



**EXCEL**  
CIVILS ACADEMY

EMPOWERING FUTURE LEADERS

# EXCEL QUEST

VOLUME - 38, FEBRUARY 2023



MINIMUM SUPPORT PRICES



VIJAY DIWAS – BANGLADESH LIBERATION WAR



INDIA-US TRADE POLICY FORUM: ADDRESSING INDIAN INDUSTRY'S TRADE CONCERNS

## National Bio Fuels Policy 2018

### Vision :

- ▶ Help in doubling farmer's income
- ▶ Provide boost to agriculture sector
- ▶ Reduce import dependency
- ▶ Creating new employment opportunities
- ▶ Promote environment friendly fuels
- ▶ Waste to Wealth creation
- ▶ Augment ongoing initiatives like Make in India, Swachh Bharat Abhiyan & Skill Development



NATIONAL BIO FUELS



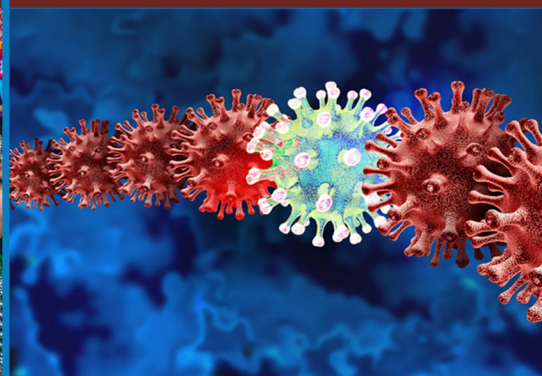
NSIC SIGNS MOU WITH WALMART



ADB, INDIA SIGN \$220 MILLION LOAN TO STRENGTHEN POWER SECTOR IN TRIPURA



THARU WOMEN IN UP



XBB.1.5 OMICRON VARIANT

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## Director's Message

Dear Aspirants,

The theme for this year's World Economic Forum (WEF) summit held at Davos, Switzerland is "Cooperation in a Fragmented World". In line with this theme, India has reiterated its position as a resilient economy with a strong leadership providing stable policy to the global investors. India's focus areas at WEF this year are investment opportunities, infrastructural landscape and its inclusive & sustainable growth story. The Department for Promotion of Industry and Internal Trade (DPIIT) has setup three lounges namely India lounge, India Inclusivity lounge and India Sustainability lounge to showcase its work and future plans. In addition, the presence of State lounges of Maharashtra, Tamil Nadu and Telangana along with business lounges of HCL, Wipro, Infosys and TCS have added strength to India's presence on the Davos promenade.

The India lounge focussed on sessions about India's growth wave, energy transition, the transforming infrastructure landscape, rising digitalization, fintech, healthcare, electronic & semiconductor supply chain & start-up ecosystem. The Inclusivity lounge at Promenade 63 at World Economic Forum reiterated the vision of the Prime Minister of India, Shri Narendra Modi for inclusivity. Traditionally, only select few big businesses were present at Davos. In 2023, India at Davos set up a special lounge that represented the voice of the smaller enterprises, individual artisans, women self-help groups, specially-abled etc. The lounge showcased hand-made products that represent years of rich Indian heritage and cultural history and generations of craftsmanship. Through the Sustainability lounge, India showcased new and emerging technologies that are set to address the climate change issues around the world. It also displayed India's approach in combating climate change and meeting the Sustainable Developmental Goals (SDGs). India showcased the technologies that were employed to attain these goals under five broad themes which are energy sector, natural resource, management, sustainable infrastructure and mobility, food and nutritional security and circular economy.

The World Economic Forum was founded by Klaus Schwab in 1971 as a not-for-profit organization to demonstrate entrepreneurship in the global public interest. It was initially called the European Management Forum, and then changed its name to World Economic Forum in 1987. Davos, a ski resort located on the lap of the Swiss Alps, has been the annual host of WEF's meeting. Though it is a surprising choice for a meeting of global economic giants and geopolitical leaders, the location was not arbitrarily selected but has a philosophical significance for the founder of WEF. With its serene environs, it can help to cut through the many distractions of global politics and succeed to create a more prosperous global economy.

