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Daily News Discussion (DND)

24th - 25th August 2021

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Note -

- **The Newspaper clippings pasted in PDF are important from Mains point of view as it contains the fodder material for Mains Answer Writing.**
- **Also watch DND video lectures everyday @ 4 PM on Sleepy's YouTube channel in order to understand how to get the most out of everyday's Newspaper .**

Click [here](#) to watch the following topics on YouTube

1. Mains Value addition

Rights (PII)

Education

Case studies-1

Concept of Santiniketan School

- Started by Rabindranath Tagore
- Not limited to education only
- Bonding b/w children and outer world
- Classes at Santiniketan were held outdoors, under an assigned tree, unless it was raining, or if the lesson needed a laboratory.
- The approach was to help the child to learn through exploration – art, music, curiosity, and the careful observation of nature
- No concept of corporal punishment.

Rights (PII)

Education

Case studies-2

Vidyagamma programme (Karnataka)

- Adopted during pandemic
- Children gather with a teacher for in-person teaching in small groups, in outdoor community spaces.
- They are not bound by blackboards and textbooks, but learning interactively, through stories and activities.

Rights (PII)

Education

Impact of covid on Education

- Parliamentary committee on education prepared a report on the impact of Covid-19 on India's education system.

Findings

- Some 24 crore children have missed school for over a year.
- 77% of children have no access to online instruction.
- In any case, 'Online education is not real education.'

- Dropouts have increased at the secondary level

Rights (PII)

Women empowerment

Supreme court

- SC decision to allow women to sit for the NDA exam is one step further towards push to armed forces to bridge the gender discrimination gap in the armed forces.

Rights (PIII)

Farmers empowerment

- The shepherds in Uttarakhand will soon get a batch of lambs through the cross-breeding of sheep indigenous to the region with Australian Merino sheep. Australian Merino sheep are known to have the softest and finest wool used for apparel. This cross-breeding was done with an aim to boost the pastoral economy and reduce the country's import dependence on raw wool.
- **Fact: Despite India having the third-largest sheep population in the world**, the average annual yield per sheep in India was 0.9 kg, as against the world average of 2.4 kg in 2018-19.

2. Environment

2.1. Smog tower (IE)

- Delhi Chief Minister Arvind Kejriwal recently inaugurated country's first 'smog tower'
- It is an experimental set up worth Rs 20 crore to purify air in a 1-km radius around the structure.

How it works

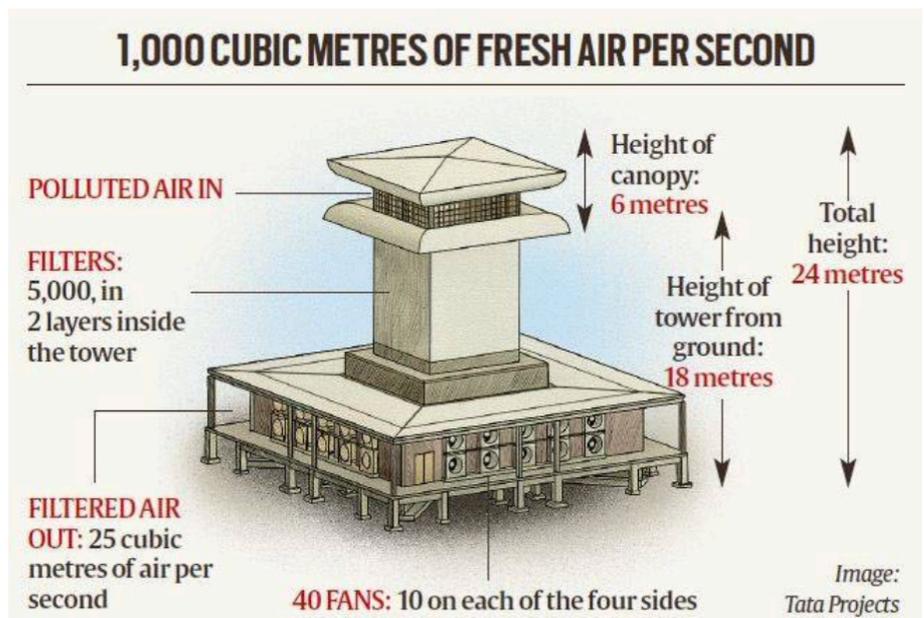
- The tower uses a 'downdraft air cleaning system' developed by the University of Minnesota
- **IIT-Bombay has collaborated with the American university to replicate the technology, which has been implemented by the commercial arm of Tata Projects Limited.**

