening the Potential of India**) scheme and set up **Kashi pottery cluster** under SFURTI Scheme in Varanasi.
- The Kashi pottery cluster will help traditional potters in increasing their skills with the help of **modern equipment** which will eventually help them to occupy a bigger market space.

#### Features Of The Scheme

- SPIN is **not a subsidy-based** programme. It enables registered potters to get a **direct loan from banks** under Pradhan Mantri Shishu Mudra Yojana (loans up to Rs. 50,000), which can be paid back in **easy installments**.
- This will reduce their dependence on government

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

- It was launched in 2005 by Ministry of Micro, Small and Medium Enterprises (MSME) to promote **cluster development**.
- It aims to organize traditional industries and artisans into clusters to make them competitive and provide support for their long-term sustainability.

#### Khadi and Village Industries Commission (KVIC)

KVIC is a **statutory body** formed under the KVIC Act, 1956. It seeks to promote the development of khadi and village industries in rural areas in coordination with other agencies engaged in rural development.



subsidy and **make potters self-reliant**, to diversify their activities and enhance their income. This will also reduce financial burden on the exchequer.

- **KVIC will act as a facilitator** for financial aid through banks and also provide training to artisans.
- Apart from pottery, KVIC will also explore strengthening other traditional arts under the SPIN scheme.

### Rail Kaushal Vikas Yojana

- Railway Ministry recently launched Rail Kaushal Vikas Yojana, under the Pradhan Mantri Kaushal Vikas Yojana.
- It aims to empower India's **youth** by offering **entry level training** in industry relevant skills through Indian Railways' training institutes.
- Free of cost training will be provided to **50000 candidates** over a period of **3 years**. Individuals who are **10th pass** and between **18-35 years** are eligible to apply.
- Initially, training will be provided in four trades viz. **Electrician, Welder, Machinist and Fitter**. Later, training programs in other trades will be added by zonal railways and production units based on regional demands and needs assessment.
- It will not only improve the employability of the youth but also upgrade the skills of self-employed and those who are working with contractors through reskilling and up-skilling and contribute towards the Skill India Mission.

### Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Launched in 2015, PMKVY is the flagship scheme for skill training of youth implemented by the Ministry of Skill Development and Entrepreneurship through the National Skill Development Corporation (NSDC).

#### Key Components of PMKVY

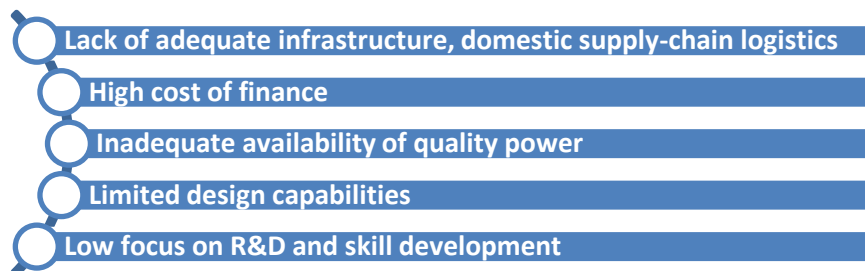
- **Short Term Training:** It provides training to school/college dropouts or unemployed as per National Skills Qualification Framework (NSQF).
- **Recognition of Prior Learning:** Individuals with prior learning experience or skills are assessed and certified under RPL. It aims to align the competencies of the unregulated workforce of the country with NSQF.
- **Special Projects:** It facilitates training in special areas and/or premises of Government and Corporates bodies and aims to encourage training for vulnerable and marginalised groups in the society.

### Scheme for Promotion of Medical Device Parks

**Department of Pharmaceuticals** notified the Scheme for Promotion of Medical Device Parks (MDP).

#### Status Of Medical Devices In India

- Current market size of medical devices industry in India is estimated to be nearly \$15 billion. However, around 85% of the medical devices used in India are imported.
- The sector suffers from various **disabilities** like:



### Objectives Of The Scheme

- Easy access to standard testing and infrastructure facilities through creation of world class Common Infrastructure Facilities (CIF) for increased competitiveness.
- Reap benefits arising due to optimization of resources and economies of scale.

### Scheme Details

- It is a **Central Sector Scheme** that will provide CIF at one place to create a strong ecosystem for medical device manufacturing in the country.
- The **total financial outlay** of the scheme is **Rs. 400 crore** and its tenure is from FY 2020-2021 to FY 2024-2025. Maximum assistance for one MDP would be limited to Rs. **100 crores**.
- **Financial assistance** to a selected MDP) would be **70% of the project cost of CIF**. In the case of North Eastern States and Hilly States, financial assistance would be 90% of the project cost.
- The State Government of Himachal Pradesh, Tamil Nadu, Madhya Pradesh and Uttar Pradesh have been given in-principle approval under the scheme to develop MDPs.
- It will lead to significant reduction in production cost of medical devices, leading to better availability and affordability of medical devices in the domestic market.

---

### Pearl Farming Promotion

- TRIFED (Tribal Co-operative Marketing Development Federation of India), an agency under the Tribal Affairs Ministry which markets and promotes tribal products, recently signed an agreement with Jharkhand based **Purty Agrotech** for promotion of pearl farming in tribal areas.
- As part of the agreement, Purty Agrotech pearls will be sold through 141 Tribes India outlets, apart from various e-commerce platforms.
- Purty Agrotech's centre will be developed into a **Van Dhan Vikas Kendra Cluster (VDVKC)**. Besides, there is a plan to develop 25 such VDVKCs for pearl farming in Jharkhand.
- TRIFED has also signed an agreement with e-grocery platform **Big Basket** to promote and sell hand-made authentic forest products sourced from tribals.

### Pearl Farming

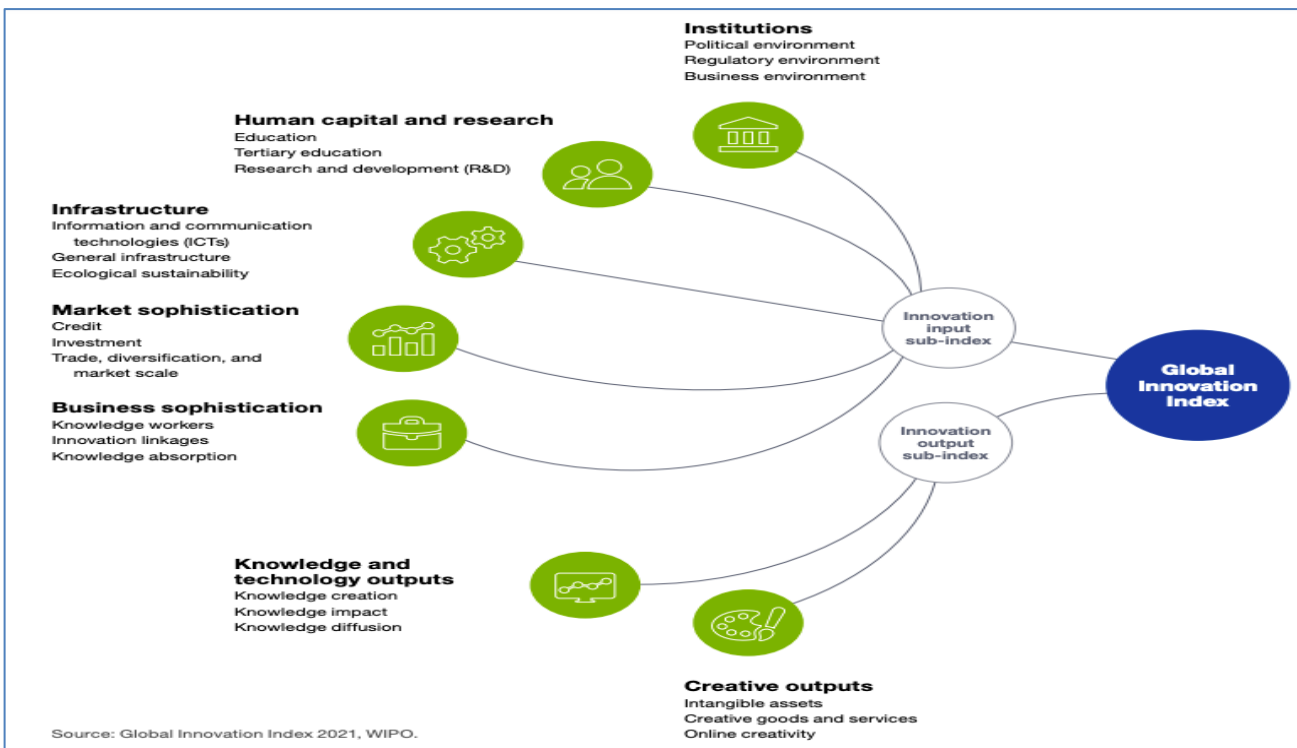
- Pearls are the **only gemstones** in the world that come from a **living creature**. **Mollusks** such as oysters and mussels produce these precious jewels. In saltwater, pearls are found in oysters, while in freshwater they are produced by mussels.
- The time taken for a pearl to develop depends on a variety of factors. Generally **freshwater types** form a **lot faster** than the saltwater ones.
- Pearl oysters are farmed in a number of countries in the production of cultured pearls.

### Benefits of Pearl Farming

- Pearl farming is **eco-friendly**, as a single oyster clears over 15 gallons of water a day. It accumulates heavy metals from the water, removes harmful pollutants thereby reduces turbidity, improves light penetration, and reduces anoxia and nitrification.
- It provides habitat for fish and improves species diversity.
- It promotes tourism, improves foreign exchange earnings and leads to significant employment generation.

**Global Innovation Index 2021**

- It was recently released by **World Intellectual Property Organization (WIPO)**.
- GII was launched in 2007 to find and determine **metrics** and **methods** that could capture a picture of innovation in society. WIPO started its association with the GII in 2011. Later, Cornell University and INSEAD joined as co-publishers, which continued until 2020.
- As of **2021**, GII is published by **WIPO in partnership with the Portulans Institute**, various corporate and academic network partners and the GII Advisory Board.
- Over the years, the GII has established itself as a **policy tool** for various governments to assess the social and economic changes in their respective countries.
- The 2021 edition of the Global Innovation Index (GII) presents the latest global innovation ranking of **132 economies**, relying on **81 different indicators**.
- GII has **two sub-indices**, the **Innovation Input Sub-Index** and the **Innovation Output Sub-Index**, and 7 pillars, each consisting of three sub-pillars.



**Key Findings**

In spite of the COVID-19 pandemic, governments and enterprises in many parts of the world have **increased their investments in innovation**. Scientific output, expenditures in R&D, intellectual property filings and **venture capital** deals continued to grow in 2021, building on strong pre-crisis peak performance.

**TOP THREE INNOVATION ECONOMIES BY INCOME GROUP**

Incomes	Countries (top three)
High income	Switzerland, Sweden, USA
Upper middle income	China, Bulgaria, Malaysia
Lower middle income	Vietnam, India, Ukraine
Low income	Rwanda, Tajikistan, Malawi

Source: Global Innovation Index 2021 by World Intellectual Property Organization

**India's Performance**

- India has climbed 2 spots and is **ranked 46<sup>th</sup>** in 2021, up from a rank of 81 in 2015.
- India  ranks 2nd among the 34 lower middle-income group economies and ranks 1st among the 10 economies in Central and Southern Asia.
- India performs better in innovation outputs than innovation inputs in 2021. It ranks 57th in innovation inputs and 45th in innovation outputs.
- It continues to lead the world in **information and communication technology** services exports indicator (1) and holds top ranks in other indicators, such as domestic industry diversification (12) and graduates in science and engineering (12).
- The consistent improvement in India's ranking is due to the immense **knowledge capital, vibrant startup ecosystem** and the work done by the public and the private research organisations to enrich the national innovation ecosystem.

**GI Tag**

- Recently **3 products** from the North East were awarded the geographical indication (GI) tag. These include Judima wine from Assam and Manipur's Hathei chilli and Tamenglong orange.
- GI Tag is given to products that have a specific place of origin and have a reputation because of their geographical origin.

<b>Judima wine</b>	<ul style="list-style-type: none"> <li>• Made by the Dimasa community of Assam, Judima wine is the <b>first beverage</b> to get a GI tag from the north-east.</li> <li>• Made from <b>sticky rice</b>, which is steamed and mixed with traditional herbs, the wine has a distinct sweet taste and takes around <b>one week</b> to prepare.</li> <li>• It is intrinsic to the social and cultural life of the Dimasas, who mainly inhabit Dimapur in Nagaland besides Cachar, Karbi Anglong, and Dima Hasao districts of Assam</li> </ul>
<b>Hathei Chilly</b>	<ul style="list-style-type: none"> <li>• Hathei chilly, commonly known as the Sirarakhong chilly, is known for its unique flavour. It is almost <b>9-inches</b> in size and bright red in colour, and is loaded with <b>antioxidants and contains high calcium and Vitamin C levels.</b></li> <li>• It thrives well only in climatic condition of Sirarakhong village, Ukhrul district (Manipur).</li> </ul>
<b>Tamenglong Orange</b>	<ul style="list-style-type: none"> <li>• Tamenglong Orange belongs to the Tamenglong district of Manipur, which is also known as The Orange Bowl of Manipur.</li> </ul>

**PLI Scheme For Textiles**

Union Cabinet has recently approved Rs 10,683 crore production-linked incentive (**PLI**) **scheme for Textiles** specifically aimed at boosting the production of high value **man-made fibre** (MMF) fabric, MMF apparel and technical textiles.

**MMF and Technical Textiles**

- MMFs are made from various chemicals or are regenerated from plant fibres. Examples include viscose, polyester, acrylics etc. The domestic MMF industry mainly comprises two components i.e., polyester and viscose, which together account for about 94% volume.

- **Technical Textiles** segment is a new age textile, with application in several sectors including infrastructure, water, health and hygiene, defence, security, automobiles, aviation, etc.
- Till now, India has primarily focused on cotton textiles. However, two-thirds of the international trade market is of man-made and technical textiles.
- To address this, the government has also launched a **National Technical Textiles Mission** in the past for promoting R&D efforts in the sector.

### Scheme Details

- **Only manufacturing companies registered in India** will be eligible to participate. Moreover, there are **2 Phases** of investment possible with different sets of incentive structures.
- The investment period is 2 years, and incentives under the scheme will be available for **5 years** during 2025-26 to 2029-30 on incremental turnover achieved during 2024-25 to 2028-29.

#### 1st Phase

- Any person or company willing to invest a **minimum ₹300 Crore in plant, machinery, equipment and civil works (excluding land and administrative building cost)** to produce notified products will be eligible.
- **Such producers will receive incentives under the scheme once they achieve a turnover of at least Rs 600 crore.**

#### 2nd Phase

- **Investors willing to spend a minimum ₹100 Crore and generating a turnover of at least Rs 200 crore will receive incentives**

### Impact

- It will lead to fresh investment of more than Rs 19,000 crore, cumulative turnover of over Rs 3 lakh crore and will create additional employment opportunities of more than 7.5 lakh jobs.
- The textiles industry predominantly employs women; therefore, the scheme will **empower women** and increase their participation in the formal economy.
- As priority will be given for investment in **Aspirational Districts, Tier 3 and 4 towns, and rural areas**, it will especially have a positive impact on States like Gujarat, UP, Maharashtra, Tamil Nadu, Punjab, AP, Telangana, Odisha etc.
- It will make domestic companies global champions in the sector, give a major push to the growing high value MMF segment and help India to regain its historical dominant status in global textiles trade.

*(For details on umbrella PLI scheme, please refer to Recitals July, 2021)*

### PLI for Auto Sector

- Government recently notified Rs 25,938 crore worth Production Linked Incentive (PLI) Scheme for Automobile & Auto components, to primarily boost the production of electric vehicles (EVs) and hydrogen fuel cell vehicles.
- In addition, the government has also announced Rs 120 crore for the drone industry.

### Scheme Details

- The scheme **excludes** conventional petrol, diesel and CNG segments. It will incentivize only **advanced automotive technologies** or auto components whose supply chains are weak, dormant, or non-existing.
- It is open to existing Automotive companies as well as new Non-automotive investor companies.

- It will be effective from FY 2022-2023 for **five years** and the base year for the eligibility criteria would be FY 2019-20.
- The PLI **incentives are sales-linked** and are expected to be in the range of 13-18% on determined sales values for original equipment manufacturers (OEMs) and 8-13% on determined sales values for auto component manufacturers.
- An additional 5% is to be given for manufacturing components for battery electric vehicles and hydrogen fuel cell vehicles.

#### Eligibility

- **OEMs** in the auto sector must have a minimum of Rs 10,000 crore in revenue and Rs 3,000-crore investment in fixed assets.
- **Auto-component manufacturers** must have minimum revenue of Rs 500 crore and fixed asset investment of Rs 150 crore
- **New non-automotive investors** must have a global net-worth of Rs 1,000 crore and a clear business plan for investment in advanced automotive technologies.
- Moreover, companies that invest over Rs 80 crore in the drone industry will be eligible for the benefits.

#### Impact

- It will lead to fresh investments of over Rs 42,500 crores, incremental production of over Rs 2.3 lakh crore and additional employment opportunities of over 7.5 lakh jobs.
- The scheme will contribute towards reducing carbon emissions and oil imports, by accelerating the country's progress towards **green mobility**.
- It will make Indian firms self-reliant and help them to be **globally competitive** in EVs and technology.
- It will also lead to the promotion of next-generation safety technologies to make Indian automobiles and roads safer.
- Boost in drone development will contribute to economic growth due to their reach, versatility, and ease of use, especially in India's remote and inaccessible areas.

---

#### Account Aggregator System

- India's **eight major banks** recently joined the Account Aggregator (AA) network that will enable customers to easily access and share their financial data.
- The AA framework was created through an inter-regulatory decision by RBI and other regulators including SEBI, IRDA, and PFRDA through an initiative of the **Financial Stability and Development Council (FSDC)**.
- An Account Aggregator (AA) is a RBI regulated **non-banking financial company** (NBFC). The AA framework allows customers to access different financial services from various providers on a single portal.
- It allows a customer to transfer his financial information related to various accounts such as banks deposits, equity, mutual fund and pension funds to any other regulated financial institution in the AA network.
- However, data cannot be shared without the consent of the individual.

#### Structure of AA

- It has a **three-tier structure**: Account Aggregator, FIP (Financial Information Provider) and FIU (Financial Information User).

- Data transmitted through AA is **encrypted** and AAs are not allowed to store, process & sell customer's data.

**FIP**

• It is the data fiduciary, which holds customers' data. It can be a bank, NBFC, mutual fund, insurance repository or pension fund repository

**FIU**

- It consumes the data from an FIP to provide various services to the consumer. For example, a lending bank that wants access to the borrower's data to determine if the borrower qualifies for a loan is an FIU
- **Banks play a dual role – as an FIP and as an FIU.**

### AA Apps

- Four account aggregator apps that have received operational licences from RBI: Finvu, OneMoney, CAMS Finserv, and NESL,
- In-principle nods have been given to: PhonePe, Perfios, and Yodlee.

### Benefits

- India's financial system involves many issues for consumers like sharing physical signed and scanned copies of bank statements, notarising documents etc. **AA network would replace** all these with a mobile-based, simple and safe digital data access & sharing process.
- It will help banks to reduce transaction costs, and offer customised products and services to the customers.
- Reduce frauds associated with physical data by introducing secure **digital signatures** and **end-to-end encryption** for data sharing.
- Improve an individual's access to loans and access to money management, as AA will fast track the loan evaluation process.
- It may also enable loans without physical collateral, by sharing trusted information from a government system like GST.

### Card Tokenisation

- Reserve Bank of India (RBI) has directed that no entity or merchant, other than card issuers and card networks, should store card details— or **card-on-file (CoF)** — from January 1, 2022.
- A **CoF transaction** is a transaction where a cardholder has authorised a merchant to store the cardholder's Mastercard or Visa payment details. The cardholder then authorises that same merchant **to bill** from cardholder's stored Mastercard or Visa account.
- RBI has permitted card issuers to **offer card tokenisation** services as token service providers (TSPs). Tokenisation refers to replacement of actual card details with an alternate code called the token, which will be unique for a combination of card, token requestor and device.
- The token is used to perform contactless card transactions at point-of-sale (PoS) and QR code payments.
- The tokenisation of card data will be done only after **customer consent**, requiring an **Additional Factor of Authentication (AFA)** (like OTP).
- Earlier, the facility of tokenisation was limited to only mobile phones and tablets of interested card holders. However, the RBI has now included consumer devices, laptops, desktops, wearables (wrist watches, bands), Internet of Things (IoT) devices, etc, to extend the scope of tokenisation.

Need For Tokenisation	Impact Of The Change
<ul style="list-style-type: none"> <li>• Many entities like e-commerce companies, airlines, supermarket chains etc. store actual card details, which is CoF. Some merchants force their customers to store card details.</li> <li>• Availability of such details with a large number of merchants substantially increases the risk of card data being stolen.</li> <li>• Any leakage of CoF data can have serious implications because many jurisdictions do not require an AFA for card transactions. Stolen card data can also be used for frauds within India through social engineering techniques.</li> </ul>	<ul style="list-style-type: none"> <li>• The above changes are expected to increase the <b>safety and security of card data</b>.</li> <li>• Even if hackers breach an e-commerce site, they will only get tokens, which cannot be used for payment as it would not be coming from the registered device. Also, tokenisation would still require two-factor authentication.</li> <li>• RBI has also clarified that customers won't have to <b>memorise</b> all of their card details for transactions, thus continuing the convenience in card transactions.</li> </ul>

### Bad Bank

- The government recently cleared a **₹30,600-crore guarantee programme for securities to be issued** by the recently incorporated **National Asset Reconstruction Company Ltd (NARCL)**.
- This will help NARCL to acquire stressed assets **worth Rs 2 lakh crore** from the balance sheets of banks.



### Background

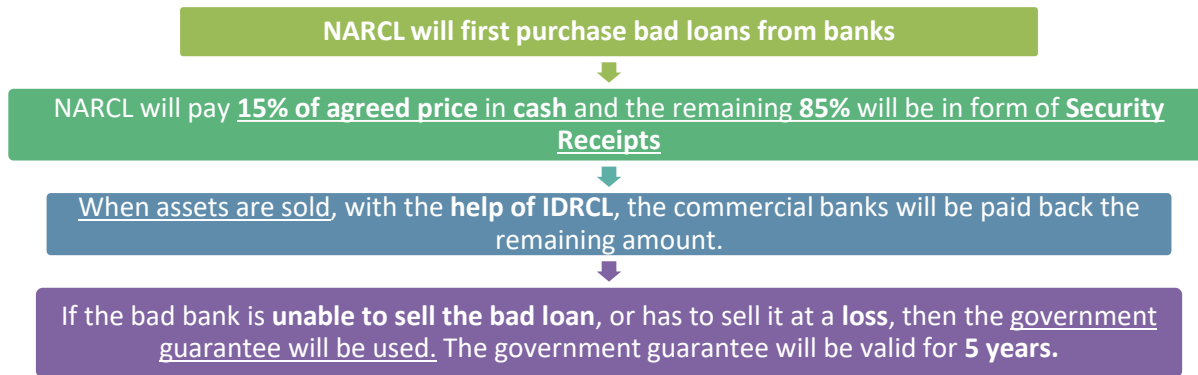
- Since the global financial crisis of 2008-09, the NPAs have increased significantly in the Indian banking system.
- Existing asset reconstruction companies (ARCs) have been helpful in resolution of stressed assets, especially for smaller value loans.
- However, considering the large stock of old NPAs, additional alternatives were needed and the NARCL-IDRCL structure was announced in this year's Union Budget.
- Bad banks have been considered a success in several countries including the **US, Sweden, Finland, Belgium and Indonesia**.