3,000 paying members and selected participants meet in Davos for up to five days to discuss global issues across 500 sessions. However, its prominence goes far beyond discussions on economic issues. In the past, it has been used as a location for critical international diplomacy as leaders are able to break tensions between warring nations. For instance, in 1988 Greece and Turkey avoided war, when the two signed the famous Davos Declaration.

This year's WEF meet holds significance due to the ongoing Russia-Ukraine war, which has sent food and energy prices soaring and the resulting inflationary pressures have ignited a global cost-of-living crisis and social unrest. Added to that, carbon emissions continue to rise as industries resumed after the pandemic. According to the WEF's Chief Economists' outlook, the economic outlook for a country for the year 2023 differs depending on its physical location. According to the survey, economists are hopeful about the Middle East and North Africa (MENA), and South Asia. Economies such as Bangladesh and India might benefit from global trends such as the diversification of manufacturing supply chains away from China. London-based consultancy Center for Economics and Business Research (CEBR) also supported this claim saying that India will become the third \$10 trillion economy by 2035.

On its way to achieving this humongous feat, India should focus on four key factors; sustaining a consistent growth rate of 6-8% for a decade with moderate inflation, building resilient supply chains with local manufacturing and research capabilities, energy transition, and digital transformation. As India takes on the leadership of G20 until November this year, energy and climate change mitigation are among its priorities.

Best wishes,

Yours sincerely,



K Rajendra Kumar IPS (Retd)

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## 1. NATIONAL

### 1.1 Vijay Diwas – Bangladesh Liberation War

1. Vijay Diwas or Victory Day is commemorated on December 16, marking the end of the 1971 Indo-Pak War and the liberation of Bangladesh.
2. India declared victory on this day 51 years ago after Pakistan signed the Instrument of Surrender.

#### **What led to the 1971 Indo-Pak War?**

After the partition of India following the end of British rule in 1947, two independent Dominions were formed – India and Pakistan. The latter consisted of East Pakistan (now Bangladesh) and West Pakistan (present-day Pakistan).

### 1.2 Vijay Diwas – Bangladesh Liberation War

1. On August 5, 2019, the former State of J&K was bifurcated into – Union Territories of J&K and Ladakh, the latter without a Legislative Assembly.
2. After the special status was removed, several political groups (the apex body for Leh) in Ladakh have been demanding that its land, employment, and cultural identity should be protected under the 6th Schedule.

#### **About the Sixth Schedule of the Indian Constitution:**

- It protects tribal populations, providing autonomy to communities by creating Autonomous District Councils (ADCs).
- It also provides for Regional Councils for each area constituted as an autonomous region.
- It consists of provisions for the administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram (Article 244).
- As of now, 10 autonomous councils exist in the above 4 states.

### 1.3 The impasse over the appointment of Judges

The Vice President of India recently commented on the ongoing heated debate between the Central government and the Supreme Court over the matter of judicial appointments

#### **Changes brought by the Constitution (99th Amendment) Act, 2014:**

**In order to replace the collegium system, it introduced 3 primary Articles.**

1. Article 124A, created a constitutional body - NJAC to replace the collegium system.
2. Article 124B, which conferred the NJAC powers to make appointments.
3. Article 124C, empowering Parliament to regulate the NJAC's functioning.



**Appointment procedure provided under the NJAC Act:**

- The NJAC was to recommend the Chief Justice of India and Chief Justices of the HCs based on seniority, while SC and HC judges were to be recommended based on ability, merit and other criteria.
- Unlike the collegium system, the Act enables both executive and judicial members to serve on the NJAC and empowered any 2 members of the NJAC to veto a recommendation.

**The SC's 2015 ruling (4:1 majority) (4th Judge Case):**

- The NJAC was unconstitutional and violated the basic structure of the constitution.
- The Bench admitted that all was not well even with the collegium system and that the time was ripe to improve the system of judicial appointments.