- Polluted air is sucked in at a height of 24 m, and filtered air is released at the bottom of the tower, at a height of about 10 m from the ground.

- When the fans at the **bottom** of the tower operate, the negative pressure created sucks in air from the top.

- The 'macro' layer in the filter traps particles of **10 microns** and larger, while the 'micro' layer filters smaller particles of around **0.3 microns**.

- The downdraft method is **different from the system used in China**, where a 60-metre smog tower in Xian city uses an 'updraft' system – air is sucked in from near the ground, and is propelled upwards by heating and convection. Filtered air is released at the top of the tower.



Background

- In 2019, the **Supreme Court** directed the Central Pollution Control Board (CPCB) and the Delhi government to come up with a plan to **install smog towers to combat air pollution**.

- The court was hearing a matter related to air pollution in the national capital **due to stubble-burning in Punjab, Haryana and Uttar Pradesh.**
- IIT-Bombay then submitted a proposal for the towers to the CPCB.
- In January 2020, the Supreme Court directed that two towers should be installed by April as a pilot project.
- The smog tower at **Connaught Place** is the first of these towers.
- The second tower, being constructed at **Anand Vihar in east Delhi** with CPCB as the nodal agency, is nearing completion

Monitoring

- IIT-Bombay suggests the tower could have an impact on the air quality up to 1 km from the tower
- The **actual impact will be assessed by IIT-Bombay and IIT-Delhi** in a two- year pilot study that will also determine how the tower functions under different weather conditions, and how levels of PM2.5 vary with the flow of air.
- An automated Supervisory Control and Data Acquisition (SCADA) system in the tower will monitor air quality.
- **Levels of PM2.5 and PM10, besides temperature and humidity,** will be measured constantly, and will be displayed on a board atop the tower.

No evidence so far

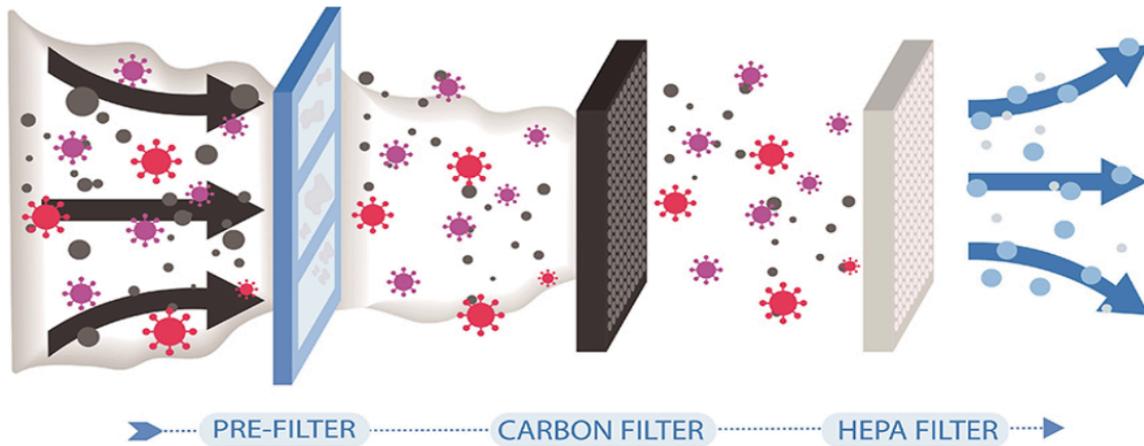
- This is the first experiment with a large-scale outdoor air-purification system in India.
- Small smog towers have been **raised in Netherlands and South Korea**; larger ones have been set up in China.
- Experts said there **isn't enough evidence** that smog towers work.