### Features of Bad Bank

- Bad banks are not involved in lending and taking deposits. Technically, it is an ARC or an AMC (Asset Management Company) that takes over the bad loans of commercial banks.
- The takeover of bad loans is normally **below the book value** of the loan and the bad bank tries to recover as much as possible.



- **Asset reconstruction** is the **purchase of title or rights** of the banks or financial institutions in loans, bonds etc., for the sole purpose of its recovery.



- Thus, the difference between the amount the commercial bank was supposed to get and the amount the bad bank is able to raise will be paid from the Rs 30,600 crore provided by the government.

### Benefits

- It will help banks to remove bad assets from their balance sheets, by transferring them to the bad bank and **cleaning up their books**. The bad bank will release capital for the banks and enable them to **restart lending**.
- Bad bank will be more **result-oriented** and hence will be better able to recover the dues.
- As it is supported by the government, it will not delay resolution due to governance deficiencies, slow-moving judicial architecture, poorly designed regulation etc, which are major issues faced by ARCs. Overall, it will give a huge boost to the macro economy.

### Issues

- The process of **price discovery** — the price at which NARCL buys these loans from the banks — might be challenging.
- In the ongoing weak economic conditions, the bad bank may find it difficult to find **potential buyers** for bad loans.
- Also, the public sector banks will be both shareholders and customers of the bad bank—which may lead to a situation where the bad debt has only been **shifted from one book to another**.
- Whether it is recapitalising PSBs laden with bad loans or giving guarantees for security receipts, the money is coming from the **taxpayers' pocket**.
- Although such structures might help, **bad banks cannot prevent NPAs in future**. The only sustainable solution is to improve the lending operation in public sector banks.

### NARCL and IDRCL

- NARCL has been incorporated under the Companies Act and it has applied to RBI for a license as an ARC. **Public sector banks** will have **51% ownership** in it.
- IDRCL is a **service company/operational entity** which will manage the asset and engage market professionals and turnaround experts.
- **Public sector banks** and **Public financial institutions** will hold a maximum of **49% stake in IDRCL**, and the rest will be with private sector lenders.

**Draft e-Commerce Rules 2021**

**Department of Consumer Affairs** is looking at some provisions pertaining to the definitions such as ‘related party’ and ‘e-commerce entity’ proposed in the rules. Earlier, government notified the **Consumer Protection (E-Commerce) Rules, 2020** under the Consumer Protection Act, 2019.

**Draft Rules 2021**

- **Mandatory registration** for e-commerce entities with the *Department of Promotion for Industry and Internal Trade* (DPIIT).
- **Clause of country of origin:** E-commerce entities offering imported goods/ services to ‘incorporate a filter mechanism at a pre purchase stage to identify goods based on country of origin. Every time, they have to offer local alternatives to ensure a fair opportunity to domestic goods.

**Restricting Related Parties:** None of the related parties are allowed to use any consumer information for ‘unfair advantage’.

- Every e-commerce marketplace must ensure that nothing is done by related parties or associated enterprises that e-commerce entity itself cannot do.
- **None of an e-commerce entity’s ‘related parties can be enlisted as a seller for sale to consumers directly.** This “broad definition” of ‘related party’ can potentially include all entities such as those involved in logistics, any joint ventures, etc.

**Fall-back liability:** The rules made E-commerce firms liable in case a seller on their platform fails to deliver goods or services due to negligent conduct, which causes loss to the customer.

**Specific flash sales or back-to-back sales** which limit customer choice, increase prices and prevent a level playing field are **not allowed**. Conventional flash sales were not banned.

**Criticism Of Draft Rules**

- The perception of **“overreach” by the Consumer Affairs Department** — venturing into areas where other departments such as the Department for Promotion of Industry and Internal Trade (DPIIT) and the Ministry of Electronics & Information Technology (MeitY)
- The cross-indexing of rules governing the e-commerce sector among various government departments. Many of the provisions were “beyond the realm” of consumer protection

- The definition of **related party** certainly needs some more clarity, otherwise it will be difficult not only for foreign players like Amazon and Flipkart, but even homegrown companies like Tata and Reliance to have their various brands sell on their super-apps
- **Small joint ventures** will also face problems: Eg joint venture between Tata Group and Starbucks, which would be considered a **related party** under the proposed provisions, and would not be able to sell products on a Tata super-app.

Industry players have argued that on one hand FDI policy prohibits companies such as Amazon and Flipkart from having control over the inventory sold on their platforms, while on the other, e-commerce rules of Consumer Affairs Department holds these **platforms liable** in case a seller fails to deliver goods or services

These rules appear to **limit consumer choices** further through provisions such as blanket ban on flash sales, etc. despite Ministry’s mandate to uphold consumer rights

**Cybersecurity issues:** All entities must provide information within **72 hours** on any request made by an authorised government agency, probing any breach of the law.

Appointing a **chief compliance officer** for 24x7 coordination with law enforcement agencies

Provisions like having a compliance officer, adherence to law enforcement requests, etc., follow in the **footsteps of the Information Technology (Intermediary) Rules, 2021** issued by MeitY. These IT rules are facing legal challenges in several courts

### Deputy Speaker Lok Sabha

Delhi High Court asked Central government to explain its stand on a petition for keeping the post of Deputy Speaker of the Lok Sabha vacant.

- The petition claimed that it is a violation of **Article 93** of the Constitution
- Position had been vacant for the **last 830 days** since the formation of 17th Lok Sabha in 2019.
- The longest time that this post had remained vacant was in **12th Lok Sabha** and even then on the 59th sitting of Parliament, election to the post was held.
- By convention, this post went to the Opposition.

Advantage	Issue
<ul style="list-style-type: none"> <li>• <b>Ensures continuity of Speaker’s office:</b> A Deputy Speaker enjoys the same legislative and administrative powers as the Speaker in absence of the Speaker because of <u>death, illness, resignation or any other reason.</u></li> <li>• When a resolution for removal of the Speaker is up for discussion, Deputy Speaker presides over the proceedings of the House.</li> <li>• A Deputy Speaker is also ex-officio chairman of some committees by virtue of his position.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>No specific timeline for Deputy Speaker’s appointment:</b> Article 93 for Lok Sabha and Article 178 for state Assemblies state that these Houses “<b>shall, as soon as may be</b>” choose two of its members to be Speaker and Deputy Speaker.</li> <li>• It would be unrealistic to expect complete neutrality while functioning.</li> </ul>

### Arguments For Not Filling The Position

- Soon after 2019 general election, the government approached the YSR Congress, who turned down the offer since it would have been difficult to align their protest against the government for not according **special status to Andhra Pradesh** while occupying the post.
- As the **combined Opposition didn’t have the strength** to elect a member of their choice, choice fell on government. There was no recognized leader of Opposition, which hampered the process

### Eat Right Station Certification

**Chandigarh Railway Station** has been awarded a **5- star** 'Eat Right Station' certification for providing high-quality, nutritious food to passengers.

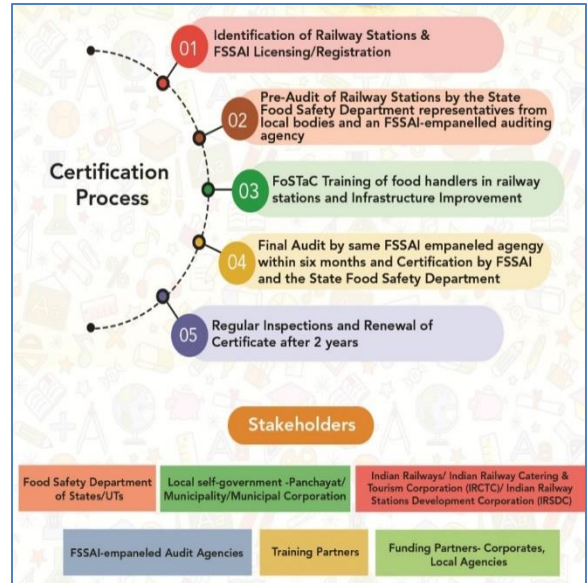
- It is awarded by **FSSAI** to railway stations that set benchmarks in providing **safe and wholesome food** to passengers adhering to standard food storage and hygiene practices.

- Chandigarh Railway Station becomes the **fifth station** in India to get this recognition. The other railway stations with this certification include Anand Vihar Terminal Railway Station, Delhi, Chhatrapati Shivaji Terminus (Mumbai), Mumbai Central Railway Station, and Vadodara Railway Station.
- The certification is part of **Eat Right India' movement**

**Eat Right India' movement**

It is a large-scale effort by FSSAI to transform the country's food system to ensure safe, healthy and sustainable food for all Indians.

- It adopts a judicious mix of regulatory, capacity building (Food Safety Training and Certification (FoSTaC) initiative), collaborative, and empowerment approaches.
- Its tagline is '**Sahi Bhojan, Behtar Jeevan**'.
- This movement is aligned with the government's flagship public health programmes such as POSHAN Abhiyaan, Anemia Mukht Bharat, Ayushman Bharat Yojana and Swachh Bharat Mission as well as the 'Fit India' Movement'



**Right to Sit**

**Tamil Nadu government** tabled a Bill in the Legislative Assembly making it mandatory for establishments to provide **seating facilities** for employees.

- The Bill sought to amend **Tamil Nadu Shops and Establishments Act, 1947** by adding a sub section to **mandatorily** provide seating facilities for the staff.
- Proposed Section 22-A** to the Act: Premises of every establishment shall have suitable seating arrangements for all employees so that they may take advantage of any opportunity to sit which may occur in the course of their work, thereby avoid 'on their toes' situation throughout working hours.

**Significance**

- It would benefit thousands of employees of large and small establishments, particularly those working in textile and jewellery showrooms
- The persons are made to stand throughout their duty time" resulting in varied health issues.
- It is in conformity with **Article 42** of Constitution (DPSP) which prompts the State to make provisions for just and humane conditions at work.
- Past demands:** In 2018 Workers of textile showrooms in **Kerala** had gone on a protest demanding the 'Right to Sit', prompting the government to amend the Kerala Shops and Establishments Act

**Employment in Private Sector Bill**

**Jharkhand** Assembly has passed **Employment of Local Candidates in Private Sector Bill 2021**, which provides **75% reservation** for local people in the **private sector** up to **₹40,000 salary a month**. Once notified, Jharkhand will become the **3<sup>rd</sup>** State in the country, after Andhra Pradesh and Haryana, to pass such law.

**Key Provisions**

- **Designated Portal:** Every employer shall register such employees receiving gross monthly salary as wages **not more than ₹ 40,000** (limit notified by the government) from time to time on the **portal** within **3 months of Act** coming into force
- **Registration:** **No local candidate** will be eligible to avail benefit of the reservation **without registering** on the designated portal.
- Every employer shall fill **up 75% of the total existing vacancies** on the date of notification of this Act and subsequent thereto by **local candidates** for such posts where gross monthly salary is not more than ₹40,000
- **Authorised Officer (AO):** The employer will have to furnish a **quarterly return** about vacancies and employment on the portal which will be examined by AO (District Employment Officer) who can call any records for the **purpose of verification**.
- **Constitution of a Committee:** Headed by a designated officer that will include Deputy Development Commissioner (DDC), Circle Officer (CO) and the local MLA to supervise the employment procedure and issue directions to the employer concerned as it may deem fit
- **Appeal:** The aggrieved employer may also file an appeal within **60 days** of an order passed by the AO or DO in front of an Appellate Authority — Director, Employment and Training, Government of Jharkhand
- **Representation:** Attention will be given to the **displaced**, local candidates of the concerned district and all classes of the society
- **Exception:** The employer may claim exemption where an adequate number of local candidates of the desired skill qualification are not available. The company has to apply to the Designated Officer (DO), the Deputy Commissioner of the concerned district, who will inquire into the attempts made by the employer to recruit local candidates of desired skill, qualification or proficiency.
- **Penal provisions** for not following the rules and regulations

**LOCAL PREFERENCE**

<b>Maharashtra</b>   Private sector to employ 80% domiciled workers (Maha residents for more than 15 years); <b>Status:</b> Planned, not implemented	for state govt jobs; <b>Status:</b> 70% quota applied, 'children of MP' at planning stage
<b>Haryana</b>   Ordinance mandating 75% quota for locals in private sector jobs; <b>Status:</b> Planned, not implemented	<b>Karnataka</b>   Pvt industries to give priority to Kannadigas in clerical and shop-floor jobs; <b>Status:</b> Rules amended, follow-up law not passed yet
<b>Madhya Pradesh</b>   70% quota in pvt sector jobs for locals; only 'children of MP' to be eligible	<b>Andhra Pradesh</b>   Up to 75% quota for locals in govt and pvt sector; <b>Status:</b> Law passed, yet to be implemented

**Significance**

- With increasing privatisation and Central government pushing for National Monetisation Pipeline (NMP), this law would prove to be a boon for the local.
- Helps in checking people who arrive from other States and eventually settle.
- Raises morale, discourages migration, address agrarian crisis and unemployment within state

**Issues**



**Bill Can Be Challenged To Violate Following Articles**

- **Article 14:** Equality before the law or the equal protection of the laws within the territory of India. Reservations to locals are against that equality.
- **Articles 15(1) and 15(2)** also prohibit the state from discriminating against any citizen **only** on grounds of religion, race, caste, sex, **place of birth**. But clauses (3) to (5) of Article 15 *empower the state* to provide for positive discrimination
- **Article 16(1):** Equality of opportunity for all citizens in matters relating to **'employment or appointment'** to any *office under the State*.
  - ✓ 16(3): It provides an exception by saying that *Parliament* may make a law "prescribing" a requirement of residence for jobs in a particular state. **This power vests solely in the Parliament, not state legislatures.**
  - ✓ Article 16(3) allows reservation based on the residence by a parliamentary law in matters of **public employment and not in private employment.**
- **Article 19(1)(g):** Right to practice any profession, or to carry on any occupation, trade or business
- Private sector firms can claim that the law interferes with their constitutional rights to carry on their trade freely.

**Court Judgments That Goes Against Such Reservation Policies**

Pradeep Jain Vs Union of India, 1984

•SC discussed the issue of legislation for "sons of the soil". Further, the court held an opinion that such policies would be unconstitutional but **did not expressly rule on it.**

Sunanda Reddy Vs State of Andhra Pradesh, 1995

•SC affirmed the observation in Pradeep Jain to strike down a state government policy that gave 5% extra weightage to candidates who had studied with Telugu as the medium of instruction

Kailash Chand Sharma Vs State of Rajasthan, 2002

•Court held that "measures taken by State on **considerations of localism** are not sanctioned by constitutional mandate of equality"

2019, Allahabad High Court

•It struck down a recruitment notification issued by the Uttar Pradesh Subordinate Service Selection Commission. The commission prescribed preference for women who were original residents of the state

**Telecom Sector Reforms**

Recently, the Union Cabinet approved a **relief package for the telecom sector.**

1994

•Telecom sector was **liberalised under the National Telecom Policy, 1994** after which licenses were issued to companies for a **fixed license fee**

1999

•Government gave an **option** to the licensees to migrate to **revenue sharing fee model.**

**Revenue Sharing Fee Model**

- Under this, mobile telephone operators were required to share a % of their **Adjusted Gross Revenue (AGR)** with government as:
  - **Annual license fee (LF)**- at 8% of AGR
  - **Spectrum usage charges (SUC)**- 3-5% of AGR
- Adjusted Gross Revenue= (Gross revenue) - (**Certain deductions** spelt out in the license agreements).

**WHAT IS ADJUSTED GROSS REVENUE**

<p>■ Telecom operators are required to pay licence fee and spectrum charges in the form of 'revenue share' to the government</p>	<p>■ The revenue amount used to calculate this revenue share is termed as the adjusted gross revenue, or AGR</p>
----------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------

**Dispute**

- Between DoT and mobile operators was mainly on the **definition of AGR**.
- DoT argued that AGR includes all revenues from **both telecom and non-telecom services**.
- The companies claimed that AGR should comprise just the revenue accrued from **core services** and not dividend, interest income or profit on sale of any investment or fixed assets.

2005	•Telecom companies <b>challenged the government’s definition for AGR calculation</b> .
2019	•Supreme Court <b>upheld the definition of AGR</b> and ordered telecom operators to pay Rs 1.19 lakh crore to DoT as pending AGR-dues.
September 2020	•SC granted <b>10 years to the companies</b> to make deferred payments of AGR dues, including penalty, interest and interest on penalty through March 31, 2031.

**Major Reforms That Have Been Announced**

- **Adjusted Gross Revenue (AGR):** AGR definition rationalised and **non-telecom revenue** will be **excluded** on prospective basis. As the rationalisation in AGR definition is only prospectively, the telcos need to generate resources, or raise capital, to eventually service this along with payment of bank dues.
- **Bank Guarantees (BGs) Rationalized:** Huge reduction in BG requirements (80%) against License Fee (LF) and other similar Levies. No requirements for **multiple BGs** in different Licenced Service Areas (LSAs) regions. Instead, One BG will be enough.
- **Moratorium on Dues:** A much needed moratorium has been announced on **statutory dues** (both AGR and spectrum purchased in past auctions) of the telecom sector for **4 years**.
  - ✓ This will help **conserve cash** which can be used in more productive areas. But this provides temporary relief.
  - ✓ However, those choosing to avail of the moratorium will have to pay an interest of **MCLR+2%**, something that will effectively protect the revenues of the government.
  - ✓ At the end of the moratorium period, the government will provide an **option** to telecom player to pay the **interest amount** arising out of the deferment of payment **by way of equity**, and at the option of the government, to convert the entire due into equity. The guidelines for this will be finalised by the Ministry of Finance.
- **Interest Rates Rationalized:** From 1st October, 2021, Delayed payments of License Fee (LF)/ Spectrum Usage Charge (SUC) will attract interest rate of SBI’s **MCLR+ 2%** instead of **MCLR+ 4%**. Interest **compounded annually** instead of monthly
- **Penalty And Interest On Penalty** on payment of licence fees, spectrum charges and all kinds of charges have been **completely scrapped**.

- **Spectrum Tenure:** In future Auctions, tenure of spectrum increased from 20 to 30 years.
  - ✓ **Surrender** of spectrum will be permitted after **10 years** for spectrum acquired in the future auctions.
  - ✓ **No Spectrum Usage Charge (SUC)** for spectrum acquired in future spectrum auctions.
  - ✓ **Spectrum sharing encouraged:** Additional SUC of 0.5% for spectrum sharing **removed**.
- **Calendar for spectrum auction :** It will usually take place in the **last quarter** of the financial year.
- **FDI:** Government has increased the FDI in the sector under **automatic route** from 49% to 100%. This could potentially pave the way to allow gradual exit of some of the equity stakeholders of Vodafone Idea in due course
- **Licence Raj Scrapped:** Customs notification of 1953 have been done away with. It will allow telecom operators to easily import equipments. Replaced with self-declaration
- Shifting between prepaid and postpaid and vice versa **did not require fresh KYC**
- A long-standing demand for the government's intervention in setting telecom floor tariffs, as it has done in the civil aviation sector to protect competition, did not find a place in the relief package.

### Significance of Reforms

- **Cash Flow & Relief:** It has offered the prospect of an **annual cash flow breather** of an estimated Rs 45,000 crore to the fund-starved industry (Moratorium on AGR dues provides annual cash flow respite of around Rs 14,000 crore, while the moratorium on spectrum dues gives another Rs 32,000 crore of annual cash flow relief)
- **Investment & Employment:** This will pave the way for large-scale investments in the telecom sector. More the investment, more the employment.
- **Healthy Competition:** It is a step towards strengthening the industry and ensuring survival of players to maintain healthy competition for the benefit of the customers.
- **Stabilizing and Reducing NPAs:** The telecom package comes as a relief to the banks as it mitigates the imminent possibility of default by vulnerable operators.

### District Level Committees for Power Related Schemes

Ministry of Power has issued an order for setting up of **District Level Committees**.

#### About District Level Committees

- They shall exercise oversight over **all power related schemes** of Government of India and also its **impact** on the provision of services to people.
- This is done in order to ensure the **involvement of people** in the process of power sector **reforms** and their **implementation**.
- All the States/UTs to notify and ensure establishment of these Committees, under intimation to Ministry of Power.
- The Committee will meet at **District Headquarters** at least once in **3 months** to **review** and **coordinate overall development** of power supply infrastructure in the district.



### Composition of The Committee

Chairperson	• Most Senior MP in district
Co-chairpersons	• Other MPs in district
Member Secretary	• District Collector
Members	• Chairperson/President of the District Panchayat/ MLAs of the district

### Power Sector At A Glance

- 100% FDI is permitted under automatic route.
- Electricity is a **concurrent** subject.
- In the past 5 years, almost **2 lakh crore** were provided under Deendayal Upadhyaya Gram Jyoti Yojana (**DDUGJY**), Integrated Power Development Scheme (**IPDS**), Pradhan Mantri Sahaj Bijli Har Ghar Yojana (**SAUBHAGYA**) etc.
- This is to ensure universal access by electrifying every village, hamlet and household; setting up more substations, upgrading existing substations, for High Tension/Low Tension Lines, Transformers etc. for strengthening the Distribution systems.

### Front of Pack (FoP) Labelling

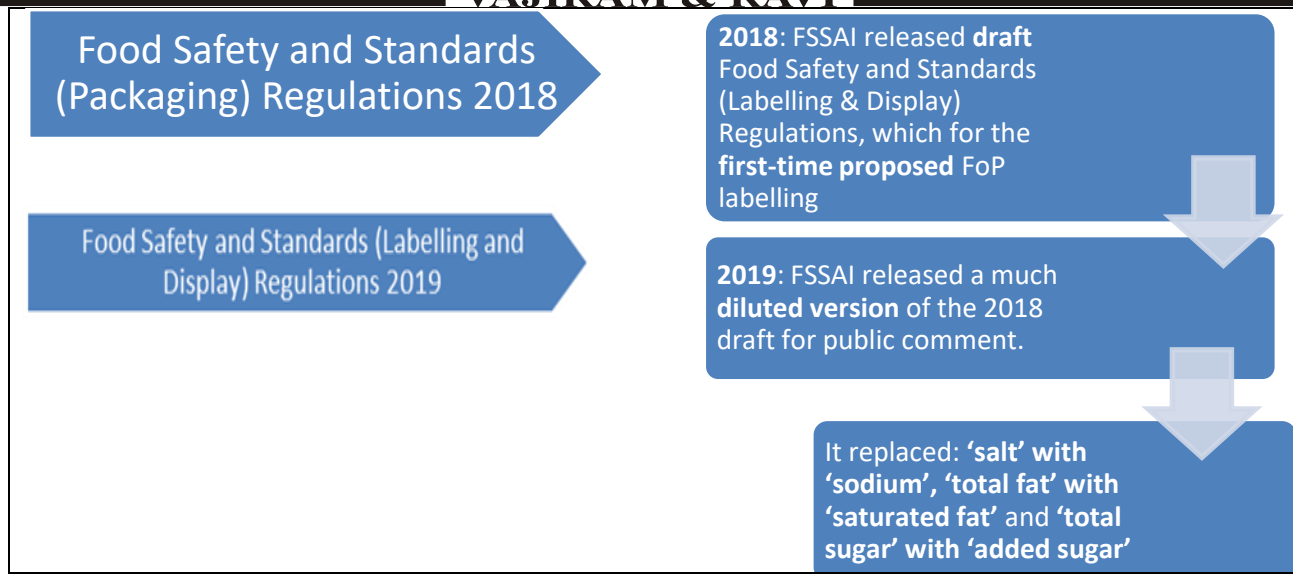
- 7 years, 4 committees and 2 draft regulations later, India still does not have a **clear labelling system** to warn consumers about harmful levels of **fat, salt, and sugar** in the processed foods.
- Processed foods are linked strongly with obesity and diet-related non-communicable diseases, such as Type-2 diabetes, hypertension, heart ailments and certain cancers.

### About FoP Labelling

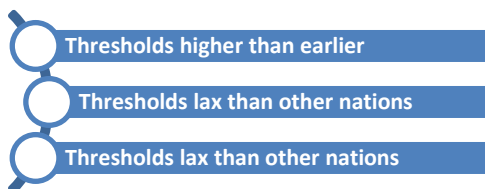
- This system is one of the **global best practices** to nudge consumers into healthy food choices. Just the way cigarette packets are labelled with images to discourage consumption.
- Manufacturers provide information in such **cryptic language** on the **back** of the overly **colourful** packets that the consumer either fails to notice it or does not comprehend it.
- WHO defines FoP: “**Nutrition labelling systems** that are presented on **front of food packages** in the principal **field of vision**; and present **simple**, often **graphic information** on the nutrient content or nutritional quality of products, to complement more detailed nutrient declarations provided on the **back of food packages**.”
- **Chile, Brazil and Israel** have used FoP labelling as a measure to fight obesity and NCDs.

### Indian Scenario

FSSAI made Food Safety and Standards (**Packaging and Labelling**) Regulations, 2011, which later divide these regulations into **two** regulations:



- Between January-June this year, FSSAI once engaged with stakeholders, including consumer organisations and industry groups.
- The working group has **relaxed the thresholds** to the extent that products with very high content of fat, salt or sugar can pass off as healthy. The problem was at three levels.



The new thresholds will not only fail to discourage the consumption of unhealthy junk foods but lead to poor dietary choices and distortion of food habits.

Draft Food Safety and Standards (Labelling and Display) Regulations 2019	
Regulations	Issues
<ul style="list-style-type: none"> <li>• Mandate <b>colour-coded labels on food items.</b></li> <li>• FoP food items will have to <b>display total number of calories, saturated and trans fats, salt and added sugar content</b> as well as proportion of daily energy needs fulfilled by food item.</li> <li>• <b>Changed the symbol of vegetarian food from a green circle to a green triangle</b> to help color blind people distinguish it from the brown circle denoting non-vegetarian food.</li> <li>• If total amounts of calories, fats, trans-fats, sugar, and sodium per serving exceed stipulated limits, it would be <b>indicated in red colour.</b></li> <li>• FSSAI proposed to also consider <b>'positive nutrients'</b> in the FoP label. It was about giving scores to 'positive nutrients' such as proteins, nuts, fruits and vegetables</li> </ul>	<ul style="list-style-type: none"> <li>• Positive nutrients will mask the negative impact of high fat, salt and sugar in the food and the industry will use it to mislead the consumer.</li> <li>• Labelling format appears to be aimed only at individuals who are literate and nutritionally aware.</li> <li>• Industries' concerns over the proposed format, especially using the colour red as it indicates danger and could dissuade consumers from their products.</li> </ul>

### 3<sup>rd</sup> State Food Security Index

Union Minister for Health and Family Welfare released FSSAI's 3<sup>rd</sup> State Food Safety Index (SFSI) to measure the performance of States across five parameters of food safety. The parameters include



- He also flagged off 19 Mobile Food Testing Vans (Food Safety on Wheels) to supplement food safety ecosystem across the country taking the total number of such mobile testing vans to 109.
- These mobile laboratories will not only help functionaries in the States/UTs to enhance their outreach and **conduct surveillance activities** even in the far-flung areas, but will also be utilized as a tool for **training and awareness generation** activities amongst citizens.
- The Index is a **dynamic quantitative** and **qualitative** benchmarking model that provides an objective framework.
- First State Food Safety Index was announced on the first-ever World Food Safety Day on 7th June 2019.

#### Rankings

- **Among larger states:** Gujarat was the top ranking state, followed by Kerala and Tamil Nadu.
- **Among smaller states:** Goa stood first followed by Meghalaya and Manipur.
- **Among UTs:** Jammu & Kashmir, Andaman & Nicobar Islands and New Delhi secured top ranks.

### Ammonium Nitrate Rules Amended

Government has amended rules for **storage** and **handling** of ammonium nitrate to improve public safety. These come in response of explosion in **Beirut, Lebanon**, in August last year that led to the deaths of over 200 people. Nearly 3,000 tons was stored at Beirut's port for **six years**.

#### New Rules

- The rules require that ammonium nitrate **received at ports** be transferred to **storage houses 500 metres beyond** the port area.
- The rules also permit the **auction of seized** lots of ammonium nitrate to ensure safe and speedy disposal besides requiring that Ammonium Nitrate be imported in **bagged form only**.
- The amendments include provision for adequate **fire-fighting facilities**, improvement of **flooring in storage and handling areas**. This will reduce the handling of loose chemicals at port and therefore enhance safety.
- To promote **ease of doing business**, the transfer of ammonium nitrate from one location to another of the **same licensee** has been permitted now.
- **Time for disposal**) of the application for seeking '**No Objection Certificate**' from District Authority or Director General of Mine Safety has been reduced from **6 months to 3 months**.

#### Ammonium Nitrate

- It is an ingredient of **fertilisers, anaesthetic gases, cold packs, commercial explosives**(used in mining and construction)
- Main component of explosive composition known as Ammonium Nitrate Fuel Oil (ANFO). Many Improvised Explosive Devices (IEDs) used by terrorists have **ANFO** as the main explosive.

- Executive Magistrates/Police Officers authorized shall carry out **inspection** of the licensed premises located within their jurisdiction once in **six months**.

### Indian Regulations

- **Industrial Development and Regulation Act 1951:** For the manufacture of ammonium nitrate, an Industrial licence is required.
- A license under Ammonium Nitrate Rules, 2012 is also required for **any** activity related to ammonium nitrate
- **Ammonium Nitrate Rules, 2012** covers manufacture, conversion, bagging, import, export, transport, possession for sale or use of ammonium nitrate

### Ladakh Resident Certificate Order 2021

- Ladakh administration has decided to issue “**Resident Certificate**” only to the **Permanent Resident Certificate** holders of the region, unlike J&K where new domicile laws allowed outsiders too to apply for jobs, land and other facilities.
- Any person who possesses a Permanent Resident Certificate (PRC) issued by the competent authority (Tehsildars) in the districts of Leh and Kargil or belongs to a category of persons who would have been eligible to be issued PRC shall be eligible to receive the ‘Resident Certificate’.
- It is to **temporarily define** ‘Resident of UT of Ladakh’ for the purpose of **appointment to all the non-gazetted posts** borne on the establishment of any department or service of administration of Ladakh.
- The Administration also enhanced the upper age limit for entry into government services against all posts. The age relaxation would be a **one-time exception** and this shall remain in force for **2 years**

### Permanent Residence Certificate (PRC)

- It is a kind of domicile certificate which helps people in availing domicile linked quotas in **government jobs** and admission in **educational institutions**.
- For obtaining a ration card of the respective state, cast the vote in elections, availing the benefits of **various schemes** of the state or to claim **scholarships** of the State.
- PRC is issued by states like Arunachal Pradesh, Assam, Mizoram, Meghalaya, Tripura & Manipur.

### Other Related News

J&K government has decided to **implement** the **Forest Rights Act (FRA), 2006**, which will elevate the socio-economic status of a sizable section of the 14-lakh-strong population of tribals and nomadic communities.

### FASTER System

Supreme Court has introduced a new “**Fast and Secured Transmission of Electronic Records**” (**FASTER**) system by which its crucial decisions, including orders on bail and stay of arrest, can be communicated **electronically** to prison authorities and investigating agencies through a secure channel.

### Significance

- Ensure that **undertrials are not made to wait for days** on end behind bars to be released because the certified hard copies of their bail orders were late to reach the prison.
- Prevent **unnecessary arrests and custody** of people even after the court has already granted them its protection.
- It may even communicate a **stay on an execution ordered** by the final court on time.

### Food and Forex Crisis in Sri Lanka

Sri Lankan President has **declared a state of Economic Emergency** for the **Supply of Essential Foods**. It has now been **passed by the Sri Lankan Parliament**.

As per the Constitution of Sri Lanka, the declaration of emergency **must be approved within 14 days by the 225-member parliament**.

- This step was taken to control food prices and prevent hoarding amid shortages of some staples
- It depends **heavily on imports** to meet even its basic food supplies, such as sugar, dairy products, wheat, and medical supplies.
- Sri Lanka does not have a **universal public distribution system** or **ration cards**

### Unbridled Power to Authorities

- The emergency law enables authorities to detain people without warrants, seize property, enter and search any premises, suspend laws and issue orders that cannot be questioned in court.
- Officials who issue such orders are also **immune from lawsuits**.
- **Military will oversee the action** which gives power to officials to ensure that essential items are sold at government-guaranteed prices.

### Factors Responsible for the Current Economic Crisis

#### Covid 19 Pandemic

- Tourism industry which represents over **10% of the country's GDP** and **brings foreign exchange** reserve was severely hit
- It also led to production shortages and logistical bottlenecks.

#### Increase in foreign exchange rate

- With the supply of **foreign exchange drying up**, the value of the Sri Lankan rupee started **depreciating** which made the imports costlier
- The island nation imports a large part of its food supplies. So, the **price of food items has risen** in tandem with the depreciating rupee.

#### Push for Organic Agri-Products

- Sri Lanka wants to become the **first country in the world with an agriculture sector that is 100% organic**. Govt has banned the use of chemical fertilisers in farming.
- This has further aggravated the crisis by **dampening agricultural production**.

#### Role of Speculators

- Speculators are causing the rise in food prices by hoarding essential supplies.

**China Opens First Road-Rail Transport Link to Indian Ocean**

The **first shipments**, using the newly-launched railway line from the Myanmar border to the key commercial hub in Chengdu in western China, were delivered.

**Key Highlights**

This corridor connects logistics lines of Singapore, Myanmar and China using **sea-road-rail link**. One way saves 20-21 days linking Indian Ocean with southwest China.



<b>Singapore to Yangon Port</b>	•Transportation <b>using ship</b> through the Andaman Sea
<b>Yangon port to Lincang</b>	•Lincang is Chinese side of the Myanmar-China border in Yunnan province •Transportation <b>via road</b>
<b>Lincang to Chengdu</b>	•Transportation <b>using new railway line</b>

**Why China Is Pursuing This Corridor**

- **Cost-effective alternative to CPEC:** CPEC has been slow to take off amid concerns over security. The **costs and logistics through CPEC are also less favourable** than the Myanmar route.
- **Source of income for Myanmar’s military regime:** This route is expected to **become the lifeblood of international trade** for China and Myanmar, while providing a source of income for Myanmar’s military regime.
- **Encirclement of India:** This new corridor further **reinforces the string of pearls policy of China**.
- This trade corridor is **another** direct Chinese outlet to Indian Ocean (**1<sup>st</sup> one being Gwadar port**).
- This trade route is also China’s alternative to the "**Malacca Dilemma**"(coined in **2003**, by the then Chinese President Hu Jintao).
- Since most of China’s **oil imports** pass through the **Straits of Malacca**, a maritime blockade here could paralyze China’s economy.

**Other Chinese Projects Aimed At Accessing Indian Ocean**

- **Port in Kyaukphyu in the Rakhine state (Myanmar):** As part of *China-Myanmar Economic Corridor*, China plans to develop a port in Kyaukphyu.
- It also includes a **proposed railway line from Yunnan directly to the port**.
- **Gwadar port in Pakistan:** It is key outlet to the Indian Ocean. It is being developed as part of the China Pakistan Economic Corridor (CPEC).



## Prime Minister of Japan Stepped Down

Japanese Prime Minister **Yoshihide Suga** has announced he will not seek re-election as leader of ruling Liberal Democratic Party (LDP). This has set the stage for a **new prime minister following a party leadership vote**.

### Electoral Process of Japan

**Parliament:** Japan has a **bicameral Parliament** called the National Diet.

- **Elections to House of Representatives (Lower house)** are held every **four years** unless the lower house is dissolved earlier.
  - **If house** is dissolved earlier, **snap elections must take place within 40 days**.
  - If house is not dissolved and lawmakers carry out full terms, a general election must be held within **30 days of parliament closing**.
- **Elections to House of Councillors (upper house)**-held every 3 years to choose half of its members

### Voting System

- **Lower House** – A **semi-proportional mixed electoral system** to elect 465 members.
  - 289 members: From **single-seat constituencies using first past the post** method
  - 176 members: **Party List system of proportional representation** in 11 regional block constituencies.
- **Upper House** - 248 Members are **directly elected** using a **mixed system**.
  - 148 members: From 47 **multi-seat constituencies using Single Non-Transferable Vote**.
  - 100 members: Using **Party List system of proportional representation** with the entire nation considered a single electoral district.

#### Party List System

- Voters in each region pick from a list of parties.
- Each party is granted seats in **accordance with the percentage of votes received**.

### Election of the Prime Minister

- Since 1947, the Prime Minister has been chosen in the "**designation election of the prime minister**" in the National Diet.
- The candidate **who wins the majority of votes cast by the lower and upper houses** of parliament will take the top job.

## Chinese Intrusion into Taiwan's Air Defence Identification Zone

Taiwan had said a **large incursion of Chinese military jets** flew into its **air defence zone**.

### China – Taiwan Relation

- China and Taiwan were divided during a **civil war in the 1940s**.
- Taiwan has its own constitution, democratically elected leaders and about 300,000 active troops in its armed forces
- However, China considers **Taiwan to be a province of China** under what it calls the "**one China principle**". It has not ruled out the use of force to reunite it.

### India's Stand

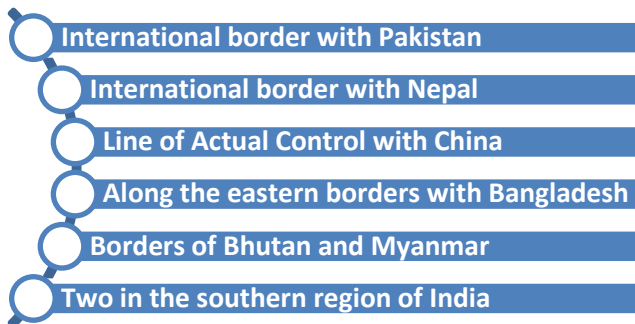
- India has a **growing relationship with Taiwan** but a much larger relationship with China.

- Traditionally India supports **One-China policy** and considers **Taiwan a part of China**.

#### What Is An Air Defence Identification Zone (ADIZ)?

- ADIZ is a defined area of airspace within which **civil aircraft are required to identify themselves**.
- These zones are **established above the exclusive economic zone (EEZ)** or high seas adjacent to the coast, and over the territorial sea, internal waters, and land territory.
- The legal basis for such zones is the right of States under the **Convention on International Civil Aviation of 1944**.
- It should be noted that ADIZs are not directly covered by international treaties. Hence, they are **not binding legal agreements**.

**ADIZ in India:** India has demarcated **6 ADIZ near its territory**. These zones have been declared over



#### AUKUS Grouping

- **United States, UK, and Australia announced a new trilateral defence deal for Indo-Pacific**.
- Under this deal, USA and Britain will help Australia deploy nuclear-powered submarines in Pacific region.

#### Key Highlights Of The Partnership

- The first major initiative of AUKUS would be to **deliver a nuclear-powered submarine fleet for Australia**. However, the **new submarines will not be armed with nuclear weapons**.
- This is **because Australia is a signatory to the Nuclear Non-proliferation Treaty (NPT)** which bans it from acquiring or deploying nuclear weapons.
- Under the deal, the three nations have agreed to
  - Enhance the development of joint capabilities and **technology sharing**,
  - Foster deeper integration of security and defence-related science, technology, industrial bases and supply chains.

**Significance:** US has **only shared** nuclear submarine technology **once** before in 1958 with Great Britain.

#### Advantage over Conventional and AIP (Air-Independent Propulsion) Submarines

- Both of these submarines need to come to the surface to recharge their batteries. The diesel engine propels the vessel on the surface. However, the fuel cells of AIP can only be charged at on-land stations, not while at sea.
- Since nuclear-powered propulsion submarine is propelled by a nuclear-powered engine rather than by batteries, it does not have to emerge on the surface at all, except to replenish supplies for the crew.



### For Indo-Pacific Region

- This will be a partnership where technology, scientists, industries and defence forces of these three countries will work together to **deliver a safer and more secure region**.
- Some analysts feel that this partnership will lead to **intensified arms race in the region**.

### For Australia

- **Australia has never had nuclear-powered submarines**. Hence, this step will give **Australia naval heft in the Pacific**, where China has been particularly aggressive.
- Critics, on the other hand, claim that this **deal would antagonise Beijing** which will not be good for Australia. As per them, the deal represents a **dramatic loss of Australian sovereignty**.
- Australia is now set to join **an elite group of only six countries** – India, US, UK, France, Russia and China – that operate nuclear-powered submarines.
- It will also be the **only country** to have such submarines without having a **civilian nuclear power industry**

### For India

- The new pact will add to the **global efforts to balance China in the region**.
- It should be noted that Australia and India are close strategic partners in the Indo-Pacific region.
- Australia is also a member of **QUAD group**. A stronger Australia would lead to further strengthening of QUAD.

### For France

- France is not happy with the deal and has termed this deal a “**stab in the back**”.
- **Australia had signed a contract** to buy 12 Attack-class submarines from France in 2016. The first submarine was expected to be operational around 2034.
- As a result of the current deal, **Australia** will have to **ditch the contract**. This would affect **French economy in a negative way**.

### How China Views This Development

- China has **denounced** a new Indo-Pacific security alliance saying **such partnerships should not target third countries**.
- It claims that the current cooperation would gravely undermine regional peace and stability, aggravate arms race and **hurt the international non-proliferation efforts**.
- This highlights that **western powers are using nuclear exports for geopolitical gaming tools**.

### Five Eyes Alliance

- The three countries alongside Canada and New Zealand already **share extensive intelligence** through Five Eyes alliance.
- The alliance was created during the Cold War (1946-1991)
- The alliance was needed to **share sensitive information** regarding their adversaries on all possible fronts available.

**Iran to Allow Nuclear Surveillance by IAEA**

Iran has agreed to let **International Atomic Energy Agency (IAEA) service monitoring cameras at Iranian nuclear sites.**

**Joint Comprehensive Plan of Action (JCPOA)**

- The JCPOA, commonly known as **Iran’s Nuclear Deal**, was signed in July 2015. It imposes **restrictions on Iran’s civilian nuclear enrichment program.**
- This deal was **negotiated by P5+1 - China, France, Russia, the United Kingdom, and the United States and Germany.**
- The basic gist of deal was that the **sanctions would be lifted** in exchange for **Iran agreeing to several serious restrictions on its nuclear development.**

**US’ Withdrawal From The Deal And Re-Imposed Sanctions**

- In May 2018, US President Trump **announced to withdraw from Iran nuclear deal.**
- Reasons given for the withdrawal were:
  - ✓ The deal is **not entirely permanent**; the restrictions on Iran’s nuclear program start to relax about 10 years after the deal was signed.
  - ✓ It **failed to stop the development of ballistic missiles** by Iran;
  - ✓ The **deal had handed Iran** a US\$100bn **windfall** from **assets frozen overseas** and was able to resume selling oil on **international markets** using **global financial system** for trade. This money is used by Iran to fund for weapons, terror, and oppression across the Middle East.
- **Sanctions were reimposed** in November 2018 by Trump on Iran following the withdrawal of USA from the deal.
  - ✓ UK, Germany and France opposed the sanctions and set up an **alternative payment mechanism** aimed at helping international companies trade with Iran without facing US penalties.
  - ✓ UN sanctions remain lifted but they would automatically "snap back" in place for 10 years, with the possibility of a 5 year extension, if Iran violates any aspect of the deal.
- Tehran responded to the U.S. withdrawal and reimposition of sanctions **by violating many of those restrictions.**

Current scenario	Significance of removing sanctions for India
<ul style="list-style-type: none"> <li>• USA is ready to "<b>re-engage</b> in meaningful diplomacy" if Iran returns to full compliance with the agreement first.</li> <li>• IAEA and Iranian diplomats have struck a "<b>temporary deal</b>" to continue inspection of Iran’s nuclear plants for 3 more months, which keeps open diplomatic path to revive the deal.</li> <li>• Iran has ruled out holding an <b>informal meeting with the US and European</b> powers on reviving the deal, insisting that <b>US must lift all of its unilateral sanctions first</b></li> </ul>	<ul style="list-style-type: none"> <li>• Revive India’s interest in Chabahar port, Bandar Abbas port, and other plans for regional connectivity.</li> <li>• Help India to neutralize Chinese presence in Gwadar port</li> <li>• Help India to procure cheap Iranian oil and aid in energy security</li> </ul>

**International Atomic Energy Agency (IAEA)**

- It is the **international centre for cooperation in nuclear field**.
- It is widely known as the **world’s “Atoms for Peace and Development” organization** within United Nations family.
- The Agency works with its Member States and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies.
- It was **created in 1957** in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology.
- **Headquarter** – Vienna, Austria

**SDG Progress Award**

- Bangladesh PM has been conferred with the ‘**SDG Progress Award**’.
- The award was given by the UN-sponsored Sustainable Development Solutions Network (SDSN) for Bangladesh’s steady progress in achieving UN’s Sustainable Development Goals.
- The SDSN was set up in 2012 under the auspices of the UN Secretary General.
- It seeks to mobilize global scientific and technological expertise to promote practical solutions for sustainable development.

**EU Unveils Indo-Pacific Strategy**

EU has **unveiled a new strategy** for boosting economic, political and defence ties in the Indo-Pacific.

**Indo-Pacific Region**

- As per EU, the region stretches from **India and China through Japan to Southeast Asia and eastward past New Zealand to the Pacific**.
- This region is **growing in importance** given its rising population and political weight, its role in global trade and security and its impact on climate change.



**Aim of the strategy**

- Strengthen and expand **economic relations**
- Reinforce the respect of **international trade rules**
- Help partners fight and adapt to **climate change** and biodiversity loss
- Boost cooperation on **health care** so least-developed countries can prepare better

**Seven priority areas identified** for a sustainable and inclusive socio-economic recovery.

Sustainable and inclusive prosperity	Green transition	Ocean governance	Digital governance and partnerships	Connectivity	Security and defence	Human security
--------------------------------------	------------------	------------------	-------------------------------------	--------------	----------------------	----------------

Key Highlights

<p>Partnerships &amp; Cooperation</p>	<ul style="list-style-type: none"> <li>• Aims to deepen its engagement with <b>partners that already have Indo-Pacific approaches of their own.</b></li> <li>• Expressed its interest in <b>engaging with the QUAD</b> on <u>issues of common interest such as climate change, technology or vaccines.</u></li> </ul>
<p>Centrality of ASEAN</p>	<ul style="list-style-type: none"> <li>• It appreciates <b>ASEAN’s commitment to effective multilateralism</b> and supports the <b>principle of ASEAN centrality</b>, its efforts to build a <b>rules-based regional architecture.</b></li> <li>• Supports the <b>ASEAN-led process</b> towards an <u>effective, substantive and legally binding Code of Conduct in the South China Sea.</u></li> </ul>
<p>Cooperation with China</p>	<ul style="list-style-type: none"> <li>• Pledged to <b>seek a trade deal with Taiwan</b> and to <b>deploy more ships to keep open sea routes.</b></li> <li>• It <b>does not claim to be directed against China in the region.</b> It is <u>built on the will to cooperate, not to confront.</u></li> <li>• Highlights areas like <b>climate and biodiversity</b> where <b>China's cooperation is essential.</b></li> </ul>
<p>Security Dimension</p>	<ul style="list-style-type: none"> <li>• Mention of <b>joint exercises, port calls to ensure freedom of navigation</b> and to <b>combat piracy.</b></li> <li>• Hints at possibilities of establishing <b>“Maritime Areas of Interest in Indo-Pacific”.</b></li> <li>• Consolidated information sharing through information fusion centres, including <b>Indo-Pacific Regional Information Sharing (IORIS) platform.</b></li> </ul>

What was the need for EU to release its Indo-Pacific strategy?