Past News (2019)

- Union Environment ministry has said that roadside air purifiers such as WAYU and HEPA filters has failed to curb air pollution in Delhi.

WAYU (Wind Augmentation PurifYing Unit)

- It has been indigenously developed by the Council of Scientific and Industrial Research - National Environmental Engineering Research Institute (CSIR-NEERI).
- It has the capacity to purify the air in an area of the **500-meter square.** It is **energy efficient** and has a **low maintenance cost.**
- It comprises a fan that sucks in air and removes dust and particulate matter.
- The **carbon monoxide and hydrocarbons** are oxidized into less harmful carbon dioxide using activated carbon coated with titanium dioxide.



High-Efficiency Particulate Arrestance (HEPA) filters

- The HEPA filter sucks airborne contaminants and pushes out clean, fresh air.
- The filters can trap nearly 99.97% of particles that are 0.3 microns.

2.2. India's turning point: How climate action can drive our economic future (BS)

- India could gain \$11 trn in 50 years with climate action: Deloitte report
- The report, titled, **India's turning point: How climate action can drive our economic future**

Key findings

- **Unmitigated climate change can cost India \$35 trillion** in economic potential over the next 50 years which could be **12.7% of its gross domestic product (GDP) by 2070.**
- As India aspires to be a \$5 trillion economy, it is not just foreign and domestic investments that will be the key in driving growth, the **country must also take this opportunity to align its ambitions with climate choices**
- With no action taken on climate change, the average global temperatures could rise by 3°C or more by the end of this century.
- This will make it **harder for people to live and work, as sea levels rise, crop yields fall, infrastructure is damaged,** and other challenges emerge, threatening the progress and prosperity that the nation has enjoyed in recent decades.
- **India can gain \$11 trillion in economic value** over the next 50 years by limiting rising global temperatures and realising its potential to 'export decarbonisation' to the world.

ECONOMIC COST IF NO ACTION TAKEN

(In \$ trillion)

Services	11	<div style="width: 100%; height: 10px; background-color: red;"></div>
Manufacturing	5	<div style="width: 50%; height: 10px; background-color: red;"></div>
Retail & tourism	8	<div style="width: 80%; height: 10px; background-color: red;"></div>
Others	11	<div style="width: 100%; height: 10px; background-color: red;"></div>
Loss to the economy over 50 years	35	<div style="width: 100%; height: 10px; background-color: red;"></div>

Source: Deloitte Economics Institute

- Over the next 50 years, the **top five most impacted industries** in terms of economic activity are expected to incur a significant share of climate-related loss, says the report. These industries – **services (government and private), manufacturing, retail and tourism, construction, and transport** – currently account for more than 80 percent of India’s GDP.

2.3. Acetabularia jalakanyakae (ToI)

- A team of marine biologists from the Central University of Punjab, Bathinda, has discovered a new species of marine green algae from Andaman and Nicobar Islands



Acetabularia jalakanyakae

- The green seaweed is named as **Acetabularia jalakanyakae**.
- Jalakanyaka in Sanskrit literally means mermaid and a **goddess of oceans**.
- The newly discovered alga is stunning; it has caps with intricate designs as if it were umbrellas of a mermaid
- **The main feature** of the newly discovered species is that the plant is **made up of one gigantic cell with a nucleus**.