- 1. EU’s engagement in the region**

  - For long, EU has just been present as **an economic actor in Asia** and the broader Indo-Pacific.
  - Now, it wants to **step up its involvement** given the rise in regional geopolitical tensions which are hurting trade and supply chains and undermining security.
- 2. Members of EU started to adopt Indo-Pacific policy on their own**

  - Members like Germany, France and Netherlands started integrating Indo-Pacific in their own national security strategies.
  - This pushed Brussels to adopt the Indo-Pacific as a strategic concept.
- 3. China’s rise and its aggressive**

  - China’s aggressive and expansionist policies in South China Sea, Taiwan Strait, Hong Kong, Xinjiang forced EU to form a strategy for this region.
  - Growing US-China rivalry its negative impact on European interests was also the reason.

Bright Star

- Egypt hosted the **'Bright Star' joint military drill** with 21 countries.
- This multinational military drill was launched in 1980 as part of US-brokered peace treaty between Egypt and Israel.

- Since then, it has been hosted by Egypt in cooperation with the US every two years.

### India-UAE Negotiations for CEPA

India and UAE started formal negotiations for a mutually-beneficial Comprehensive Economic Partnership Agreement (CEPA).

#### Background

During the visit of Crown Prince al-Nahyan to New Delhi (January 2017) as Chief Guest for Republic Day celebrations, India and the UAE signed a **Comprehensive Strategic Partnership (CSP) agreement**. The focus areas underlined in the CSP were:

- Economy with emphasis on a two-way flow of investments,
- Counter-terror cooperation and defence ties.
- Negotiation in areas such as trade facilitation, customs cooperation
- Intellectual Property Rights.

#### Comprehensive Economic Partnership Agreement

- It is a kind of free trade pact which covers **negotiation** on the **trade in services and investment**. It may even consider negotiation on areas such as trade facilitation, customs cooperation, competition and Intellectual Property Rights.
- Partnership agreements are more comprehensive than FTA.
- It also looks into the **regulatory aspect of trade**
- India has signed CEPAs with South Korea and Japan

### Key Highlights

#### CEPA with an Early Harvest

Both countries formally launched negotiations for a **CEPA with an early harvest (CSP)** to be concluded by end December 2021 and new formal agreement to be signed by March 2022.

#### Aims To Increase Bilateral Trade In Goods And Services

- The proposed free trade agreement (FTA) is expected to raise bilateral merchandise trade to \$100 billion in five years following the signing of the pact.
- In FY21, the bilateral merchandise trade was at \$43 billion.
- It also aims to more than double **bilateral services trade** to \$15 billion during this period.

#### FTAs With Key Economies: India's Broader Strategy

- The negotiations with the UAE are a part of India's broader strategy to **forge "fair and balanced" trade agreements with key economies**.
- India is also aiming to sign free trade agreements with Australia, UK and the European Union in the near future.

#### Early Harvest Schemes

- Aim of this scheme is to promote trade before a comprehensive Free Trade Agreement is concluded.
- It helps the two trading countries to identify **certain products** for tariff liberalisation pending the conclusion of FTA negotiation.



- This strategy gained traction after **India pulled out of the China-dominated RCEP** in November 2019.
- Balanced FTAs will also enable India to achieve sustained growth rates in exports in the coming years.
- India has set an **ambitious merchandise export target of \$400 billion for FY22**, against \$291 billion in FY21.

**India – UAE Bilateral Relationship**

<b>Political relations</b>	<ul style="list-style-type: none"> <li>• Established diplomatic relations in 1972.</li> <li>• In February 2019, <b>UAE invited India as the "Guest of Honour"</b> to address the Inaugural Plenary of 46th Session of the Organisation of Islamic Cooperation.</li> <li>• PM Modi, in August 2019, was awarded the <b>highest civilian award of UAE called 'Order of Zayed'</b>.</li> </ul>
<b>Trade Relation</b>	<ul style="list-style-type: none"> <li>• UAE was India's <u>2<sup>nd</sup> biggest goods export market</u> until FY20, behind only the US.</li> <li>• China pipped it in FY21 when the pandemic caused severe disruptions in trade.</li> <li>• UAE is currently <u>India's 3<sup>rd</sup> largest trading partner</u> with bilateral trade in FY20 valued at \$59 billion.</li> </ul>
<b>Investment</b>	<ul style="list-style-type: none"> <li>• UAE is <u>8<sup>th</sup> largest investor in India</u>, having invested \$11 billion between 2000 and 2021.</li> <li>• Investment by Indian companies in the UAE is estimated to be over \$85 billion.</li> </ul>
<b>NRI Remittances</b>	<ul style="list-style-type: none"> <li>• Annual remittances made by the <b>large Indian community in UAE (~3.3 million)</b> amount to US\$ 17.56 billion for year 2018.</li> </ul>
<b>Energy Cooperation</b>	<ul style="list-style-type: none"> <li>• Abu Dhabi National Oil Company along with Indian Strategic Petroleum Reserves Ltd. (ISPRL) are establishing a <b>strategic crude oil reserve in Mangalore (Karnataka)</b>.</li> </ul>
<b>Defence Relation</b>	<ul style="list-style-type: none"> <li>• Defence co-operation between the two countries is steered through a <u>Joint Defence Co-operation Committee at Ministry level</u>. Bilateral Defence Exercise:                         <ul style="list-style-type: none"> <li>• Zayed Talwar exercise, In-UAE BILAT - naval exercise</li> <li>• DESERT EAGLE-II – Airforce exercise</li> </ul> </li> </ul>
<b>Cultural relation</b>	<ul style="list-style-type: none"> <li>• <u>Cultural Agreement of 1975</u> provides the basic framework</li> <li>• India was the <u>Guest of Honour Country in Abu Dhabi International Book Fair 2019</u>.</li> <li>• Abu Dhabi celebrated 150th birth anniversary of Mahatma Gandhi, 115th birth anniversary of Lal Bahadur Shastri &amp; 550th Birth Anniversary of Guru Nanak Dev ji.</li> <li>• <u>First traditional Hindu Temple in Abu Dhabi</u> was opened in April 2019.</li> <li>• In February 2019, Abu Dhabi included <b>Hindi as the 3<sup>rd</sup> official language</b> used in its courts, alongside Arabic and English.</li> </ul>

**SAARC Foreign Ministers' Meeting Cancelled**

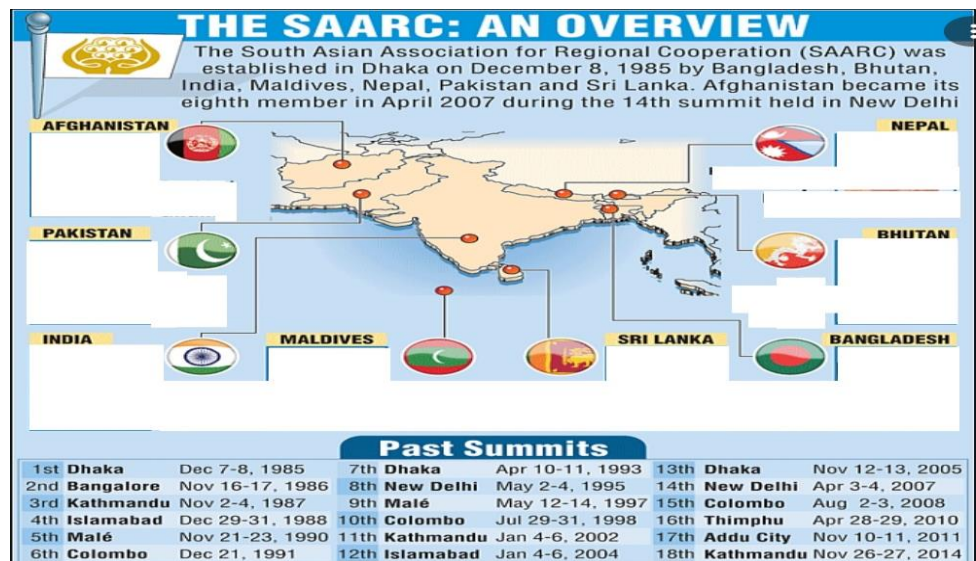
- A meeting of foreign ministers of South Asian Association for Regional Cooperation (SAARC) countries, has been cancelled. It was slated to be held in **New York**.
- **Nepal was the host of the meet.**

**Reason for Cancellation**

- Pakistan wanted the Taliban to represent Afghanistan in the SAARC meet. However, India along with some other members objected to the proposal.
- Taliban has not been **recognised** by India and other countries of the world. Top cabinet ministers of the Taliban regime in Kabul are blacklisted by the UN.
- The majority of members in SAARC agreed that an empty chair can be kept for Afghanistan during the meet to which Pakistan did not agree.
- **SAARC works on consensus** and the member countries could not achieve it on this issue. Hence, the meeting was called off.

**About South Asian Association for Regional Cooperation (SAARC)**

- **Secretariat**- Kathmandu.
- 8 Member states and 9 observer states.
- 9 observer states are Australia, China, the European Union, Iran, Japan, Mauritius, Myanmar, South Korea and the United States.
- The combined economy of SAARC is **3rd largest in the world** in the terms of GDP (PPP) after the United States and China.



- **SAARC has 21%** (Around 1.7 billion) **of world's total population**.
- India makes up over 70% of the area and population among these eight nations.
- **SAARC Summits Status** - The **19th Summit which was supposed to be held in Islamabad in 2016**. It was postponed due to boycott by members following Islamabad's alleged involvement in the Uri terror attack.

**Challenges Faced by SAARC**

- Often overshadowed by India-Pak tensions.
- **Failed to promote economic integration** - In financial year 2015-16, the total India-SAARC trade stood at around \$21.5 billion, as against \$23.4 billion a year ago.
- Of this, India's trade with Bangladesh and Sri Lanka accounted for nearly 60%.
- **Failed to ensure regional integration** – In 2014, Pakistan pulled out of the Motor Vehicle Agreement which has the potential to promote sub-regional cooperation within South Asia.

**SAARC During COVID-19 Pandemic**

- In March 2020, a video-conference of leaders of all SAARC member nations was hosted by India. India proposed **SAARC COVID-19 Emergency Fund**. Almost all nations pledged money to the pool.
- By the end of March 2020, total amount in the Covid-19 Emergency Fund has reached to \$18.3 million which reflected the deeply shared sense of determination.
- SAARC Disaster Management Centre launched a website for information related to the COVID-19.

**SAARC Successes (Implementation of Major Themes)**

**MAJOR THEMES COVERED AND IMPLEMENTED**

Themes SAARC summit: Action/Initiative

<p><b>TRADE IN GOODS/SOUTH ASIAN FREE TRADE AGREEMENT (SAFTA)</b> (implemented but needs improvement like reduction of peak tariffs to ensure freer trade)</p> <ul style="list-style-type: none"> <li>Decided to finalize the draft treaty text by 2002, expedite removal of tariff and non-tariff barriers to free up trade (Kathmandu summit, 2002)</li> <li>Signed the framework agreement on Safta (Islamabad, 2004)</li> <li>Emphasized need to realize the full potential of Safta by reducing sensitive lists, accelerating trade facilitation measures and removing non-tariff barriers (Thimphu, 2010)</li> </ul> <p><b>TRADE IN SERVICES</b> (agreement came into force in 2012 but discussions on modalities are still on)</p> <ul style="list-style-type: none"> <li>Recognized need to take regional economic integration further by expanding scope of Safta to include trade in services (Dhaka, 2005)</li> <li>Urged inclusion of trade in services under Safta; called for finalization of such a pact (New Delhi, 2007)</li> <li>Signed Saarc agreement on trade in services and called for its early ratification (Thimphu, 2010)</li> </ul> <p><b>SOUTH ASIAN UNIVERSITY</b> (operational)</p> <ul style="list-style-type: none"> <li>India offered to establish the university (Dhaka, 2005)</li> <li>Decided to establish the university (Delhi, 2007)</li> </ul>	<p><b>TRANSPORTATION</b> (The Saarc summit, 2014, in Kathmandu is expected to sign the Saarc Motor Vehicles agreement and the Regional Railways agreement)</p> <ul style="list-style-type: none"> <li>Agreed to study India's proposal for daily air services facility by designated airlines on reciprocal basis (Dhaka, 2005)</li> <li>Urged early implementation of Saarc regional multimodal transport study (Colombo, 2008)</li> <li>Noted progress made in consideration of Saarc Motor Vehicles agreement by member states (Colombo, 2008)</li> <li>Called for collaborative efforts to achieve greater intra-regional connectivity; agreed to expedite talks on agreements on Motor Vehicles and Regional Railways (Thimphu, 2010)</li> <li>Agreed to complete preparatory work on Indian Ocean cargo and passenger ferry service by end of 2011 to launch the service (Addu City, 2011)</li> </ul> <p><b>INVESTMENT</b> (Saarc Investment Promotion and Protection agreement pending since 2007)</p> <ul style="list-style-type: none"> <li>Sought early finalization of regionally agreed investment framework (Kathmandu, 2002)</li> <li>Directed that the agreement on investment promotion and protection be finalized (New Delhi, 2007)</li> </ul>	<p><b>SAARC ARBITRATION COUNCIL</b> (pending finalization of arbitrators panel)</p> <ul style="list-style-type: none"> <li>Agreement on operationalizing council (Colombo, 2008)</li> </ul> <p><b>SOUTH ASIAN DEVELOPMENT BANK</b> (to be established)</p> <ul style="list-style-type: none"> <li>Urged that the prospects of setting up a development bank should be examined (Islamabad, 2004)</li> </ul> <p><b>ENERGY</b> (The Saarc summit, 2014, in Kathmandu is expected to sign a pact on regional power grid)</p> <ul style="list-style-type: none"> <li>Directed a study on South Asian Energy Cooperation including an Energy Ring (Islamabad, 2004)</li> <li>Stressed the need for urgently developing a hydel power potential, grid connectivity and gas pipelines (Colombo, 2008)</li> <li>Noted proposal from India to prepare a road map for a Saarc market for electricity (Thimphu, 2010)</li> </ul> <p><b>VISION FOR A SOUTH ASIAN COMMUNITY</b> (not much progress)</p> <ul style="list-style-type: none"> <li>Agreed to the vision of a South Asian community with a smooth flow of goods, technologies, services, people, capital and culture (New Delhi, 2007)</li> </ul>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**First-ever 2+2 Ministerial Dialogue Between India & Australia**

- India hosted the **first-ever 2+2 Ministerial Dialogue with Australia** in New Delhi.
- "2+2 ministerial dialogue" is the highest-level institutional mechanism involving **foreign and defence ministers** of two countries.

India holds talk in 2+2 format with **4 countries: US, Japan, Australia and Russia.**

In April 2021, India and Russia announced the establishment of a new 2+2 dialogue.

**Background**

- This dialogue is the outcome of India-Australia leaders' virtual summit in June 2020.
- In this summit, both sides decided to elevate bilateral relations to a **comprehensive strategic partnership**.
- As per agreement, meeting in a '2+2' format is to discuss **strategic issues** at least **every two years**.



**Key Outcomes of the Dialogue**

<b>Co-operation during COVID-19</b>	<ul style="list-style-type: none"> <li>• Australia-India Strategic Research Fund is being used to fund the collaborative projects aimed at advancing COVID-19 screening and study the future health effects of the virus.</li> <li>• Leaders appreciated the launch of the <b>Supply Chain Resilience Initiative</b> by the Trade Ministers of India, Australia and Japan.</li> </ul>
<b>Afghanistan</b>	<ul style="list-style-type: none"> <li>• Both sides insisted that <u>Afghanistan’s soil must not become a safe haven for terrorists or be used for attacks on other nations</u>, as <b>emphasised in the UNSC resolution 2593</b>.</li> <li>• Participating leaders urged that international organisations such as <b>UNHCR should be allowed unimpeded access to provide humanitarian support</b>.</li> </ul>
<b>Quad</b>	<ul style="list-style-type: none"> <li>• It reflects <b>globalisation and the compulsions of countries to work together</b>.</li> <li>• Quad champions <b>ASEAN centrality</b>. It has a <b>positive and practical agenda</b> that includes <u>Covid-19 vaccines, climate change, critical technologies and countering dangerous disinformation</u></li> </ul>
<b>Indo-Pacific</b>	<ul style="list-style-type: none"> <li>• India and Australia are committed to <b>bolstering cooperation across the Indo-Pacific</b>. This cooperation would be aimed to <b>ensure a free and open region on a rules-based order (in line with United Nations Convention on the Law of the Sea (UNCLOS))</b>.</li> <li>• It would also aim to <b>improve coordination for maritime security and information-sharing</b>.</li> </ul>
<b>Bilateral cooperation</b>	<ul style="list-style-type: none"> <li>• On bilateral defence cooperation, both sides decided                             <ul style="list-style-type: none"> <li>○ expand military engagements across services,</li> <li>○ greater defence information-sharing and</li> <li>○ mutual logistics support</li> </ul> </li> </ul>

- Australian side described **India as a “rising Indo-Pacific great power”** and an **“increasingly significant security partner for Australia”**.
- It was the **bilateral logistics support arrangement** that enabled Australia to airlift oxygen to India during the second wave of Covid-19 infections this year.
- Australia expressed its intention to
  - **invite India** to participate in the **Talisman Sabre exercise** and
  - Continue to **participate in India’s Malabar naval exercise** along with the US and Japan.

**UNSC resolution 2593**

Adopted under India's presidency of UNSC. It demanded that **Afghan territory should not be used to threaten or attack any country** or to shelter and train terrorists and plan or finance terrorist attacks.

**Strategic Clean Energy Partnership (SCEP)**

SCEP organizes inter-governmental engagement across **five pillars of cooperation**:



**Developments in SCEP**

- Recently the **revamped U.S.-India Strategic Clean Energy Partnership (SCEP)** was launched by the addition of a 5<sup>th</sup> Pillar on Emerging Fuels.

- A new India-US Task Force on Biofuels
- Both sides will strengthen the electric grid in India
- India-US Low Emissions Gas Task Force - to support India's vision of **gas-based economy**.
- Institutionalization of India Energy Modeling Forum

#### What does the recent partnership mean for India?

- The current partnership sets clear domestic targets on greenhouse gas emissions and renewable energy deployment for both countries.
- In its new nationally determined contribution, the United States has set an economy-wide target of reducing its **net greenhouse gas emissions by 50-52% below 2005 levels in 2030**.
- On the other hand, **India has set a target of installing 450 GW of renewable energy by 2030**.
- Achieving India's renewable energy transition goals by 2030 would require investment of \$2.5 trillion (Rs 183 lakh crore) which will be mobilized by this partnership.

### India & Bangladesh: Recent Developments

#### 57<sup>th</sup> Indian Technical and Economic Cooperation (ITEC) day celebrated

- High Commission of India celebrated the 57th ITEC day in Dhaka.
- ITEC is a flagship programme of the Government of India. It was established in 1964.
- It is a training programme which offers benefit of India's **development experience** and appropriate **technologies** to the developing countries.
- Every year, more than 10,000 training slots are offered to 161 partner countries.

#### New Passenger Terminal Building inaugurated at Petrapole

- A new Passenger Terminal (I) Building was inaugurated at the Integrated Check Post, Petrapole.
- It will give a major boost to **border infrastructure** and further strengthen connectivity
- ICP Petrapole is the **largest land port in India** and 9th largest land port in South Asia.

#### Mobile Oxygen Plants handed over to Bangladesh

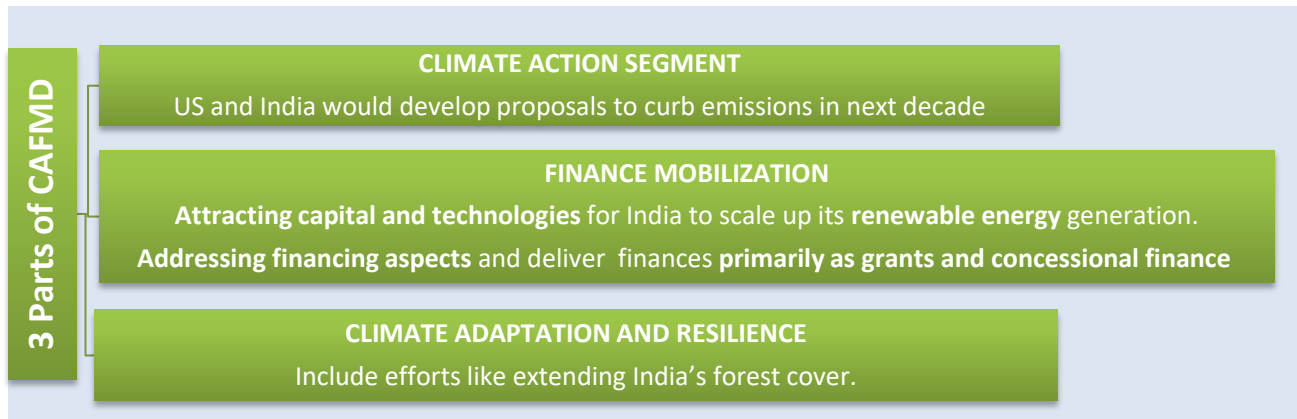
- India delivered **2 Mobile Oxygen Plants** to Bangladesh to fight COVID 19 pandemic.
- These plants had been developed and manufactured by **DRDO**

### Tamil Nadu-Denmark Energy Island Project

- Tamil Nadu is planning to set up of an **Energy Island in the Gulf of Mannar** with the help of Denmark. The Island may have a potential to generate **4-10 gigawatts** of electricity.
- Gulf of Mannar lies between the west coast of Sri Lanka and the south-eastern tip of India.
- If it materialises, the project will be the **first offshore floating wind park in India**.
- This project is part of the **Green Strategic Partnership** that was signed between PM Modi and his Danish counterpart during a virtual summit in September 2020.

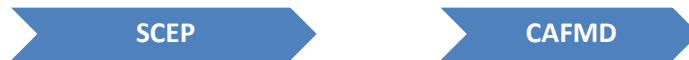
**Climate Action and Finance Mobilization Dialogue (CAFMD)**

- India and USA launched the “Climate Action and Finance Mobilization Dialogue (CAFMD)”.
- CAFMD is **one of the two tracks** of the India-U.S. Climate and Clean Energy Agenda 2030 partnership launched at the Leaders' Summit on Climate in April 2021.
- Revamped US-India **Strategic Clean Energy Partnership (SCEP)** was the first track.



**About the India-US Climate and Clean Energy Agenda 2030 Partnership**

- The partnership aims to provide **financial and technological support** to India to meet its Paris Agreement goals on transitioning to renewable energy by 2030.
- It will proceed along **2 main tracks**



## SUMMITS AND ORGANISATIONS

### 8<sup>th</sup> Meeting of Agricultural Experts of BIMSTEC

India hosted the 8<sup>th</sup> Meeting of Agriculture Experts of Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) countries virtually.

#### Agricultural Cooperation under BIMSTEC

Agriculture is one of the **14 priority areas** identified for sectoral cooperation.

- The **4<sup>th</sup> Summit of BIMSTEC**, held in August 2018 at **Kathmandu**, emphasised deepening the cooperation in agriculture sector.
- The agricultural cooperation has assumed even greater significance in view of the **COVID-19 pandemic and its impacts on the food system**.

#### BIMSTEC

- It is an **economic bloc** with **Permanent Secretariat** at Dhaka, Bangladesh
- **Aim:** To **counter** the onslaught of **globalisation** by accelerating **regional growth** through mutual cooperation by utilising regional resources and geographical advantages.
- It is **sector-driven cooperative organisation** in which **6 sectors have been included:** Trade, Technology, Energy, Transport, Tourism and Fisheries
- Under these 6 sectors, 14 priority areas have been identified. **Climate change was added as the 14<sup>th</sup> priority area of cooperation in 2008.**
- Among these priority areas, a member country chooses which of the 14 priority areas it is willing to take lead.
- **India is lead country for:**
- Transport & Communication, Tourism, Environment & Disaster Management, Counter-Terrorism & Transnational Crime.

## BIMSTEC

Stands for **The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation**

Founded in 1997 through **Bangkok Declaration**

**7 MEMBER COUNTRIES**

**Importance of BIMSTEC**

- Accounts for **22%** of the world's population
- Combined GDP of **\$2.7 trillion**
- One-fourth of the world's traded goods cross the Bay every year
- Six focus areas- trade, technology, energy, transport, tourism and fisheries

First summit held in Thailand

Sri Lanka is the current Chair

Significance of BIMSTEC for India	Challenges
<ul style="list-style-type: none"> <li>• <b>Bridge-builder between the SAARC and the ASEAN</b> – Myanmar and Thailand are members of ASEAN while other member nations belong to SAARC.</li> <li>• <b>Neighbourhood First Policy</b> - BIMSTEC is an integral part of India's ongoing efforts to increase geo-economic cooperation among countries in the <u>region which it sees as part of its extended neighbourhood</u>.</li> <li>• <b>Potential game-changer for the landlocked northeastern</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>India and Bangladesh</b> have Teesta water sharing dispute and refugees issue.</li> <li>• <b>Bangladesh and Myanmar</b> problems in regard to the Rohingya Muslims as refugees.</li> <li>• <b>India and Sri Lanka</b> continue to have friction on the fishermen issue.</li> </ul>

states.

- **Strategic Significance** - China has diverted its attention to the Bay of Bengal with greater assertion. The Bay of Bengal acts like a funnel to the Malacca Strait, a major trade route for China.
- **Economic Significance** – 7 nations had robust annual economic growth in recent times and one-fourth of the world’s traded goods cross the Bay every year.
- **Resource rich region** - The Bay of Bengal has huge untapped resources especially massive reserve of natural gas.
- **In counterterrorism**: Close cooperation between India and BIMSTEC countries can strengthen the fight against terrorism and illicit drug trafficking.
- **Attractive alternative to SAARC** - BIMSTEC **more naturally** lends itself to regional integration (physical connectivity as well as economic cooperation) than SAARC

- **Chinese Interference** in the backyard
  - Growing Nepal – China economic and security cooperation
  - Growing friendship between Sri Lanka and China
  - Increased Chinese activities in Bangladesh
- Initiated by India, **MILEX 2018 was the first field training military exercise** as part of the BIMSTEC. Nepal and Thailand only sent observers and did not participate.
- **BIMSTEC seriously lags behind** ASEAN and other regional organisations **in terms of people-to-people contacts.**

### 6<sup>th</sup> Eastern Economic Forum 2021

PM Modi addressed the plenary session of **6th Eastern Economic Forum (EEF)**.

#### About Eastern Economic Forum (EEF)

- It was established by the President Vladimir Putin, in 2015.
- **Aim**: To support the **economic development of Russia’s Far East**, and to **expand international cooperation in the Asia-Pacific region**.

#### What has the EEF achieved till now?

- Since its establishment, more than **17 different countries have invested** in the Far East. These include countries like China, Japan, South Korea, Australia, New Zealand, and Vietnam.
- In 2019, **India extended a \$1 billion line of credit towards the development of this region.**

#### India’s Engagement with Russia’s Far East

- India is the **first country in the world to open a consulate in Vladivostok** (Sangam’ of Eurasia and Pacific).
- Indian PM was the chief guest at 5<sup>th</sup> EEF (2019), **first by an Indian Prime Minister.**
- In 2019 India announced a commitment to an **“Act Far-East”** policy.
- India gave a line of credit worth USD 1 billion for investment in this region.



- **International Trade and commerce:** India and Russia agreed to **open a maritime route between Chennai and Vladivostok** to give impetus to cooperation between India and Russian Far East. This connectivity project along with International North-South Corridor will bring India and Russia physically closer.
- **Energy:** Indian workers are participating in major gas projects in the Amur region, from Yamal to Vladivostok and onward to Chennai.

### India's Sherpa for G20 Meet

- The commerce and industry minister **Piyush Goyal** has been appointed as **India's Sherpa** for the **G20**.
- This year's G20 Summit is scheduled to take place in October under **Italian presidency**.
- **India will hold the G20 presidency** from 1<sup>st</sup> December, 2022.
- It will convene **G20 leaders' summit in 2023 for the first time**.
- India will be part of the G20 Troika (preceding, current, and incoming G20 Presidencies) from December 1, 2021 till November 30, 2024

- A Sherpa is a **personal representative of the leader** of a member country at G20.
- Sherpas meet much before the start of the Summit to **iron out differences on various issues**.
- There is **only one Sherpa per Summit** for each member country

[For detailed discussion on G20 and its usefulness, please refer the topic "**First G20 Ministerial Conference on Women's Empowerment**" from August 2021 edition of CA magazine]

### Conference of Protectors of Emigrants (PoE)

- The **4<sup>th</sup> edition** of **Conference of PoE** was held on 10<sup>th</sup> September (Day on which Emigration Act, 1983 was enacted).
- PoE are responsible for **granting emigration clearance to the intending emigrants**.
- PoE submits its report regarding treatment received by emigrants to the **Protector General of Emigrants (PGE)**.
- PGE under Ministry of External Affairs is the **authority responsible for protecting the interest of Indian workers going abroad**.
- PGE is also the registering authority to issue **Registration Certificate** to the **Recruiting Agents** for overseas manpower exporting business.

### UN Meeting on Humanitarian Situation in Afghanistan

- Recently, **UN High-Level Meeting on the Humanitarian Situation in Afghanistan** was held in Geneva.
- As per World Food Programme (WFP) estimate, **14 million people are on brink of starvation**.
- Hundreds of health facilities are at risk of closure after donors backed out.
- **3.5 million people are currently internally displaced**.

- Participating nations have pledged over \$1.2 billion to help Afghanistan. Earlier, UN had called for **\$606m to be raised**, saying this **would bring vital relief to millions**.

**India's Stand at the Meeting**

<b>Did not pledge any money</b>	<ul style="list-style-type: none"><li>• This was probably the <b>first time in 20 years</b> that it has not pledged any money to <b>Taliban ruled Afghanistan</b>.</li></ul>
<b>Humanitarian assistance</b>	<ul style="list-style-type: none"><li>• <u>Humanitarian assistance providers must be given <b>unrestricted</b> and direct access to Afghanistan</u></li><li>• Normalisation of regular commercial operations of <b>Kabul airport</b> which could help the <b>flow of relief material to Afghans</b>.</li><li>• <b>Non-discriminatory distribution of humanitarian assistance</b> across all sections</li></ul>
<b>Recalled UNSC resolution 2593</b>	<ul style="list-style-type: none"><li>• <b>Resolution 2593</b> calls for <b>Afghan soil not being used for terrorism</b></li><li>• India expressed hope that the <u>resolution 2593 would guide international community's approach in coming days</u>.</li></ul>
<b>Expressed concerns about regional stability</b>	<ul style="list-style-type: none"><li>• UNDP has recently assessed that there is an imminent threat of poverty levels rising from 72 to 97% in Afghanistan.</li><li>• As per India, this would have catastrophic consequences, <b>not just in the collective fight against poverty, but also for regional stability</b></li></ul>

[Also refer the topic *“U.S. Exit from Afghanistan”* from July 2021 edition of CA magazine]

**China Applies to Join Asia-Pacific Trade Pact**

China has applied to join a key **Asia-Pacific trade pact** as it attempts to strengthen its position in the region. This pact is called Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).

**Why China Wants to join it?**

- CPTPP would be a **significant boost for China**, especially after it has joined **Regional Comprehensive Economic Partnership (RCEP)** in November 2020.
- Recently, **UK, US and Australia** launched a historic **trilateral security pact** which is seen as an effort to counter China's influence in the Asia-Pacific region.

**About CPTPP**

- It was **created by US to counter China's influence**. However, former President Donald Trump pulled US out of it in 2017.
- This free trade agreement has 11 members - Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam.

**SCO Summit 2021**

**21<sup>st</sup> summit** of **Shanghai Cooperation Organisation (SCO)** was held in **Dushanbe, Tajikistan**. **Dushanbe Declaration** was issued at the end of the summit by the SCO members.

**Key Highlights of the Summit**

- This was **20<sup>th</sup> anniversary** of SCO and the **first summit to be held in a hybrid format**.
- **Iran was admitted as a full member** and Saudi Arabia, Egypt and Qatar as observers.
- Proposal to **establish the SCO Counter-Terrorism Centre in Dushanbe** as a separate permanent body was discussed.

**Dushanbe Declaration**

<b>Terrorism</b>	<ul style="list-style-type: none"> <li>• <b>Terrorism had to be uprooted from its social foundations</b>, which includes <u>eliminating poverty, unemployment and illiteracy</u>.</li> <li>• <b>Joint efforts to prevent terrorism and its financing</b>.</li> <li>• Continue to <b>conduct joint anti-terrorism exercises</b>, with a special reference to upcoming <b>Pabbi Anti-Terror 2021 exercise</b> which will <b>take place in Pakistan</b>. <u>India has not confirmed its presence</u></li> </ul>
<b>Afghanistan</b>	<ul style="list-style-type: none"> <li>• Supported the <u>emergence of Afghanistan as an independent, neutral, united, democratic and peaceful state, free of terrorism, war and drugs</u>.</li> <li>• It is <b>critical to have an inclusive government in Afghanistan</b>, with representatives from all ethnic, religious, and political groups.</li> </ul>
<b>Tourism</b>	<ul style="list-style-type: none"> <li>• Creation of additional mechanisms for interaction in sphere of <b>culture and tourism</b>.</li> <li>• Proposed to <u>introduce the practice of announcement of a SCO <b>tourism and cultural capital every year</b></u>.</li> </ul>

Indian PM attended the summit virtually. It was the **4<sup>th</sup> summit** that India has participated as a **full-fledged member (since 2017)**.

**India's Stance at the Summit**

**On Afghanistan**

- Indian PM urged the international community to **not rush into recognising the Taliban govt** saying it was not inclusive and formed without negotiations.
- India **backed a central role for the UN** on issue of recognition of Afghanistan govt.

**On Terrorism**

- PM Modi called upon SCO members to develop, based on a **zero-tolerance approach to terrorism**, strict and shared norms that serve as a template for global anti-terror cooperation.
- These norms should include a **code of conduct** to check cross-border terrorism and terror-financing activities and a mechanism for its implementation.

**On SCO RATS (regional anti-terror structure)**

- India highlighted the fact that a large number of advanced weapons were still in Afghanistan.
- Also, the situation in Afghanistan could lead to an uncontrolled flow of drugs, illegal weapons, and human trafficking.



- Against this backdrop, India expressed its hope that the SCO RATS mechanism can play a positive role through information sharing.

**On Connectivity Issues**

- **Norms** for connectivity initiatives under SCO must be transparent, participatory and not undermine the territorial integrity of any country.
- The stress on transparency and consultation was an implicit reference to New Delhi’s opposition to China’s Belt and Road Initiative.
- **India did not endorse Chinese Belt and Road Initiative** at the summit.

**About SCO**

- It is a permanent intergovernmental international organisation, created in **June 2001** in Shanghai (China).
- Founding members included Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan.
- Represents approximately **42% of the world’s population, 22% of its land area and 20% of its GDP.**
- **Currently, SCO has 6 observers namely:** Afghanistan, Belarus, Mongolia, Saudi Arabia, Egypt and Qatar

**What is SCO?**  
Shanghai Cooperation Organization

**It aims to...**

- Resolve border issues
- Fight terrorism
- Bolster regional security
- Counter American influence in Central Asia

**SCO Members**

- China
- Kazakhstan
- Kyrgyzstan
- Russia
- Tajikistan
- Uzbekistan
- India
- Pakistan

**Why SCO is important**

- Is seen as an Eastern counter-balance to NATO
- Enhances security cooperation among members
- Helps deal with terrorism, particularly IS terrorists
- Increases economic cooperation in the region
- China's One Belt and One Road (OBOR) initiative
- India's push for connectivity with Chabahar port in Iran
- International North-South Transport Corridor connecting the sub-continent with Central Asian countries

**Iran has now become the full member of SCO (in 21st Summit)**

Significance of SCO for India	Challenges Faced by India at SCO
<ul style="list-style-type: none"> <li>• India’s security, geopolitical, strategic and economic interests are closely intertwined with developments in the region</li> <li>• The <b>Regional Anti-Terrorism Structure (RATS)</b> of SCO specifically deals with issues relating to security and defence.</li> <li>• The Central Asian region is <b>richly endowed with natural resources</b> and vital minerals</li> <li>• SCO provides a platform for <b>India’s efforts to connect with Central Asia.</b></li> <li>• <b>Stable Afghanistan</b> is in India’s interest. SCO is a platform which can play an important role in Afghanistan.</li> </ul>	<ul style="list-style-type: none"> <li>• SCO as a platform is seen by the West as an <b>organization to forward Chinese interests.</b></li> <li>• <b>Growing convergence with China and Russia</b> will be another challenge for India.</li> <li>• <b>Differences between India and Pakistan</b> might hamper the functioning of the SCO.</li> <li>• All members of SCO have supported OBOR except India. It might lead to <b>isolation of India on this platform.</b></li> <li>• It would be difficult for India to <b>overcome the burden of geography</b> and make tangible gains in terms of trans-regional connectivity.</li> </ul>

**1st In-person Quad summit**

- Leaders of 4 countries (India, the US, Australia and Japan) met for Quad summit in **Washington**. This was the **first-ever in-person** Quad summit.
- The summit concluded with the release of **Joint statement** and a **factsheet**. These documents highlighted the diversified areas of cooperation under the QUAD.

**Outcome of the Summit: Factsheet**

<b>COVID and Global Health</b>	<p><b>a. Quad vaccine initiative: Help Vaccinate the World</b></p> <ul style="list-style-type: none"> <li>• In March 2021, Quad leaders launched <b>Quad Vaccine Partnership</b> to help enhance <b>equitable access of vaccines</b> in the Indo-Pacific and the world.</li> <li>• They decided to <b>donate more than 1.2 billion vaccine doses</b> globally, in addition to the doses financed through COVAX. To date, group has <u>delivered ~79 million vaccine doses</u>.</li> <li>• These vaccines were to be developed in US, manufactured in India, financed by Japan &amp; US, and supported by Australia</li> <li>• The current summit welcomed <u>India’s announcement to resume exports of safe and effective COVID-19 vaccines, including to COVAX, beginning in October 2021.</u></li> </ul> <p><b>b. Save Lives Now</b></p> <ul style="list-style-type: none"> <li>• The summit highlighted that Japan will work with India to enhance key investments of approx. \$100 million in the healthcare sector related to COVID-19.</li> </ul> <p><b>c. Build Back Better Health Security</b></p> <ul style="list-style-type: none"> <li>• To better prepare the member countries and the world for the next pandemic.</li> <li>• To <u>jointly build and conduct at least one pandemic preparedness tabletop or exercise in 2022.</u></li> <li>• Strengthen S&amp;T cooperation in support of the <b>100-Day Mission</b>—to have safe and effective vaccines, therapeutics and diagnostics within 100 days.</li> </ul>
<b>Infrastructure</b>	<p><b>a. Launch the Quad Infrastructure Coordination Group</b></p> <p>This will share assessments of regional infrastructure needs and coordinate respective approaches to deliver transparent, high-standards infrastructure.</p> <p><b>b. Lead on High-Standards Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Since 2015, Quad partners provided more than \$48 billion infrastructure in the region.</li> <li>• To amplify these contributions and further catalyse private-sector investment.</li> </ul>
<b>Climate</b>	<p><b>a. 3 thematic area of cooperation</b></p> <ul style="list-style-type: none"> <li>• Climate ambition, including working on 2030 targets for national emissions</li> <li>• Clean-energy innovation and deployment,</li> <li>• Adaptation, resilience, and preparedness.</li> </ul> <p><b>b. New initiatives launched</b></p> <ul style="list-style-type: none"> <li>• <b>Form a Green-Shipping Network</b> – to deploy green-port infrastructure and clean-bunkering fuels at scale.</li> <li>• <u>Quad Shipping Taskforce</u> in order to establish <u>2 or 3 Quad low-emission or zero-emission</u></li> </ul>

	<p><u>shipping corridors by 2030.</u></p> <ul style="list-style-type: none"> <li>• <b>Establish a Clean-Hydrogen Partnership</b> - to strengthen and reduce costs across all elements of the clean-hydrogen value chain.</li> <li>• <b>Enhance Climate Adaptation, Resilience, and Preparedness</b> - by improving critical climate information-sharing and disaster-resilient infrastructure.</li> <li>• <b>Climate &amp; Information Services Task Force</b> will be convened and a new technical facility will be built through the Coalition for <b>Disaster Resilient Infrastructure</b>. This will provide <u>technical assistance in small island developing states.</u></li> </ul>
<b>People-to-People Exchange and Education</b>	<ul style="list-style-type: none"> <li>• <b>Quad Fellowship for students</b> from each of the member countries.</li> <li>• It will <u>sponsor 100 students per year</u>—25 from each Quad country—to pursue masters and doctoral degrees at leading STEM graduate universities in the United States.</li> </ul>
<b>Critical and Emerging Technologies</b>	<p>In March 2021, QUAD established a new critical and emerging technologies working group. This summit also announced to</p> <ul style="list-style-type: none"> <li>○ <b>Publish a Quad Statement of Principles</b></li> <li>○ <b>Establish Technical Standards Contact Groups</b> on Advanced Communications and Artificial Intelligence</li> <li>○ <b>Launch a Semiconductor Supply Chain Initiative</b></li> <li>○ <b>Support 5G Deployment and Diversification</b></li> <li>○ <b>Monitor Biotechnology Scanning</b></li> </ul>
<b>Cybersecurity</b>	<p>Decided to <b>launch a Quad Senior Cyber Group</b> to promote</p> <ul style="list-style-type: none"> <li>⊖ adoption and implementation of shared cyber standards;</li> <li>⊖ development of secure software;</li> <li>⊖ building workforce and talent;</li> <li>⊖ scalability and cybersecurity of secure and trustworthy digital infrastructure.</li> </ul>
<b>Space</b>	<ul style="list-style-type: none"> <li>⊖ Share Satellite Data to Protect Earth and its Waters – to better adapt to climate change</li> <li>⊖ Enable Capacity-Building , Consult on norms for Sustainable Development of outer space.</li> </ul>

**Quad Grouping**

- Grouping of 4 **democracies** (India, Australia, US and Japan) is known as quadrilateral security dialogue or quad.
- Aim is to **ensure a free and open international order based on the rule of law in the Indo- Pacific.**

**UN Food Systems Summit 2021**

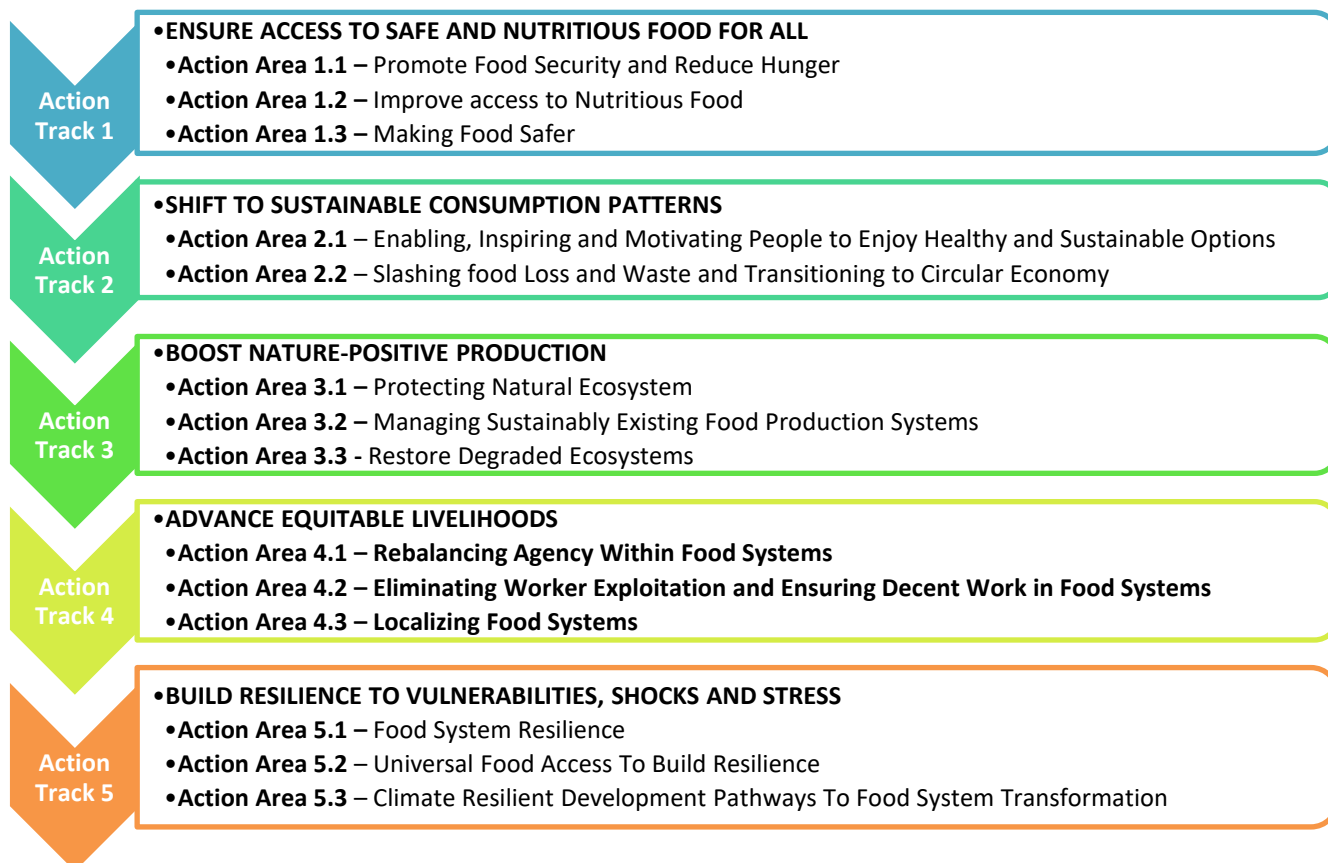
**In News**

- **First-ever UN Food Systems Summit** was held during the UN General Assembly in New York.

- The summit sought to set the stage for global food systems transformation to achieve the Sustainable Development Goals by 2030.

### Key Outcomes

#### 1. Five Action Tracks and Action Areas Under each Track identified



**2. Governance Identified as Cross-cutting action area** - The Governance Action Area includes two main areas of focus: 1) Food System Summit (FSS) governance and 2) food systems governance more broadly.