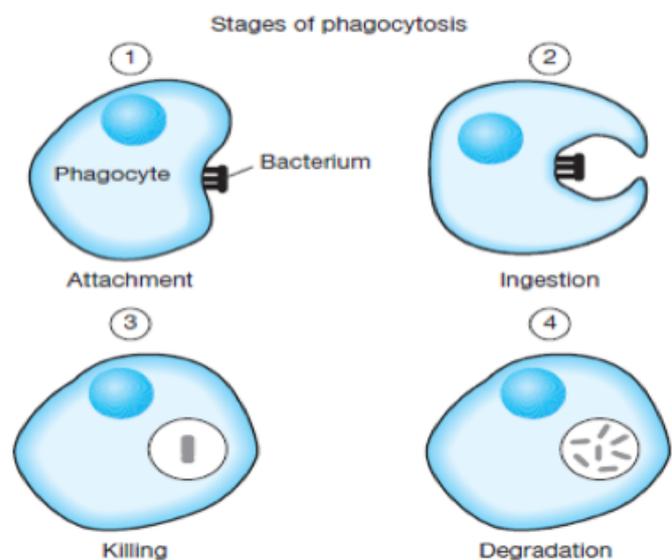
Algae

- **Alga is a term that describes a large and incredibly diverse group of eukaryotic, photosynthetic lifeforms.**
- Algae are photosynthetic organisms
- Algae can be either unicellular or multicellular organisms
- Algae lack a well-defined body, so, structures like roots, stems or leaves are absent

2.4. Immune cells in sea coral & Anemones (DTE)

- **Specialised immune cells** exist in certain varieties of sea corals and anemones, found a new study

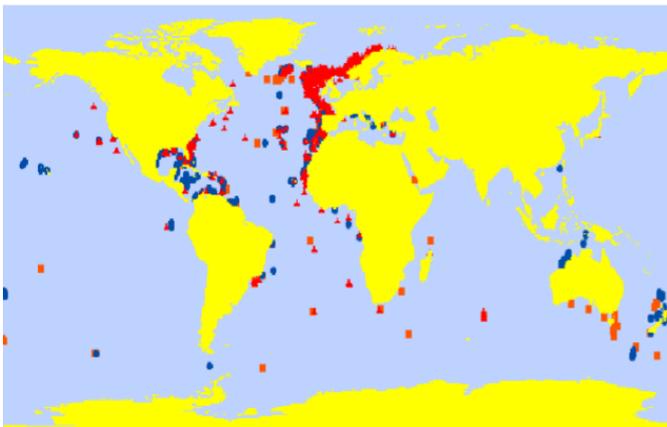
About



- The newly discovered **phagocytic cells** were identified in cauliflower coral and starlet sea anemone by scientists at the Rosenstiel School of Marine and Atmospheric Science, University of Miami and the Ben Gurion University of the Negev.
- Immune cells ingest and destroy foreign and damaged cells through a process called phagocytosis
- It helps to better understand **how coral cells perform specialized functions such as fighting infections** as the climate change crisis drastically reduces global coral reef biomass and diversity worldwide.

Deep sea coral Vs Shallow corals (Source: NOAA)

- Deep-sea corals are defined as **corals that live at depths greater than 50 meters**, but most species live **in depths several hundred meters** deep, in cold, dark, rocky habitats, often far from shore.
- Unlike shallow-water coral reefs, which are limited to warm tropical waters, deep-sea corals are found throughout the world's oceans, from tropical to polar regions.
- While the **diversity of corals that build reefs in shallow waters is very high**, and includes hundreds of species, there are **only six species of deep-sea stony corals that create reefs**. The most common of these is *Lophelia pertusa*, which forms massive reefs throughout the Atlantic Ocean, including the Gulf of Mexico and the South Atlantic Bight
- **Shallow-water corals rely on photosynthetic algae** that live within the corals and provide their hosts with nutrition. However, algae cannot survive where there is no light, so **deep-sea corals need to rely on alternate sources of food** to obtain their nutrition, either by feeding on organic material falling from the surface or by feeding on small plankton.
- Because **deep-sea corals lack algae**, they are bright white in coloration, rather than the brown and green colors than we see in shallow reefs.
- Note : Tropical coral (Complete) covered in 24th June DND



3. Science & Technology

3.1. Human trials for new HIV vaccine (TH)

- Moderna, the Massachusetts-based American biotechnology company, has indicated that it may begin human trials for a vaccine for novel mRNA vaccine (mRNA-1644) in September for HIV

mRna vaccine for HIV

- The vaccine is expected to work similar to the **Covid-19 vaccine** – by getting the **body's** cells to produce the HIV virus' spike protein triggering an immune response.
- The **larger purpose of stimulating the B cells** is to generate what are called **broadly neutralising antibodies (bnAbs)**, which are specialised blood proteins that attach to the surface proteins of HIV and disable them by accessing key but hard-to-reach regions on the virus
- **RNA-based immunogens** are believed to be a promising alternative because they **do not involve the use of a live virus, can be made relatively easily, can be quickly deployed and safely administered.**

Challenges

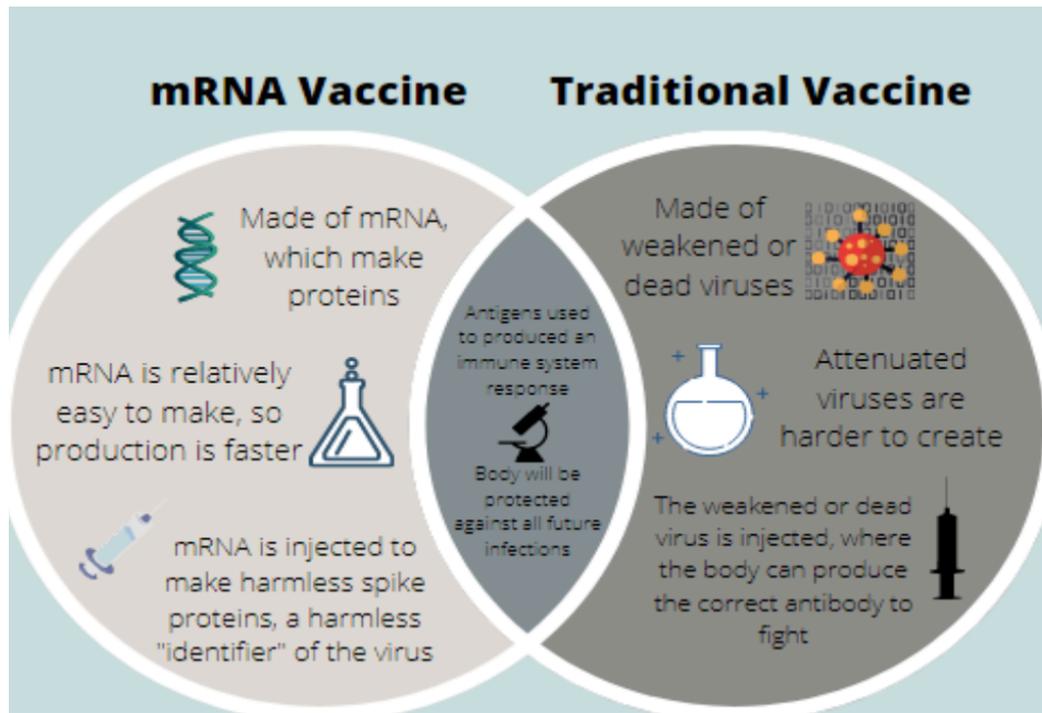
- m-RNA vaccines are sensitive to temperature in storage
- **HIV has mutated into several variants** and is an insidious virus, and it will be many years before definitive proof of the success of the m-RNA approach can be established.

Note : Type of vaccine & Mechanism (COVID Series IV)-08 June DND

4. Economy

4.1. National Monetisation Pipeline (NMP)

- The Government recently unveiled a **four-year National Monetisation Pipeline (NMP) worth Rs 6 lakh crore to unlock** value in brownfield projects by engaging the private sector transferring to them the rights but not the ownership in projects; and using the funds for infrastructure creation across the country.