### Background

In April 2021, The UN Secretary General had called for the first ever UN Food Systems Summit to be held in September 2021 with an aim to strategize the actions for positive change in Agri-food systems in the World to realize the vision of the 2030 Agenda for Sustainable Development.

### India's Role

- India with close to 18% humanity on the Globe owes paramount stake in this Food System Summit.
- India had volunteered to the **Action Track 4: Advance Equitable Livelihoods for the UN Food System Summit 2021.**
- It has constituted a high-level Interdepartmental Group under the Chairmanship of Prof. Ramesh Chand, Member, NITI Aayog.
- This group is conducting National Dialogues with all the stakeholders of agri-food systems for exploring national pathways towards creating sustainable and equitable food systems in India.

- The **first National Level Dialogue** on Agri-Food Systems-Advancing Equitable Livelihoods was conducted in April, 2021.

**Food Systems:**

- The term “food system” refers to the **constellation of activities** involved in producing, processing, transporting and consuming food.
- The health of our food systems profoundly affects the health of our bodies, as well as the health of our environment, our economies and our cultures.
- Failure of food systems threatens our education, health and economy, as well as human rights, peace and security.

### Centre Signs Pact with Five Ultra-groups of Karbi Anglong

A **tripartite peace accord** was signed by representatives of the Centre, Assam government and five ultra-groups based in Assam's Karbi Anglong.

#### Salient features of the Agreement

##### Development of Karbi Anglong

- A **Special Development Package of Rs. 1000 crores** over 5 years will be given by the Union Government
- Assam Government will **undertake specific projects for the development** of Karbi areas.

##### Greater Devolution of Power

- It proposes to give more legislative, executive, administrative and financial powers to Karbi Anglong Autonomous Council (KAAC).
- It will ensure **focussed development of the Council area, without affecting the territorial and administrative integrity of Assam**

##### Peace and Security in the region

- Over **1000 armed cadres** have vowed to **abjure violence** and join the peaceful democratic process
- It also provides for **rehabilitation of cadres of the armed groups**

##### Creation of Institutions

- The Government of Assam shall set up a **Karbi Welfare Council** for focussed development of Karbi people living outside KAAC area.
- The **Consolidated Fund of the State will be augmented** to supplement the resources of KAAC

##### Development of Local People

- The agreement will provide **protection of identity, language, culture, etc.** of Karbi people

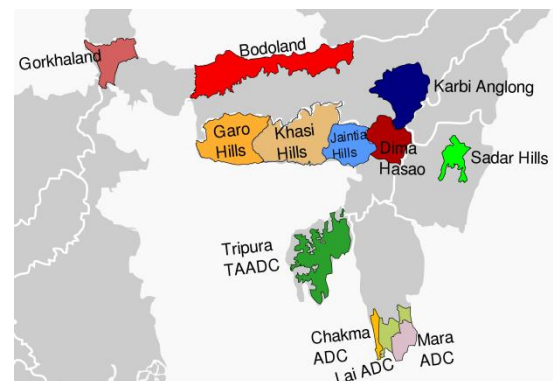
#### About Karbi-Anglong

- Karbi Anglong is the **largest district in Assam**, comprising **various tribal** and ethnic groups (Karbi, Dimasa, Bodo, Kuki, Hmar, Tiwa, Garo, Man, Rengma Naga)
- **Karbhis at 46.38% form the majority** of the population. They linguistically belong to the **Tibeto-Burman group**.

#### Reasons For The Existence Of Insurgency

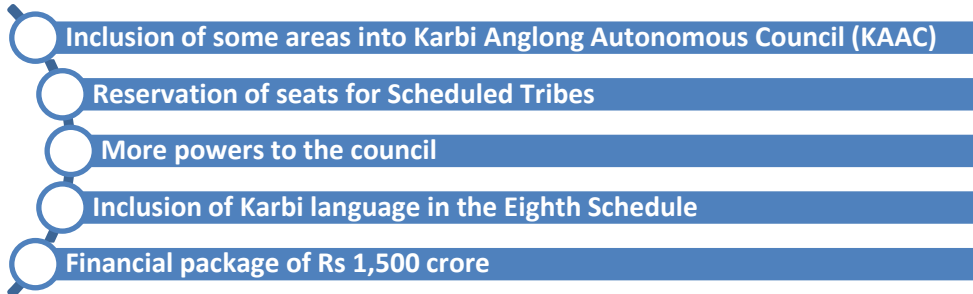
##### Tribes and ethnic clashes

- Several clashes have broken out between various tribes in Karbi over the years.
- In 2014, over 3,000 people from Karbi and Rengma Naga tribes were rendered homeless due to violent clashes that broke out between these two tribes



**Demand for statehood**

- Karbis have been demanding for a **separate state** of Karbi Anglong comprising **two hill districts** — **Kabri Anglong and Dima Hasao**.
- **Other demands of the militant groups are: Incorporate these 5 more demands**



**Poor Socio-economic Development**

- Over the years, endless corruption, mismanagement of funds and the failure to devolve power to common people have completely jeopardised the KAAC.
- The present **system of allocation of funds through the state government** has also deprived the council of resources and impeded the development process.
- KAAC has also **not been able to address the concerns of the non-Karbi people** residing in the Karbi Anglong District.

**Karbi Anglong Autonomous Council (KAAC)**

- Karbi Anglong is an **autonomous district under the Sixth Schedule** of Indian Constitution.
- Karbi Anglong is geographically divided into two parts: East Karbi Anglong (EKA) and West Karbi Anglong (WKA), with its administrative headquarters located at Diphu town in EKA.
- On April 01, 1995, **Karbi Anglong District Council (KADC)** was **upgraded to Karbi Anglong Autonomous Council (KAAC)**.

**Govt. Inks Peace Pact with NSCN**

Centre has signed a **ceasefire agreement with a faction of the Naga insurgent group NSCN led by Niki Sumi**. The pact came into effect on 8 September 2021 and will be in force for one year.

**Naga Insurgency Background**

- **Naga National Council (NNC)** was formed in April 1946 to carry out social and political upliftment of the Nagas.
- After the return of the **radical leader of Naga cause, Angami Zapu Phizo**, from Burma in 1947, **the faction of NNC demanding full impendence grew strong**.
- **Nagaland achieved statehood in 1963**

**Insurgent group NSCN led by Niki Sumi**

- NSCN Niki group is a breakaway faction which had broken away from NSCN (Khaplang) in 2017.
- Sumi was the **prime accused in the killing of 18 Indian Army soldiers in Manipur in 2015**.

**Shillong Accord and the split of NNC**

- **Shillong Accord** signed in **1975** by Government of India with a section of NNC leaders.

## VAJIRAM & RAVI

- The leaders agreed to **abjure violence** and work towards the solution of the Naga problem **within the framework of Indian Constitution**.
- It was opposed by Phizo, Isak Swu and Muivah.
- Later, **Isak Swu and Muivah formed the "National Socialist Council of Nagaland (NSCN)"** in January 1980.
- Later, **NSCN split into two factions**, namely NCSN (I-M) led by Isak & Muivah and NCSN (K) led by Khaplang.

### Naga Peace Accord 2015

- In August 2015, Government of India and NSCN signed a **framework agreement**, also being referred to as "**Naga Peace Accord**".
- The details of the agreements are **not entirely clear yet**. However, points include:

- Government could devolve of more powers to Nagaland under provisions of Article 371 (A)
- Army of NSCN-IM will be absorbed in a new force on the lines of Home Guards.
- Devolve more autonomy to Naga tribes living in Manipur.
- It does not include physical integration of all Naga areas in terms of a boundary.

- The agreement **was only a framework**, with many details still to be hammered out.

### Progress since August 2015

- **Nagaland Governor**, RN Ravi, is **appointed as an interlocutor** in the peace talks with the leaders of NSCN (I-M) so as to finalise finer details.
- Even after **5-6 years of signing the framework agreement**, the deadlock persists over the issues like demand for a separate flag and constitution.

### Controversy

- In August 2020, NSCN-IM released a copy of the sensitive **Framework Agreement**.
- The group also **accused the then Nagaland Governor**, an interlocutor, **of deleting a keyword**.
- The Framework Agreement says, "**Inclusive peaceful co-existence of the two entities sharing sovereign power**".
- The word "shared sovereignty" has been **interpreted differently** by both sides involved in talks.

### Naval Aviation Gets President's Colour

Indian Naval Aviation has been awarded the **President's Colour**. Incidentally, Indian Navy was the first amongst three Services to be awarded the President's Colour in May 1951.

### What is the navy's aviation wing?

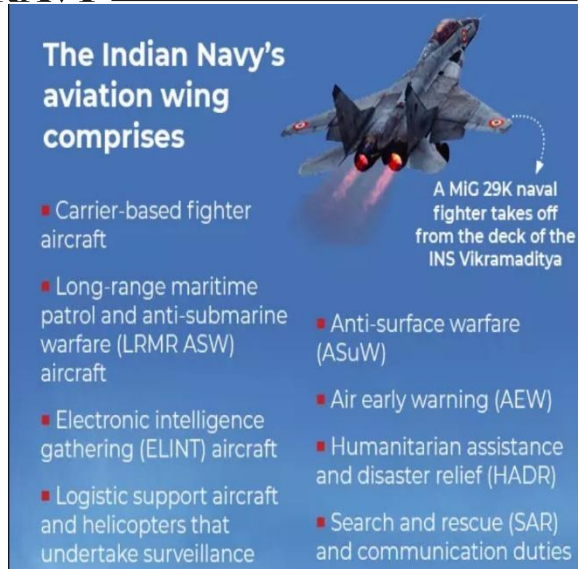
- Indian Naval Aviation came into being with **acquisition of the first Sealand aircraft**, an amphibious plane, in January 1951.
- The formal birth of Naval Aviation was the commissioning of the INS Garuda, a Naval Air Station at Kochi, in May 1953.



- Indian Naval Aviation at present has **nine air stations** and **three naval air enclaves** along the Indian coastline and in **Andaman and Nicobar Islands**.
- Recently, naval aviation got a boost with the **maiden sea trial of indigenous aircraft carrier (IAC-1) – Vikrant** (for detailed discussion on Vikrant, please refer the topic “*I n d i a ’ s F i r s t I n*” ~~from~~ *Augast 2021* edition of CA magazine).

**Important Role Played in the past**

- This wing played a **crucial role in the liberation war of Bangladesh in 1971**.
- It played important role in **Indian Navy's relief and rescue assignments** in times of natural calamity. E.g. **2004 tsunami** and numerous cyclones including the recent **Cyclone Tauktae** in May 2021



**What is President's Colour award?**

- The President's Colour is the **highest honour bestowed on a military unit** in recognition of its exceptional service to the nation.
- It consists of a **36-inch by 48-inch white ensign with the National Flag** in the canton and the state emblem embroidered in gold at the centre.
- **The elephant** (signifying strength), is placed diagonally opposite the national flag in the canton

**MLAs Forum -Arunachal Pradesh**

- MLAs of Arunachal Pradesh have united to **constitute a forum** in order to **stop people migrating from the border areas**.
- Newly formed forum is “**Indo-China Border Development Legislators of Arunachal Pradesh**”.

**About the Forum**

- Aims at **devising plans & strategies to develop backward areas** along Indo-China border region.
- Assembly Speaker, Passang Dorjee Sona, has been named as the Chairman of the forum.

**What was the need to create this forum?**

- **To stop migration** - The border residents **lack basic amenities** and people from this region tend to **migrate to urban areas for a better life**.
- **To strengthen first line of defense** - The local residents living near the border are India’s first line of defense. They report **Chinese infraction to the security forces**.
- **To modify the Border Area Development Programme (BADP) to suit local needs** – The current set of guidelines made it difficult to implement the BADP in the sparsely populated and spaced-out villages along the international border.

**About Border Area Development Programme (BADP)**

- It was initiated in **western region during the Seventh Five-Year Plan** from 1985-1990 and later extended to

other regions.

- Various developmental works in the border areas are being **undertaken by the Ministry of Home Affairs** under the BADP as part of a **comprehensive approach to border management**.
- Funds under BADP are provided to the States as a **100% non-lapsable Special Central Assistance**.

### MILITARY EXERCISES

<b>Zapad 2021</b>	<ul style="list-style-type: none"> <li>• It is a <b>multi-nation military exercise</b> that was held in Russia. This exercise was primarily focused on <b>operations against terrorists</b>.</li> <li>• <b>India also participated</b> in the exercise while <u>China and Pakistan took part as observers</u>.</li> <li>• <b>NAG Battalion group</b> (Infantry regiment Indian Army ) participated in the exercise</li> </ul>
<b>SIMBEX: India-Singapore Naval Drill</b>	<ul style="list-style-type: none"> <li>• <b>India and Singapore</b> recently concluded maritime bilateral exercise known as <b>SIMBEX</b> (Singapore-India <b>Maritime Bilateral Exercise</b>).</li> <li>• It was <b>28<sup>th</sup> edition</b> of this exercise and conducted in southern fringes of South China Sea.</li> <li>• <b>Initiated in 1994</b>, it is <u>Indian Navy's longest uninterrupted bilateral maritime exercise with any foreign navy</u>.</li> </ul>
<b>SCO Peaceful Mission 2021</b>	<ul style="list-style-type: none"> <li>• The <b>6<sup>th</sup> edition of Exercise PEACEFUL MISSION</b> was hosted by Russia.</li> <li>• The aim is to <u>foster close relations between SCO member states</u> and to enhance abilities to command multi-national military contingents.</li> <li>• It is a <b>joint Counter-Terrorism exercise</b> which is conducted in Multilateral format. It is <b>conducted biennially</b> as part of <b>military diplomacy between SCO member states</b>.</li> </ul>
<b>India-Nepal Joint Military Training</b>	<ul style="list-style-type: none"> <li>• <b>15<sup>th</sup> edition of Indo - Nepal Joint Military Training, Exercise Surya</b> was conducted at Pithoragarh (Uttarakhand). Last edition of this <b>exercise was conducted in Nepal in 2019</b>.</li> <li>• The exercise, which aims to share experiences gained during the conduct of various counter-insurgency operations, is conducted by <b>Armies of India and Nepal</b>.</li> </ul>

### Indian and Algerian Navies Maiden Exercise

- Navies of India and Algeria have carried out a **maiden naval exercise** off the Algerian coast.
- India has been focusing on boosting defence and security ties with various **African nations** in the last few years. Earlier, in August 2021, Indian navy conducted bilateral naval exercise with Morocco.
- Such exercises will help India in developing a **Maritime Domain Awareness network** in Indian Ocean Region.

### India's Maritime Security Strategy in this region

- Enhanced synergy between regional navies and coast guards through **exercises**
- Setting up of inclusive **regional maritime security infrastructure** with the participation of the strategically located island states
- A robust **information sharing** mechanism to monitor the activities in IOR
- An **Indian- led initiative Indian Ocean Rim Association (IORA)** is headquartered in **Mauritius**. It has eight African members including the strategic island states like Madagascar and Comoros.

**Breakthrough Infections**

- A 'breakthrough infection' refers to the virus being able to **penetrate the protective barrier of antibodies**.
- Breakthrough infections are infections following two doses of vaccine.
- Natural immunity following a virus infection stays robust and lasts longer is already well known. People infected with the 2002 Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) have been shown to have strong immunity for up to three years.
- A vaccine effectiveness study undertaken in Israel has shown that natural infection confers stronger immunity against the SARS CoV2 virus than even full vaccination.

**Mu COVID Variant**

- Ever since the origin of the new strain of the Coronavirus, the virus has mutated several times. First Alpha, then Delta, Lambda and now researchers have come across a new variant of COVID-19 termed **Mu**.
- This mutant virus was first found in Colombia in January 2021.
- The genomic structure of the Mu variant is different from the original strain of the virus. Thus it can easily evade the protection provided by the COVID-19 vaccines being administered across the globe.
- A variant of the virus occurs when there is a **change or mutation** in the original genomic structure of the virus. It is the general nature of the RNA of the virus including corona virus to evolve and change structure over time. That may happen due to **geographic separation**.
- Viruses are generally categorized under two sections-'**variant of concern (VOC)**' and '**variant of interest**.' The Mu variant has been termed as the variant of interest, which means it **looks like** it has the potential to do more harm.
- VOC: A variant for which **there is evidence** of an increase in transmissibility, more severe disease (e.g., increased hospitalizations or deaths), significant reduction in neutralization by antibodies generated during previous infection or vaccination, reduced effectiveness of treatments, or diagnostic detection failures

**Footprints Of 3 Dinosaur Species Found**

- Footprints of **three** species of dinosaurs have been found in **Thar Desert in Rajasthan's** Jaisalmer district.
- Footprints, made in the sediment or silt of the seashore, later become permanently stone-like.
- The dinosaur species are considered to be of the theropod type (carnivorous), with the distinguishing features of hollow bones and feet with three digits.
- It proves the presence of the giant reptiles-in the western part of the State, which formed the seashore to the Tethys Ocean during the Mesozoic era.

**Biological E Jab Gets Nod For Trial Among Children**

- Hyderabad-based pharmaceutical firm Biological E. has received the Drugs Controller General of India (DCGI) approval for initiating the Phase II/III study to evaluate its CORBEVAX vaccine in children aged above 5 years.

- CORBEVAX is a **receptor-binding domain (RBD)** protein sub-unit vaccine for corona virus disease
- **RBD** is a short immunogenic fragment from a virus that binds to a specific *endogenous receptor* sequence to gain entry into host cells. Specifically, **these refer to a part of the ‘spike’ glycoprotein (S-domain)** which is needed to interact with endogenous receptors to facilitate membrane fusion and delivery to the cytoplasm.

### Antimalarial Vaccine

WHO’s Strategic Advisory Group of Experts on Immunization (SAGE) considers evidence to decide on the rollout of the **first Malarial vaccine (RTS, S)**. **The drug combo proves most efficacious in Africa trial.**

- The study measured the efficacy of vaccination with or without chemoprevention (drugs). “The combination of these interventions resulted in a substantially lower incidence of uncomplicated malaria, severe malaria, and death from malaria than either intervention alone.
- The malaria vaccine prevents the parasite developing in humans. However, some break through infections could happen. When there is a vaccine break through infection, the Antimalarial drug kills those parasites.

### Nipah Reappears

After a gap of over 3 years, a case of zoonotic Nipah virus infection was reported in Kozhikode, Kerala

- The first outbreaks of the Nipah virus among humans were reported from Malaysia (1998) and Singapore (1999). The virus takes its name from the village in Malaysia.
- **Fruit bats commonly known as flying fox**, are considered to be a natural reservoir of the virus. They transmit this virus to other animals like pigs, and also dogs, cats, goats, horses and sheep.
- Humans get infected mainly through direct contact with these animals. The virus can also be passed on through food contaminated by **saliva or urine** of these infected animals or directly from person-to-person.
- The Nipah virus is known to spread far more slowly than SARS-CoV-2.
- The disease has also been identified periodically in eastern India.
- Currently, there are **no vaccines** for both humans and animals.

### Vaccine In The Works Against Nipah Virus

- Preliminary animal trial results seem to suggest Covishield **like** vaccine give protection against the Nipah virus.
- No approved vaccine yet exists for the lethal Nipah virus.
- Researchers at United States, reported that the **ChAdOx1 vaccine vector**, when customized to the Nipah virus, fully protected African green monkeys.
- **ChAdOx1** is a **multipurpose vaccine vector**, meaning it can be customized to carry DNA from a wide variety of pathogens. The version of ChAdOx1 that is used in the Covishield or AstraZeneca vaccine is the ChAdOx1 with a piece of spike protein Of SARSCoV2.
- For the Nipah study, the scientists loaded a **piece of glycoprotein** from a Nipah virus strain found in Bangladesh, where annual outbreaks occur. Test vaccine for the purposes of the study was called **ChAdOx1 NiV**.
- After various experiments data suggested that the vaccine may provide close to complete protective immunity in African green Monkeys.

## Covid-19 Vaccines Fare With Delta Variant

- **Delta variant**, or the B.1.617.2 lineage, first discovered in Maharashtra, is dominant not just in India but also in several other countries
- The study found that compared to the original virus, the Delta variant was 8 times more likely to cause breakthrough infections among vaccinated people, and 6 times more likely to re-infect people who have recovered from previous infections.
- The study reported a higher “**replication and spike mediated entry**” in the Delta variant, meaning it had a greater ability to infect and multiply within the human body, compared to the B.1.617.1 lineage.
- However, **vaccines are still effective**. Delta variant is *just less sensitive* to neutralizing antibodies. It means that it would require **five to eight times more antibodies** to elicit same kind immune response as against original virus during the first wave to block Delta variant.

## Pollen Calendar

Researchers from the Post Graduate Institute of Medical Education and Research (PGIMER) and Punjab University have **created a pollen calendar for Chandigarh to track airborne pollen to prevent allergy**.

### What is A Pollen Calendar

Pollen calendars represent the **time dynamics** of airborne pollen present in a particular geographical area i.e. they are location-specific

### Why Is It Important To Study Pollen

Pollen grains are **male biological structures** with the primary role of fertilization, but when inhaled by humans, they may strain the respiratory system and cause allergies

### How Will A Pollen Calendar Benefit People

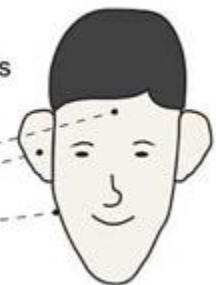
- Pollen calendar provides clear understanding for clinicians, as well as people with allergies to identify potential allergy triggers & help to limit their exposure during high pollen load season.
- Europe, UK and the US are using regional pollen calendars to prevent and diagnose allergic rhinitis/hay fever and predict the timing and severity of the pollen season.

## Fragile X Syndrome

It is a genetic disorder and is **caused by an abnormality (mutation) in the FMR1 gene**. FMR1 is a gene located on the X chromosome that produces a protein called FMRP (Fragile X mental retardation protein) needed for proper cell function. The syndrome became known as the fragile X syndrome because some individuals with the disorder were found to have a segment of their **X chromosome** that appeared to be **broken or fragile** (although not completely disconnected). Later it was learned that the FMR1 gene is located precisely where the X chromosome appears to be “fragile” in affected individuals.

### Symptoms

- Intellectual disability
- Autism spectrum disorders
- Abnormal facial features
  - Prominent forehead
  - Large ears
  - Long face



- It is the absence or severe reduction of the protein (FMRP) made by the FMR1 gene, that causes fragile X syndrome.
- Mutation of the FMR1 gene causes the loss or reduction of FMRP.
- Human body cells normally have 46 chromosomes. Pairs of human chromosomes are numbered from 1 through 22 and the sex chromosomes are designated X and Y.
- Males have one X and one Y chromosome and females have two X chromosomes. **Fragile X syndrome is a X-linked dominant disorder.**
- Females with the abnormal gene may be affected by this disorder. Males are usually more severely affected than females).

### Medicine From The Sky Project

- Telangana is promoting the nine-day pilot under Medicine from the Sky project. It is the first-of-its-kind project involving the delivery of medicines through multiple drones.
- It includes a comprehensive study of drone-based deliveries for **blood, vaccines, diagnostic specimens, and lifesaving equipment.**
- The project framework was prepared by World Economic Forum (WEF) and Group Healthnet Global Limited and was later adopted by the Telangana government.