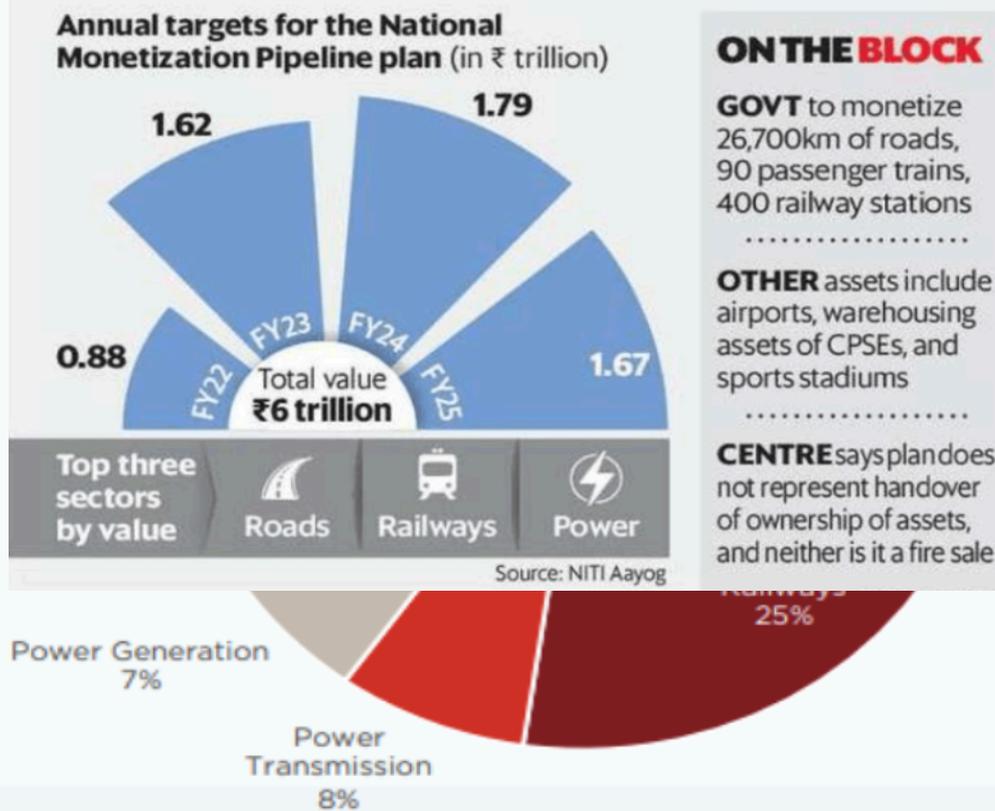


About

- Asset monetisation consists of a limited period transfer of performing assets (or disposing of non-strategic / underperforming assets) to unlock “idle” capital and reinvesting it in other assets or projects that deliver improved or additional benefits.
- It was **prepared by NITI Aayog** in consultation with infrastructure line ministries, based on the mandate for ‘Asset Monetisation’ under Union Budget 2021-22.
- The **ownership (of assets) will remain with the government** and there will be a mandatory hand back after a certain time.

Sectoral Break - UP

The Centre aims to hand gas pipelines, roads and telecom towers, among other assets, to private firms on a long-term lease. A look at the monetization goals:



Benefits

- By bringing in **private participation** in this, you will be able to **monetise it better** and ensure further investment in infrastructure building
- The NMP will run co-terminus with the National Infrastructure Pipeline of Rs 100 lakh crore announced in December 2019.
- To enable 'Infrastructure Creation through Monetisation' wherein the public and private sector collaborate, each excelling in their core areas of competence, so as to **deliver socio-economic growth**.

Challenges of NMP

- Lack of identifiable revenue streams in various assets,
- Absence of proper dispute resolution mechanism,
- Regulated tariffs in power sector assets
- Low interest among investors in national highways below four lanes and
- Lack of independent sectoral regulators as potential impediments

4.2.Ubharte Sitaare Fund (TH)

- The Hon'ble Finance Minister of India, Smt. Nirmala Sitharaman, on Saturday, August 21, 2021 launched the **Ubharte Sitaare Fund**

Ubharte Sitaare Fund

- It is an **Alternative Investment Fund**, christened “Ubharte Sitaare Fund”, co- sponsored by India Exim Bank and SIDBI
- The corpus of the Fund is ₹ 250 crore with a **green shoe option of ₹ 250 crore**.
- The Fund would invest by way of equity, and equity like products in export- oriented units, both in the **manufacturing and services sectors**, across the country and facilitate rising stars in the export market to attain greater heights.
- The objective of the USF is to **identify and invest in small and mid-size ventures** in manufacturing and service industries with good export potential that could be future champions of export and handhold them through the growth phase

Criteria

- Companies will be selected for support based on their unique value proposition in technology, products or processes that match global requirements.
- Fundamentally strong companies with acceptable financials with an annual turnover of up to approx. Rs 500 crore.
- Companies with a good business model, strong management capabilities, and focus on product quality.

Alternative Investment Fund? (Detailed coverage: 17 May DND)

- Anything alternative to traditional forms of investments gets categorized as alternative investments.
- In India, AIFs are defined under **Securities and Exchange Board of**
- **India** (Alternative Investment Funds) Regulations, 2012.
- It refers to any privately pooled investment fund, (whether from Indian or foreign sources) which are not presently covered by any governing fund management of SEBI nor coming under the direct regulation of any other sectoral regulators in India.
- It includes venture Capital Fund, hedge funds, private equity funds, commodity funds, infrastructure funds, etc.

4.3.UCBs: RBI panel for four-tier structure (IE)

- The Reserve Bank of India’s (RBI’s) expert committee on urban co-operative banks (UCBs) has suggested a **four-tiered structure to regulate them**, based on size of deposits.
- The committee, headed by former RBI Deputy Governor NS Vishwanathan

Suggestions



- The committee has proposed **setting up an Umbrella Organisation (UO) to oversee co-operative banks** and suggested that they should be allowed to open more branches if they meet all regulatory requirements.
- The UO should be financially strong and be well governed by a professional board and senior management, both of which are fit and proper.

- According to the committee, based on the cooperativeness' of the banks, availability of capital and other factors, UCBs may be categorised into four tiers for regulatory purposes
 - ✓ **Tier 1** with all unit UCBs and salary earner's UCBs (irrespective of deposit size) and all other UCBs having deposits **up to Rs 100 crore.**
 - ✓ **Tier 2** with UCBs of deposits between **Rs 100 crore and Rs 1,000 crore.**
 - ✓ **Tier 3** with UCBs of deposits between **Rs 1,000 crore and Rs 10,000 crore.**
 - ✓ **Tier 4** with UCBs of deposits more than **Rs 10,000 crore.**

Supervisory Action Framework(SAF):

- The objective of the Supervisory Action Framework (SAF) should be to find a time-bound remedy to the financial stress of a bank
- SAF should adopt a twin indicator approach, wherein **asset quality and capital are measured through Net non-performing Asset(NNPA) and Capital to Risk-Weighted Assets Ratio(CRAR) respectively.**

Cooperative banks

- Co-operative banks are financial entities established on a cooperative basis and belonging to their members.
- They are **registered under the Co-operative Societies Act** of the State concerned or under the Multi-State Co-operative Societies Act, 2002.
- The Co-operative banks are governed by the Banking Regulations Act, 1949 and Banking Laws (Co-operative Societies) Act, 1955.