*For more about Drones please refer July Recitals (Defense and Security section)*

### Chandrayaan-2 Findings

- **The Chandrayaan 2 Large Area Soft X-Ray Spectrometer (CLASS)** measures the Moon's X-ray spectrum to examine the presence of major elements such as magnesium, aluminum, silicon, calcium, titanium, iron, etc.
- It has detected **the minor elements chromium manganese** and Sodium for the first time through remote sensing.
- The finding can lay the path for understanding magmatic evolution on Moon and deeper insights into the nebular conditions as well as planetary differentiation.
- A key outcome from Chandrayaan-2 has been the exploration of the **permanently shadowed regions** as well as craters and boulders underneath the regolith. This is expected to help scientists to zero in on future landing and drilling sites, including for human missions.
- Chandrayaan 2 Finds Unambiguous Detection of OH And H<sub>2</sub>O (Refer August Recitals)
- **Future Moon missions** that hope to make use of such data include:
  - i) **Japan Aerospace Exploration Agency (JAXA)-ISRO collaboration Lunar Polar Exploration (LUPEX) mission** (scheduled for launch in 2023/2024). Its aim is to obtain knowledge of lunar water resources and to explore the suitability of the **lunar polar region for setting up a lunar base.**
  - ii) **NASA's Artemis missions** plan to enable **human landing** on the Moon beginning 2024 and target sustainable lunar exploration by 2028.
  - iii) **Chinese Lunar Exploration Programme** too plans to establish a prototype of the International Lunar Research Station (ILRS) at the lunar South Pole and build a platform supporting large-scale scientific exploration.

### Water Management System For Toxic Textile Effluents

Indian researchers have developed an **improved water management system** that can completely **reuse dye wastewater** from textile industries, eliminating its **toxicity** and making it suitable for domestic and industrial usage.

- Modified treatment process consisting of the primary dosing step, followed by sand filtration step, another AOP (advanced oxidation process) and subsequent carbon filtration step.
- AOP technology is used for degrading and mineralizing recalcitrant organic matter from effluent wastewater.

### RTPCR Tech Transfer to MSME

The National Environmental Engineering Research Institute (NEERI) has transferred the know-how of the indigenously-developed saline gargle RT-PCR technique, used for testing Covid-19 samples to the Micro, Small, and Medium Enterprises (MSME).

- It is simple, fast, cost-effective, **patient-friendly** and comfortable technique that provides instant results.
- Because of its minimum infrastructure requirement it can be used in **Rural and tribal areas also**.

**Saline RT-PCR method:** It does not require the swab samples collected from the nose and throat of patients. The kit comes with a tube containing saline. One needs to put this solution into the mouth and **gargle for 15 seconds**. Then one has to spit the liquid back into the tube and send this for testing. An RNA template is produced when this solution is heated, which is further processed for Reverse Transcription Polymerase Chain Reaction (RT-PCR).

### Zero-shot Learning (ZSL)

Machines have become much more intelligent, but without a properly **labeled training data set of seen classes**, they cannot distinguish between two similar objects.

- On the other hand, humans are capable of identifying approximately 30,000 basic object categories. In machine learning, this is considered as the **problem of Zero-shot learning (ZSL)**.
- ZSL is a problem setup in machine learning, where at testing, a learner observes samples from classes that were **not observed while training** the model and predicts the category they belong to Zero-shot methods.
- It basically works by combining the observed/seen and non-observed/unseen categories through some types of auxiliary information, which encodes observable distinguishing properties of objects.
- The auxiliary information may include attributes, textual descriptions etc.

### LCA- Tejas Mk2

It is a single-engine multirole aircraft designed by Aeronautical Development Agency (ADA) in collaboration with Hindustan Aeronautics Limited (HAL).

- It is a replacement for the Mirage 2000 class of aircraft.
- Payload of 6,500 kg compared to the 3,500 kg by LCA.
- 4.5 generation aircraft.
- It will be rolled out in 2022 and the first flight in early 2023.

- ADA is an autonomous body of the Ministry of Defence
- Following the Mk-1A is the LCA Tejas Mk-2 which will provide a high degree of manoeuvrability.
- LCA Tejas Mk-1A is an improvement over LCA Tejas Mk1 with higher thrust engine.

### Advanced Medium Combat Aircraft (AMCA)

It is a **fifth-generation** indigenous fighter aircraft designed by Aeronautical Development Agency (ADA).

- Payload capacity of 1,500 kg internally and a 5,500-kg external payload
- Aircraft will have stealth and non-stealth configurations
- Designed for stealth and unlike the LCA, which is designed for maneuverability.
- It has a unique shape to achieve low radar cross-section and has an internal carriage of weapons.
- When the external weapons are removed, this aircraft has enough fuel and weapons inside to do a very capable operational role in stealth mode.
- It will be developed in two phases, AMCA Mk1 and AMCA Mk2
- While AMCA Mk-1 will have an imported engine, same as LCA Mk-2, the AMCA Mk-2 will have an indigenous engine.
- It will be rolled out in 2024 and first flight in 2025.

### Plant As a Source mRNA Vaccine

Scientists are doing research to demonstrate that whether plant can be used to produce mRNA vaccine.

- The research foundation has set 3 Goals
- To prove that DNA containing the mRNA vaccines can be successfully delivered into the part of plant cell where it will replicate.
- Demonstrating that plant can produce enough mRNA
- Demonstrating right dosages
- Ideal cell for making this work are Chloroplasts.

### Black Tigers

- Black tigers are found only in **Simlipal**.
- **Pseudo-melanistic tigers** are also present in three zoos in India -Nandankanan (Bhubaneswar), Arignar Anna Zoological Park (Chennai) and Bhagwan Birsa Biological Park (Ranchi).
- All of them have **ancestral links** to one individual from Simlipal.
- **Pseudo-melanism** is a **rare pattern variant**, distinguished by stripes that are broadened and fused together, is also observed in both wild and captive populations.
- **Genetic basis of pseudo-melanism is linked to a single mutation** in Transmembrane Aminopeptidase Q (Taqppep).
- Mutants are genetic variations which may occur spontaneously, but not frequently, in nature



- **Pseudo-melanism is caused by a recessive (hidden) gene** which **expresses** itself in the absence of dominant gene.
- So, two normal-pattern tigers carrying the recessive (pseudo-melanism) gene will have to breed together for a **one-in-four** probability of giving birth to a black cub.
- **Inbreeding increases the chances of the two same recessive genes** to come in the offspring.
- Occurrence of Black tiger signifies that Inbreeding is taking place among the tiger population which in long run will lead to the loss of genetic diversity.
- The darker coat colour of the mutants offers them a **selective advantage** when hunting in dense closed-canopy and relatively darker forested areas of Simlipal as compared to the open plains of most other tiger habitats.

### Substitute for Single Use Plastics

Researchers have developed a **polymer** using non-edible oil and cellulose extracted from agricultural stubble.

- **Non-edible Castor oil** was used in this process of making the polymer which reacts with the cellulose and di-isocyanate compound.
- Flexibility of the polymer sheet depends on the proportion of **cellulose** and **non-edible oil**. Higher the concentration of cellulose less flexible the polymer will be and vice versa.

### Inspiration4 Mission

- Launched by **Falcon 9 rocket** for an **Earth-orbiting mission** placing the Dragon capsule into low Earth orbit
- It is the world's first **all-civilian mission** to orbit the earth.
- It will orbit the Earth at 575km, higher than the International Space Station and the Hubble space telescope and hence will be the farthest distance travelled by a crewed mission since 2009.
- **Inspiration4 is the third spaceflight by a billionaire in 2021**. The other two both suborbital missions -were the flight of Virgin Galactic founder Richard Branson and the flight of Blue Origin founder Jeff Bezos.

### Helina Completes All Trials

- It is helicopter launched Nag Antitank Guided Missile (AGTM) developed indigenously by DRDO
- Helina is a 3<sup>rd</sup> generation **fire and forget** class ATGM mounted on an indigenous Advanced Light Helicopter (ALH)
- It has minimum range of 500 m and maximum range of 7 km.
- It is an all-weather day and night capability with Infrared Imaging Seeker (IIR)
- A variant of the HELINA Weapon System called DHRUVASTRA is being inducted into the Indian Air Force (IAF). It would have an Air to Ground role other than an anti-tank role

### New Species of Hybodont Shark

- The crushing teeth of new species of Hybodont shark of Jurassic age (160-168 million years old) have been reported for the first time from **Jaisalmer**
- Hybodonts, an extinct group of sharks, was a dominant group of fishes in both **marine** and fresh water environments during the Triassic and early Jurassic time.
- They became extinct at the end of the Cretaceous time (65 million years ago)
- The genus Strophodus has been identified for the first time from the Indian subcontinent and is only the **third** such record from Asia, the other two being from **Japan** and **Thailand**

### Chang'e-5 Probe

- It is Chinese National Space Administration's (CNSA) lunar sample return mission
- The mission comprises a **lunar orbiter**, a **lander** and an **ascent probe** that will lift the lunar samples back into orbit and return them back to Earth

### Latest Findings

- 90% of the materials collected by Chang'e-5 likely derive from the landing site and its immediate surroundings are of **mare basalt type**
- Researchers have traced rapidly cooled glassy material to now **extinct volcanic vents** known as '**Rima Mairan**' and '**Rima Sharp**' located southeast and northeast of the Chang'e-5 landing site.
- These fragments could give insights into past episodes of energetic, fountain-like volcanic activity on the Moon.

### Ethanol Blending

- Ethanol is a Biofuel i.e. fuel produced by processing organic matter
- Ethanol in India is obtained primarily from **sugarcane via a fermentation process**
- Ethanol is high in oxygen content, which ~~therefore~~ allows an engine to more thoroughly combust fuel.
- The government has set targets of **10% ethanol blending** of petrol by **2022** and to raise it to **20% by 2030** under the Ethanol Blending Programme but recently the Govt. has announced to **prepone** the 20% ethanol blending of petrol to 2025.

**1<sup>st</sup> Generation Biofuel**

- It has **High Carbon Content**.
- Made from Edible Items. Eg- Sugar, Corn, Starch etc.

**2<sup>nd</sup> Generation Biofuel**

- **Greenhouse Gas content less than 1<sup>st</sup> Generation Biofuel**
- Made from leftover of Food Crops. Eg- Rice Husk, Wood Chips etc.

**3<sup>rd</sup> Generation Biofuel**

- It is **Carbon Neutral** in. (CO<sub>2</sub> Emitted = CO<sub>2</sub> Sequestered)
- Produced using Microorganisms. Eg- Algae

**4<sup>th</sup> Generation Biofuel**

- Made from '**Genetically Engineered Crops**'
- They are **Carbon Negative**.

### Arjun Main Battle Tank(MBT) MK-1A

- Arjun MBT Project was initiated by DRDO in 1972.
- The MBT Mk-1A is a new variant of Arjun Tank designed to enhance **fire power, mobility and survivability**, infused with 72 new features and more indigenous content from the Mk-1 variant.

- This would ensure effortless mobility in all terrains, besides precise target engagement during day and night.
- The tank has been designed and developed by Combat Vehicles Research and Development Establishment (CVRDE) along with DRDO.
- Arjun MBT is equipped with 120mm main rifled gun with Fin Stabilised Armour-Piercing Discarding Sabot (FSAPDS) ammunition which is capable of destroying all known tank armour up to direct shooting range
- It also has a computer-controlled integrated fire control system with stabilised sighting that works in all lighting conditions.

### **Mk1A and MkII**

- The development of Arjun Mk1 was followed by improved variants - Mk1A and MkII.
- Arjun MkII variant is a light-weight Futuristic Main Battle Tank (FMBT) with electro-optical sensors and high-power lasers.

### **Indigenous Memory Technology**

- Researchers IIT-B have developed a “memory technology” that can revolutionize Indian industry and many applications that need semiconductor chips (defence sector, automobile, cell phone manufacturing etc).
- There is also another form of memory called the **one-time programmable memory** (OTP) where the memory is **written once, stored for lifetime, and retrieved** and used many times.
- It can be used in various ways, one of which is in **correcting faulty chips** that have been mass produced for specific applications.
- OTP memories also have many other uses of which three of them are- **chip identity, secure information storage** and **chip calibration for error correction**.
- The memory cells used in the OTP memories is made up of **Silicon dioxide**

### **Mars and Water Availability**

- New research from Washington University suggests a fundamental reason for **water unavailability**: Mars may be just too small to hold on to large amounts of water.
- They used isotopes of **potassium** to estimate the presence, distribution and abundance of volatile elements on different planetary bodies.
- Potassium is a moderately volatile element, but the scientists decided to use it as a kind of **tracer** for more volatile elements and compounds, such as water.
- They measured the potassium isotope compositions of 20 previously confirmed Martian meteorites and determined that Mars **lost more potassium** and other volatiles than Earth during its formation.

### **Dark Energy**

- International team of researchers conducted **XENON1T experiment** and detected first direct detection of dark energy
- XENON1T was operated deep underground at the INFN Laboratori Italy, from 2016 to 2018. It was primarily designed to detect **dark matter**

- Dark Energy is also opposite of Dark Matter as dark matter attracts and holds galaxies together, dark energy **repels and causes the expansion of our universe**
- Dark energy, the mysterious form of energy that makes up about 68% of the universe
- Dark Energy is a hypothetical form of energy that exerts a negative, repulsive pressure, behaving like the opposite of gravity.
- It is causing the **rate of expansion** of our universe to **accelerate** over time, rather than to slow down which is opposite what earlier scientist had thought
- Earlier, astronomers believed that eventually the expansion of the Universe will slow down because of gravity and it will recollapse.

### India's First Herbicide-tolerant & non-GM Rice Varieties

- Indian Agricultural Research Institute (IARI) has developed the country's **first-ever non-GM (genetically modified) herbicide-tolerant rice varieties**
- **Pusa Basmati 1979** and **Pusa Basmati 1985** are the two varieties which contain a mutated **Acetolactate synthase (ALS) gene** making it possible for farmers to spray Imazethapyr, a broad-spectrum herbicide, to control weeds.

ALS gene and resultant enzyme don't bind with herbicides such Imazethapyr when sprayed on the crop thus continuing the growth of the plant while killing only weeds

- The new herbicide-tolerant varieties have been **developed through mutation breeding and not by genetic modification** to ensure no foreign gene in the new varieties.
- In conventional rice growing, herbicides are not directly applied as they can't distinguish between the rice plant and weeds. Therefore, paddy seeds are first raised as young plants in nurseries before being planted in the fields. Standing water in the nursery acts as a natural herbicide eliminating weeds.
- **Significance:** These varieties don't require nurseries and hence save on labor and water input in rice cultivation.

## ENVIRONMENT AND GEOGRAPHY

### Red Flag over Draft NCR Plan

The **draft Regional Plan 2041** for the National Capital Region (NCR) has dropped or amended several environmental safeguards present in the **current plan (Regional Plan 2021)** with a possible long term disastrous implications for the Natural Conservation Zone (NCZ) in the region.

#### Issues

- Though the draft plan says that the components under NCZ as in Regional Plan 2021 shall remain and be continued to be conserved, it categories these as “**forest**” and “**green cover**” areas and makes the conservation of “*green cover*” *optional*
- 0.5% to total area under NCZ is allowed for related *compatible development* which could be either at *one place or at multiple location*. This could have serious implications as the State governments could use the entire quota of 0.5% in one or few concentrated locations, thus, effectively breaching the limit of 0.5% per plot
- Several important provisions with regards to the forest cover and conservation of monuments, manmade heritage sites and river beds have also been dropped.
- The RP2021 said in view of very low existing forest cover (4.02%) in the NCR, more areas be brought under forest to maintain ecological balance, all waste lands be identified and brought under forest cover and added that the total forest cover be 10% of the total area of the region. But this has now been dropped in the new draft plan.
- The mandate to keep water bodies free from any encroachment/development to allow free flow of water and prevent construction and habitation activities in the floodprone areas/river beds/banks has been dropped.

#### Draft NCR Regional Plan-2041

- Improving the ranking of NCR cities on the ease of living index, boosting economic activity and opportunity, and furthering the sustainability of the NCR Region.
- It seeks to make NCR a smart region by improving connectivity among towns by bringing in bullet trains, helitaxi services, and smart roads to evolve it into an economically prosperous area
- NCR Regional Plan-2041 is expected to replace the NCR Regional Plan-2021.
- The regional plan is being drafted keeping citizens at the center
- It has made several recommendations for **protecting the environment, biogas plants for crop residue, green corridors along roads and floating water drones to clean rivers among others.**
- **Increasing flow of water in Yamuna:** NCRPB has fixed 2026 as the new deadline to ensure Zero discharge of untreated sewage and industrial discharge into the Yamuna. Out of 1400km of river flow only 22km in Delhi, the national capital accounts for 76% of the pollution load on the river.

**NCR Regional Plan-2021:** To guide the development of the region from 2001 until 2021. It was notified in 2005. It was first to introduce the concept of a NCZ.

- Nodal Authority: The National Capital Region Planning Board (NCRPB) has been entrusted with the task of preparation of this regional plan.

- NCR cities and towns should be “planned with an optimum high rise, high-density and Floor Area Ratio (FAR) norms”;
- Mixed land-use of residential, commercial, and institutional should be allowed “both vertically and horizontally” in the older areas of NCR;
- Private land-owners should have the authority to cut or replace trees planted on their land
- The elements under the Natural Conservation Zones in the RP-2021 will remain, but there would be a distinction between “forests and green cover”. Areas currently categorized as ‘forests’, will continue to be conserved in RP-2041.

**National Capital Region Planning Board (NCRPB):** It is a statutory body constituted by the Act of Parliament in 1985. It functions under the Ministry of Housing & Urban Affairs, Govt. of India with the mandate to evolve policies for the control of land uses and development of infrastructure in the region.

### Flaws in ESZ of Deepor Beel

Local stakeholders have found flaws in the **recently notified** eco-sensitive zone (ESZ) of Deepor Beel Wildlife Sanctuary ( **Assam’s only Ramsar Site**).

#### Flaws

- Garbage dump which is kept out of ESZ is close to the wetland. Seepage from this dump and sewage from Guwahati have already made the sanctuary toxic.
- Apart from factories and warehouses set up close to the wetland, Deepor Beel suffers from the garbage dump on its edge at Paschim Boragaon. This dump has been kept out of the ESZ.
- It has a railway track set to be doubled and electrified which has caused death of elephants in railway accidents, fewer elephants visiting the wetland due to deteriorating quality of water due to garbage dumping, reduction in the number of fishes available for fishermen etc

#### Deepor Bill

- It is a **Ramsar site** and a part of it is also a wildlife sanctuary (Rani Reserve forest) in Guwahati, Assam. Deepor Beel is a permanent **freshwater lake**, which is in an earlier channel of the **Brahmaputra River**.
- It is the only major storm-water storage basin for Guwahati city.

#### About Ecologically Fragile Zones or Eco-Sensitive Zones

- These are areas within 10 kilometres of Protected Areas, National Parks, and Wildlife Sanctuaries.
- Under the Environment Protection Act 1986, the Ministry of Environment, Forests and Climate Change (MOEFCC) of the Government of India notifies ESZs.
- Even regions larger than 10 km in width might be included in the eco-sensitive zone if they include sensitive corridors, connectedness, and biologically significant patches that are vital for landscape connection.
- The main goal is to restrict certain activities in the vicinity of National Parks and Wildlife Sanctuaries in

order to reduce the detrimental effects of such activities on the fragile ecology that surrounds the protected areas.

### 160 Species of Raptors Endangered Worldwide

A new analysis by ‘**International Union for the Conservation of Nature (IUCN)** and **BirdLife International**’ remarks about the threats faced by the birds of prey. It adds further, **30% of the 557 raptor species around the world are threatened by extinction.**

#### Key Findings

- The study mentions that 557 raptor species around the world are facing threats of extinction.
- The threats of birds are a **result of habitat loss, deforestation, pollution, human-wildlife conflicts and climate change** amongst others.
- The study noted that the raptors prey on a wide range of vertebrates and thus, facilitate **long-distance seed dispersal**. This indirectly increases seed production and pest control.
- The **Annobon scops-owl** has an estimated population of fewer than 250 and is **restricted to Annobon Island off West Africa**. Recently, it has been classified as ‘**critically endangered**’ because of rapid habitat loss and degradation.
- The **vulture population** in India has **declined by over 95 percent** because of the widespread use of **diclofenac**, a non-steroidal anti-inflammatory drug.

Raptors are also known as **birds of prey**. They are predators at the top of the food chain. Indonesia has the most raptor species, followed by Colombia, Ecuador and Peru. This includes birds such as a hawk, eagle, owl, vulture, etc.

### Global Award For Turtle Conservation

**Indian biologist Shailendra Singh** has been awarded the **Behler Turtle Conservation Award for bringing three critically endangered turtle conservation species back from the brink of extinction. It is referred to as the “Nobel Prize” of Turtle Conservation.**

- The award was given by several global bodies involved in turtle conservation such as Turtle Survival Alliance, IUCN/SSC Tortoise and Freshwater Turtle Specialist Group, Turtle Conservancy, and the Turtle Conservation Fund.
- These three species are **red-crowned roofed turtle (Batagur kachuga)**, **northern river terrapin (Batagur baska)**, and **black softshell turtle (Nilssonina nigricans)**.

**Northern river terrapin:** It is a species of riverine turtle native to Southeast Asia. It is one of Asia’s largest freshwater and backwater turtles. The species is currently found in Sundarban Ecosystem

IUCN Status: **Critically Endangered**

Indian Wildlife (Protection) Act of 1972: **Schedule I**

**Red Crowned Roofed Turtle:** It is a species of freshwater turtle endemic to South Asia.

The **stronghold for this river turtle is only in Chambal River in central India**, however, small isolated populations may still exist in the Ganges and Brahmaputra river basins.-

IUCN Status: **Critically Endangered**

Indian Wildlife (Protection) Act of 1972: **Schedule I**

Black Softshell Turtle at different temple ponds in Assam.

IUCN Red List: **Critically Endangered**

Wildlife (Protection) Act, 1972: No legal protection

### **Turtle Survival Alliance (TSA)**

It was **formed in 2001** as an International Union for Conservation of Nature(IUCN) partnership for sustainable captive management of freshwater turtles and tortoises.

### **Turtle Conservation Fund (TCF)**

It was established in 2002 as a partnership initiative of Conservation International, IUCN Tortoise and Freshwater Turtle Specialist Group (TFTSG), and Turtle Survival Alliance (TSA). Later, it was joined by other organizations.

### **IUCN/SSC Tortoise and Freshwater Turtle Specialist Group (TFTSG)**

It is one of the more than 100 Specialist Groups and Task Forces that constitute the working network of the **IUCN Species Survival Commission (SSC)**. It provides expertise and science-based recommendations with conservation relevance covering all species of freshwater and terrestrial turtles and tortoises.

### **Koraput's Manda Buffalo Gets Unique Indigenous Tag**

National Bureau of Animal Genetic Resources (**NBAGR**) has recognised Manda buffalo, found in the **Eastern Ghats** and plateau of Koraput region of Odisha, as the 19th **unique** breed of buffaloes found in India.

#### **About the Species**

- They are **resistant to parasitic infections**, less prone to diseases and can live, produce and reproduce at low or nil input system.
- The small, sturdy buffaloes are used for ploughing in their native habitat of **Koraput, Malkangiri and Nabarangpur districts**.
- These buffaloes have **ash grey** and **grey coat** with copper-coloured hair. The lower part of the legs up to elbow is light in colour with copper colour hair at the knee. Some animals are **silver white** in colour.

#### **Benefits of GI Tag**

- It will be incumbent upon both Centre and State governments to devise a strategy for conservation of these buffaloes. Besides, research would be carried out to enhance buffaloes' productivity through breeding strategy
- It will help in marketing their produce- milk, curd and ghee at a premium price.

Four breeds of cattle — Binjharपुरi, Motu, Ghumusari and Khariar — and two breeds of buffalo — **Chilika and Kalahandi** — and one breed of sheep, Kendrapara, have already received NBAGR recognition



## IUCN World Conservation Congress 2020

The world's largest environmental decision-making forum 'IUCN World Conservation Congress 2020' (postponed from June 2020 to September 2021) is being held in Marseille, France.

**International Union for the Conservation of Nature (IUCN)** conducts the World Conservation Congress which is held **every four years**. The **first** was conducted **in the United States in 1948**.

### Highlights

#### 1. Global Indigenous Agenda

- It calls for the secure recognition for collective **indigenous rights** and governance of lands, territories, waters, coastal seas and natural resources.
- It was **developed by IUCN's Indigenous Peoples Organisation Members**.
- It lays out 10 high-level proposals and outcomes relating to **five themes**: Indigenous governance; biodiversity conservation; climate action; post-Covid-19 recovery efforts and food security; and global policy setting.

#### 2. IUCN Red List Update

- **No. of Species on Nine Categories**: The updated **Red List** says that despite global improvement at the species level, the number of species that are at high risk continues to grow. Some 902 species are officially **extinct**. 30% of the species that it assessed face the threat of extinction.
  - Some 80 species are **extinct in the wild**, 8,404 are **critically endangered**, 14,647 are **endangered**, 15,492 are **vulnerable** and 8,127 are **near threatened**.
  - Some 71,148 species are of **least concern**, while 19,404 are **data deficient**. The ninth category is '**Not Evaluated**'.
3. **Tuna Species**: Four of the seven most commercially fished tuna species have shown signs of recovery, namely **Atlantic bluefin tuna**, **Southern bluefin tuna**, **Albacore**, **yellowfin tunas**, **bigeye tuna**, **Pacific bluefin tuna**
  4. Indonesia's **Komodo dragon** is the world's largest living lizard and it has been moved from **vulnerable to endangered**.
  5. **Sustainable Tourism Initiative**: The programme is funded by Germany and includes implementing partners such as UNESCO and the Worldwide Fund for Nature (WWF). It will use tourism as an instrument to contribute to sustainable development in developing and emerging countries.

## River Bhogdoi Dying A Slow Death

Bhogdoi is one of the **south bank tributaries of the mighty river Brahmaputra** and originates from Mokokchung, Nagaland.

### The Problem

In 2019, the Union Ministry of Environment, Forest and Climate Change declared Bhogdoi as one of the most polluted rivers in Assam.

- Coal mining in Nagaland introduced **high levels of manganese** in the river.
- Chemical **waste from the tea gardens** nearby is turning the river poisonous and polluted.

- One of the major drains and smaller drains carry **municipal waste** from Jorhat and into the river. The drains carry **industrial and residential wastes**.
- Disposing human excreta, cremating dead bodies and massive encroachment along the bank

## Renewable Energy and Land Use in India

Recently a report released by Institute for **Energy Economics and Financial Analysis (IEEFA)** named **Renewable Energy and Land Use in India by Mid-Century** suggested that **careful planning today can maximise the benefits and minimise the costs of India's history-making energy transition.**

### Key Highlights

- India will use **significant stretches of land by 2050** (50-75K sq kms for solar and 15-20K sq kms for wind) to install renewable energy generation capacities.
- In India, **electricity generation has to compete with alternative uses of land** such as agriculture, **urbanisation**, human habitation and nature conservation, unlike Europe or the US.
- Properly managed **renewable generation can co-exist with other land uses**, and, unlike coal-based power which fundamentally changes land during use or decommissioning.
- The amount of carbon release will **depend on the region, scale of expansion, solar technology efficiency and land management practices** at solar parks.
- Land use for renewable energy may put a pressure on a variety of ecosystems.

### Effect on Ecosystem

**Generally**, zero impact areas, barren land, unused land or wasteland imply that such areas have **no value**

- **Open Natural Ecosystems (ONE)**, classified as **wastelands**, covered around 10% of India's land surface. The **largest stretches** are found in Rajasthan, Madhya Pradesh, Maharashtra, Andhra Pradesh and Gujarat.
- However, some of these have the **"highest densities and diversity of large mammalian fauna"** and also support livelihoods of local populations
- Earlier, **Supreme Court** directed all power lines of solar power units passing through **Great Indian Bustard** habitats in Rajasthan and Gujarat to be laid underground as the overhead transmission lines could threaten the endangered species.

### Suggestions Given In The Report

- Optimising the size of land used, its location and impact on human habitation, agriculture and conservation of natural resources to reduce environmental damage.
- **Minimising total land-use requirements for renewable energy** by promoting offshore wind, rooftop solar and solar on water bodies.
- Policy makers and planners should exclude ONE with high **density habitats** when considering location of renewable energy projects.
- Attention on Indian **agri-voltaics sector** securing benefits to farmers and incentivising agri voltaics uptake where crops, soils and conditions are suitable and yields can be maintained or improved.
- **Agri voltaics combine agricultural use of land with production of electric energy by photovoltaics.**

## New Island on the Map

A new island has been discovered that is located off the Greenland's coast.

### Highlights

- Before this, Oodaaq was marked as the Earth's northernmost terrain.
- The researchers have suggested the discovery be named 'Qeqertaq Avannarleq', which is Greenlandic for "the northernmost island".
- It is **made up of seabed mud and moraine**, i.e. soil, rock and other material left behind by moving glaciers, and has **no vegetation**.
- **Global warming might have had a severe effect on the ice sheet of Greenland**, but the new island however is not a direct consequence of climate change
- The discovery comes as a battle is looming among Arctic nations (US, Russia, Canada, Denmark and Norway) for the control of North Pole and of the surrounding seabed, fishing rights and shipping routes exposed by melting ice due to climate change.

## India's First Dugong Conservation Reserve

- It will be **built in Tamil Nadu** for the conservation of Dugong, a marine animal that has been enlisted **vulnerable** by World Conservation Union IUCN
- Dugong (sea cow) is the State animal of Andaman & Nicobar Islands. This marine species survive on seagrass and other aquatic vegetation.
- It is the only **herbivorous mammal** that is strictly marine and is the **only extant species** in the family Dugongidae.
- Distributed in shallow tropical waters in the Indo-Pacific region, in India, they are found in the **Gulf of Kutch, Gulf of Mannar, Palk Bay, and Andaman & Nicobar Islands**.
- **Schedule 1 of the Indian Wildlife Act 1972** bans the killing and purchasing of dugong meat.
- The reserve will be spread over an area of 500 km in **Palk Bay**, located between India and Sri Lanka. It is a flagship species in the region.
- Australia has the highest Dugong population due to coral reefs.

### Causes of Extinction

- Dugongs are long-living animals that have a **low reproductive rate, long generation time, and high investment in each offspring**.
- Other factors include loss of seagrass habitats, conversion of coastal forests to banana, areca nut, and coconut plantations) high boat traffic, extreme climatic events.

## Generating Methanol from Coal

- India's first Indigenously designed *High Ash Coal* Gasification based Methanol Production Plant at BHEL R&D Centre, Hyderabad has been opened
- **Methanol** is utilized as a **motor fuel**, to **power ship engines**, energy sector (boilers, heating modules), cooking (replacing LPG, kerosine) and to **generate clean power**.

- Methanol is also used to generate **di-methyl ether (DME)**, a liquid fuel that is very similar to diesel. Existing diesel engines simply need to be minimally changed to use DME instead of diesel.
- Methanol vis-a-vis-Petrol and Diesel is slightly lower in energy content
- Lower production costs: It is cheap to produce relative to other alternative fuels.
- Reduced environmental hazards: Methanol has a lower risk of flammability compared to gasoline.
- The majority of worldwide **methanol production is derived from natural gas since it is relatively an easy process.**
- India doesn't have **much of the natural gas reserves**. Producing methanol from **imported** natural gas leads to outflow of foreign exchange and sometimes uneconomical due to excessive prices of natural gas.
- The next best option is to utilise India's abundant coal. However, due to the high ash% of Indian coal, most **internationally accessible technology** will not be adequate for our demands.

**To Address This Issue**

- BHEL began working on **Indian high ash coal gasification** in 2016 with support from the NITI Aayog to produce methanol.
- The **project was supported by the Department of Science and Technology.**
- This is part of NITI Aayog's '**Methanol Economy**' programme that is aimed at reducing India's oil import bill, greenhouse gas (GHG) emissions, and converting coal reserves and municipal solid waste into methanol.

Future use	Significance
<ul style="list-style-type: none"> <li>• This in-house capability will assist India's <b>coal gasification mission</b> and <b>coal-to-hydrogen production</b> (hydrogen mission)</li> <li>• BHEL is further developing some critical processes such as catalytic conversion of syngas to methanol.</li> <li>• <b>Joint venture with Israel:</b> 5 methanol plants based on high ash coal, 5 DME plants, and 1 natural gas-based methanol production plant have been planned to be set up</li> <li>• <b>Methanol as a marine fuel:</b> Three boats and seven cargo vessels are being built by the Cochin Shipyard Limited for Inland Waterways Authority</li> </ul>	<ul style="list-style-type: none"> <li>• Blending of <b>15% methanol</b> in gasoline can result in at least <b>15% reduction</b> in the import of gasoline/crude oil</li> <li>➤ This would bring down GHG emissions by 20% in terms of particulate matter, NOx, and SOx</li> <li>• India, with 125 Billion Tonnes of Coal reserves and 500 million tonnes of Biomass generated every year has a huge potential</li> <li>• Methanol Economy will also create close to 5 million jobs</li> <li>• Rs 6000 crore can be saved annually: Blending 20% DME (derivative of methanol) in LPG will help the consumer save between Rs 50-100 per cylinder.</li> </ul>

**Sheltered Vultures Now At Home**

- Eight critically endangered Oriental white backed vultures were released into the wild for the first time in India from the **Jatayu Conservation and Breeding Centre.**
- These are not migratory birds.

- Vultures are on the verge of extinction in India. Uncontrolled veterinary usage of nonsteroidal anti-inflammatory drugs (NSAID), including **Aceclofenac**, **Ketoprofen** and **Nimesulide**, and the illegal use of the drug **Diclofenac**, are toxic to vultures
- Populations of three species of vultures (Oriental white-backed, Long-billed and Slender-billed) have declined by over 97% since the 1990s, and that of the Oriental white backed vultures by a drastic 99.9%.

### Thawing Permafrost

Latest IPCC report warns that increasing global warming will result in reduction of arctic permafrost which will release greenhouse gases like CO<sub>2</sub> & Methane which will further melt it

#### Concerns

- Affects infrastructure: Countries like Russia, Sweden, Canada will be impacted first because of the constructions like Railways, roads, buildings **made on Permafrost**.
- If the ground begins to thaw, **organic material** will become available for microorganism to break down. In some environments, microorganisms will release CO<sub>2</sub>, and in others **release methane** which is about **25-30 times more potent as a greenhouse gas** than CO<sub>2</sub>.
- The environment now is so much more suitable than during the Ice Age for not just human life, but also the evolution or development of viruses and bacteria.
- Some permafrost regions have changed from Carbon Storehouse to Carbon Emitters
- After a forest fire, one expects the forest to grow back in the next 50-60 years. This restores the carbon stock in the ecosystem.
- But in the tundra, peat (where the organic material is) takes a very long time to accumulate. So if peat is burned and released into the atmosphere, then it will take centuries to restore that carbon stock at ground level.



#### Permafrost

It is any ground that remains completely frozen (0°C) or colder for at least two years straight. It covers about 15% of the land area of the globe. Although the ground is frozen, permafrost regions are not always covered in snow. Tundra refers to treeless plains in permafrost region.

### US-EU led Effort to cut Methane Emissions

- The **Global Methane Pledge**, a U.S.–EU pact to cut methane emissions by a third, based on 2020 levels, by the end of this decade.
- Methane, a greenhouse gas, is 80 times more potent than CO<sub>2</sub> in terms of its global warming capacity. Approximately 40% of methane emitted is from natural sources and about 60% comes from human-influenced sources, including livestock farming, rice agriculture, biomass burning and so forth.

- Countries joining the Global Methane Pledge commit to this collective goal and moving towards using best available inventory methodologies to quantify methane emissions, with a particular focus on high emission sources.

### SEA CUCUMBERS

- Indian Coast Guard (ICG) has seized two tonnes in the Gulf of Mannar and Palk Bay areas in Tamil Nadu.
- They are **marine invertebrates** that live on seafloor found generally in tropical regions.
- Sea cucumbers are echinoderms
- It uses its tentacles to capture plankton and other tiny particles
- They are an integral part of **coral ecosystem** as one of the main by-products of sea cucumbers digestion of sand is **calcium carbonate** (essential for survival of coral reefs).
- They are crucial to maintain the balance of ocean habitats by acting like **garbage collectors** of the ocean ecosystem.
- Sea cucumbers are in high demand in **China and Southeast Asia**, where they are consumed as food and used in medicine.
- It is treated as an endangered species and is placed in Schedule I of Wildlife protection Act.
- Lakshadweep has created the **world's first conservation area for sea cucumbers**.

#### Physical characteristics

- No limbs or eyes, or blood.
- Sea cucumbers **feed on tiny particles like algae, minute aquatic animals, or waste** materials

### Plant Discoveries 2020

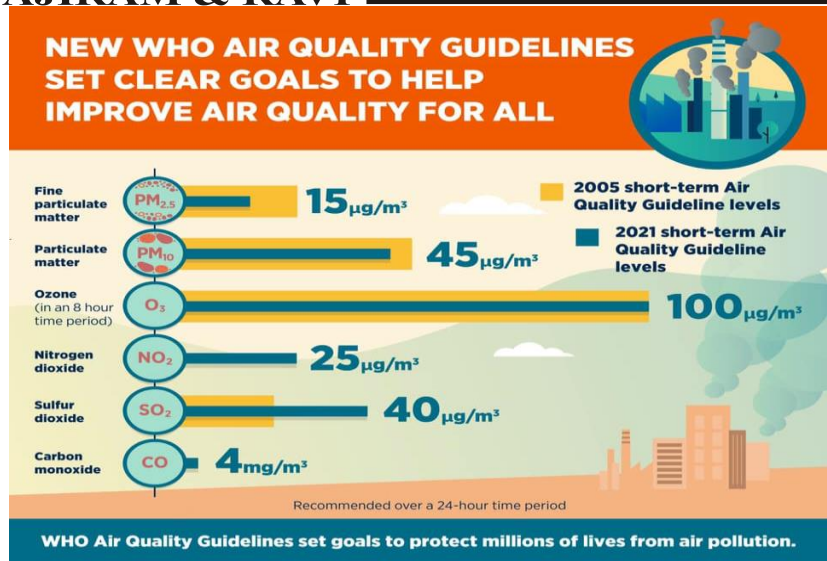
- Botanical Survey of India, in its new publication ***Plant Discoveries 2020*** has added 267 new taxa/ species to the country's flora.
- Among the new discoveries this year, nine new species of **balsams (Impatiens)** one species of **wild banana** were discovered from Darjeeling, one species each of **wild jamun** from Coimbatore and **fern species** were recorded from Kandhamal in Odisha.
- 22% of discoveries were made from the **Western Ghats** followed by Western Himalayas (15%), Eastern Himalayas (14%) and Northeast Ranges (12%).

**Significance:** India being a signatory to the **Convention on Biological Diversity (CBD)** is committed to work towards the prime objective of **Global Strategy of Plant Conservation** and the newly discovered species may offer potential source of wild edible plants, traditional drugs, cosmetics and wild relative of crop plants

### WHO New AQGs: Pollution Norms

The new Air Quality Guidelines (AQGs) are the WHO's first update since 2005. AQG is an annual mean concentration guideline for particulate matter and other pollutants. WHO has further **lowered the recommended levels** of pollutants that can be considered safe for human health.

WHO's new guidelines recommend air quality levels for six pollutants — particulate matter (PM) 2.5 and PM 10, ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>) and carbon monoxide (CO). The diagram presents the data for 24 hours mean Average except O<sub>3</sub> which is at 8 hours mean Average.



**Impact on Health**

✓ Both PM 2.5 and PM 10 are capable of penetrating deep into lungs, but PM 2.5 can even enter bloodstream, resulting in cardiovascular and respiratory impacts and also affecting other organs.

- In 2013, outdoor air pollution and particulate matter were classified as carcinogenic by WHO's International Agency for Research on Cancer (IARC). Every year, exposure to air pollution is estimated to cause 7 million premature deaths.
- PM is primarily generated by fuel combustion in different sectors, including transport, energy, households, industry and agriculture. Types of particulate matter include black carbon/elemental carbon, ultrafine particles, particles originating from sand and dust storms.

**National Ambient Air Quality Standards (NAAQS):** These are Standards for ambient air quality with reference to 12 pollutants notified by CPCB under Air (Prevention and Control of Pollution) Act, 1981. These 12 pollutants include: Sulphur dioxide (80 µg/m<sup>3</sup>), Nitrogen dioxide(80 µg/m<sup>3</sup>), PM 2.5(60 µg/m<sup>3</sup>), PM 10(100 µg/m<sup>3</sup>), Ozone(100 µg/m<sup>3</sup> - 8 hours mean), Lead, Carbon Monoxide(2 µg/m<sup>3</sup>- 8 hours mean), Ammonia, Benzene, BenzoPyrene ,Arsenic, Nickel.

**Impact of New Guidelines on India**

- New air quality guidelines mean that nearly **entire India** would be considered a polluted zone for most of the year.
- These norms would push India to work harder to make its air cleaner and safer.
- Feasibility of implementing the new guidelines is questionable, especially in challenging geo-climatic zones like India.
- WHO's guidelines are **not binding** and NAAQS don't meet WHO's existing standards.
- National Clean Air Programme aims for a 20% to 30% reduction in particulate matter concentrations by 2024 in 122 cities, keeping 2017 as the base year.

**Kovalam And Eden Beaches Get Blue Flag Certification**

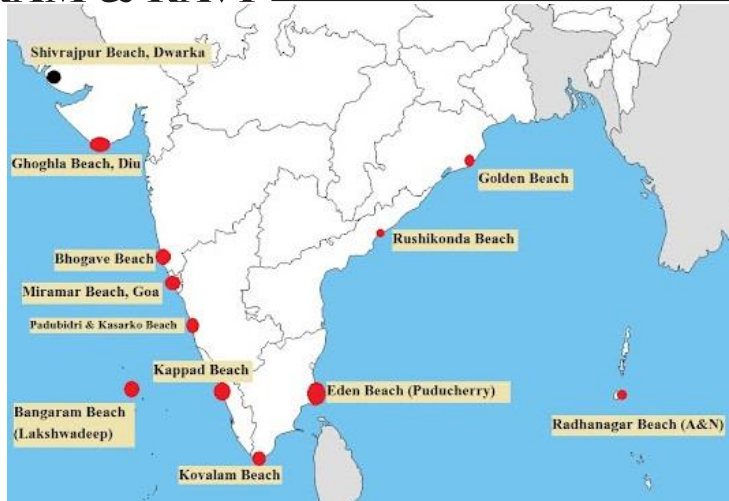
- The certification is awarded by the Denmark-based non-profit Foundation for Environmental Education (FEE).

- Kovalam is near Mammallapuram while Eden beach is in Puducherry.

- The Blue Flag Beach must comply with **33 Blue Flag Criteria**. These criterias are divided into 4 major heads namely:

- **Environmental education and information**
- **Bathing water quality**
- **Environmental management**
- **Conservation and safety services in the beaches**

- The 'Blue Flag' is a certification that can be obtained by a beach, marina, or sustainable boating tourism operator, and serves as an eco-label. The certification is awarded by the Denmark-based non-profit Foundation for Environmental Education, which sets stringent environmental, educational, safety-related and access-related criteria that applicants must meet and maintain. It is awarded annually to beaches and marinas in FEE member countries.



- The 'Blue Flag' is a certification that can be obtained by a beach, marina, or sustainable boating tourism operator, and serves as an eco-label. The certification is awarded by the Denmark-based non-profit Foundation for Environmental Education, which sets stringent environmental, educational, safety-related and access-related criteria that applicants must meet and maintain. It is awarded annually to beaches and marinas in FEE member countries.
- **India has now 10 International blue flag beaches** with the addition of Kovalam and Eden beaches this year and recertification for 8 beaches which got the tag in 2020.

### World Rhino Day

- **Theme 2021 - Keep the fight alive**
- On the occasion of World Rhino Day (**22<sup>nd</sup> September**) the "world's largest stockpile" of rhino horns was consigned to flames in eastern Assam's Bokakhat (headquarters of the Kaziranga National Park) to dispel the myth that have driven the illegal horn trade and the poaching of the animal.
- Rhino horns are just a mass of **compacted hair** and they have **no medicinal value**.
- World Rhino Day was first announced by World Wildlife Fund (WWF) - South Africa in year 2010.
- Five species of rhino exist namely **white and black rhinos in Africa**, the **greater one-horned, Javan and Sumatran rhino species in Asia**.

**Greater one horned Rhino is found Only in India.** Its Habitat includes: Indo-Nepal terai and northern West Bengal and Assam. Important areas: Kaziranga NP, Pobitora WLS, Orang NP, Manas NP in Assam, Jaldapara NP and Gorumara NP.

- **IUCN status: Vulnerable**
- CITES: Appendix 1
- **WildLife Protection Act, 1972: Schedule 1**

### Cyclone Gulab

- Cyclone Gulab (name given by Pakistan) is a deep depression formed in the Bay of Bengal that intensified into a **cyclonic storm**. The system hit the landmass between Kalingapatnam in Andhra Pradesh and Gopalpur in Odisha.



- A much larger threat is the extreme heavy rainfall that will dump across the central belt of India as it travels inland.
- Being a monsoon system, it naturally holds **excess moisture** compared to storms of pre-monsoon and post-monsoon periods.
- Continuous moisture supply is one of the key ingredients for the **intensification** of cyclonic systems. The equatorial Rossby waves (natural planetary waves) could have transferred a substantial amount of energy (moisture) to this system due to **weak to moderate negative Indian Ocean Dipole (IOD)**
- **(IOD) is defined by the difference in sea surface temperature between two areas (or poles, hence a dipole) – a western pole in the Arabian Sea (western Indian Ocean) and an eastern pole in the eastern Indian Ocean south of Indonesia.**
- **With a positive IOD:** Winds over the Indian Ocean blow from east to west (from Bay of Bengal towards Arabian Sea). These results in the Arabian Sea (western Indian Ocean near African Coast) being much warmer and eastern Indian Ocean around Indonesia becoming colder and dry.
- **Negative IOD:** Reverse happens making Indonesia much warmer and rainier.

#### **Naming of Cyclones**

- In 2000, the World Meteorological Organisation (WMO) agreed to start assigning names for cyclones over the North Indian Ocean basin using a list of names suggested by the countries surrounding the ocean basin. Initially, India expressed reservations about naming cyclones. After 4 years of continuous deliberations, the India Meteorological Department (IMD) initiated the naming of the North Indian Ocean storm with Cyclone Onil in September 2004.
- There are six Regional Specialised Meteorological Centres (RSMCs) and five regional Tropical Cyclone Warning Centres (TCWCs) across the globe. They monitor cyclogenesis, issue advisories and name cyclones.
- **IMD's RSMC** in New Delhi is one among them that provide advisories to **13 countries in the north Indian Ocean basin: Bangladesh, India, Iran, Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, Thailand, United Arab Emirates and Yemen.**
- RSMC, New Delhi is, therefore, responsible for naming cyclones over the Bay of Bengal and the Arabian Sea.
- All the 13 countries sharing the Indian Ocean basin have already provided a long list of 169 names, with each country proposing 13 names. The names are chosen one after the other from this list, approved by World Meteorological Organisation (WMO).