Structure of co-operative banks in India

- Broadly, cooperative banks in India are divided into two categories – **urban and rural.**
- Rural cooperative credit institutions could either be short-term or long-term in nature.
- Further, short-term cooperative credit institutions are further sub-divided into State Co-operative Banks, District Central Co-operative Banks, Primary Agricultural Credit Societies.
- Meanwhile, the long-term institutions are either State Cooperative Agriculture and Rural Development Banks (SCARDBs) or Primary Cooperative Agriculture and Rural Development Banks (PCARDBs).
- On the other hand, **Urban Co-operative Banks (UBBs)** are either scheduled or non-scheduled

5. Polity

5.1. Adoption (First Amendment) Regulations, 2021 (IE)

- The government on Monday introduced a new clause in the adoption regulations

New rules

- It shall be the responsibility of the Indian Mission of the country to which the child has moved to perform all the assigned duties under the Adoption Regulations, 2017, in respect to the adopted child.
- So far, Indian missions have had a role in inter-country adoption of Indian children limited to kids adopted by **Non Resident Indians (NRIs), Overseas Citizens of India or foreign parents.**
- The amendment has been notified in accordance with the relevant sections of the **Juvenile Justice (Care and Protection of Children) Act, 2015 (2 of 2016)**’.

Current Responsibility of Indian Missions

- The Indian diplomatic missions presently send progress reports of an adopted child on quarterly basis in the **first year and on six-monthly basis in the second year**, from the date of arrival of the child in the receiving country.
- It also expected to contact the central authority or other authorities in the receiving countries to ensure safeguards of children of Indian origin **adopted by Non-Resident Indian or Overseas Citizens of India or foreign parents.**
- In **case of disruption of adoption**, the foreign missions shall send a report in this regard at the earliest, and render necessary help and facilitate the repatriation of the child in case required.

Persons Eligible to Adopt Child under Adoption Regulations, 2017

- They can adopt irrespective of their marital status and whether or not he or she has a biological son or daughter.
- They should be physically, mentally and emotionally stable, financially capable and shall not have any life-threatening medical condition.
- A single female can adopt a child of any gender but a single male shall not be eligible to adopt a girl child
- In the case of a married couple, both spouses should give their consent for adoption.
- No child shall be given in adoption to a couple unless they have at least two years of stable marital relationship,”.
- Couples with three or more children shall not be considered for adoption “except in case of special need children”, “hard to place children” and in case of “relative adoption and adoption by step-parent”.

Note: JJ Act (30 July DND)

5.2. Yuktdhara portal

- Recently, the Ministry of Rural development has launched a new geospatial planning portal, 'Yuktdhara'

Yuktdhara portal

- It is a culmination of joint efforts of the **Indian Space Research Organisation (ISRO)** and **the Ministry of Rural development** made towards realising a G2G (Government-to-Government) service for rural planning in support of decentralised decision making.
- The word '**Yukt**' is derived from **Yojanam**, the planning and 'Dhara' indicates the flow
- It will serve as a **repository of assets (geotags)** created under the various National Rural Development Programmes, such as **MGNREGA, Per Drop More Crop Programmes, Integrated Watershed Management Programme, and Rashtriya Krishi Vikas Yojana**, along with the field photographs.
- It will integrate a wide variety of thematic layers, multi-temporal high- resolution earth observation data with the analysis tool.
- The Planners will be able to **analyse previous assets** under various schemes and facilitate the identification of new works using online tools. Prepared plans will be then evaluated by appropriate authorities under State Departments.
- Yuktdhara based plans will be **prepared by grassroot functionary** and verified by appropriate authorities for relevance and resource allocation.
- Previously launched, ISRO's **Geoportal Bhuvan** is presently a de-facto geospatial platform for several developmental planning activities across India.

Bhuvan Portal

- It is a type of web portal used to find and access **geographic information (geospatial information)** and associated geographic services (display, editing, analysis, etc.) via the Internet.
- It shows the true borders of the country as per the information available from the Government of India