**1.4 North-East Zonal Councils**

1. Recently, PM Modi attended the Golden Jubilee celebrations (50 years) of the North-Eastern Council (NEC) in Shillong.

**What are Zonal Councils? ABOUT ZONAL COUNCILS::**

1. Zonal Councils are the statutory (and not the constitutional) bodies.
2. They are established by an Act of the Parliament, that is, States Reorganisation Act of 1956.
3. The act divided the country into five zones- Northern, Central, Eastern, Western and Southern and provided a zonal council for each zone.
4. While forming these zones, several factors have been taken into account which include:
  - a. The natural divisions of the country.
  - b. The river systems and means of communication.
  - c. The cultural and linguistic affinity.
  - d. The requirements of economic development, security and law and order.
5. In addition to the above mentioned Zonal Councils, a North-Eastern Council was created by a separate Act of Parliament, the North-Eastern Council Act of 1971.

**1.5 India Inequality Report 2022**

According to 'India Inequality Report 2022: Digital Divide' released by the NGO Oxfam India - growing inequalities based on caste, religion, gender, class, and geographic location are being worryingly replicated in the digital space in India.

**Key Highlights of the report:****Gender Divide:**

- Women constitute only one-third of internet users in India
- 61% of men-owned mobile phones compared to just 31 % of women in 2021

**Rural-Urban Divide:**

- Only 31 per cent of the rural population uses the Internet compared to 67 per cent of their urban counterparts.
- Maharashtra has the highest internet penetration, while Bihar has the lowest.

**Religion and Caste wise Divide:**

- Sikhs have the highest likelihood of having a computer followed by Christians, Hindus and lastly Muslims.
- The tendency to use formal financial services is lowest for ST households, followed by SC households and OBC households.

**1.6 Going beyond OPS vs. NPS debate****National Pension Scheme (NPS):**

- The NPS is a voluntary and long-term retirement investment plan administered by the Pension Fund Regulatory and Development Authority (PFRDA), Ministry of Finance, Government of India.
- It was launched in January 2004 for government employees and it was decided to discontinue defined benefit pensions/OPS for all employees who joined after April 1, 2004.

**The Old Pension Scheme:**

- It was discontinued in 2004, however, it guaranteed life-long income after retirement.
- Typically, the insured amount is equal to 50% of the most recently drawn salary.
- The expenditure incurred on the pension is borne by the government.

**1.7 FRBM Act (2003)**

**Aim:** To make the Central government responsible for ensuring inter-generational equity in fiscal management and long-term macroeconomic stability.

**Fiscal Limits:** The Act envisages the setting of limits on the Central and state government's debt and deficits.

- The States have since enacted their own respective Financial Responsibility Legislation, which sets the same 3% of Gross State Domestic Product (GSDP) cap on their annual budget deficits.

**The NK Singh committee (set up in 2016) recommendation:**

- The debt to GDP ratio should be 7% for the central government, and 20% for the state governments together by the FY 2022 – 23. Fiscal deficit: By FY 2022 – 23, the fiscal deficit should be 2.5% of GDP.

### 1.8 NFSA: 81 crore people to get free food grains for one year

The Union government announced free food grains to beneficiaries under the National Food Security Act, 2013, for a year commencing in January 2023, combining economic prudence and the need of a safety net.

- It has, however, discontinued the PM Garib Kalyan Anna Yojana (PMGKAY), merging it with NFSA

Comparing NFSA AND PMGKAY	
NFSA	PMGKAY
<ul style="list-style-type: none"> <li>• <b>Objectives:</b> To provide for food and nutritional security.</li> <li>• <b>Key features:</b> <ul style="list-style-type: none"> <li>▪ Food grains at <b>subsidised price</b> - rice at Rs 3/kg, wheat at Rs 2/kg and coarse grain at Re 1/kg.</li> <li>▪ <b>2 categories of beneficiary</b> - Antyoday Anna Yojana (35kg/family/month) and the Priority Households (5kg/person/month).</li> <li>▪ Covers <b>67%</b> of the total population (75% of the rural and 50% of the urban population).</li> <li>▪ Meals to pregnant <b>women</b> and lactating mothers.</li> <li>▪ Maternity benefits of not less than <b>Rs. 6,000</b> to such women.</li> <li>▪ <b>Children</b> up to 14 years of age will be entitled to nutritious meals.</li> <li>▪ In case of non-supply of entitled food grains or meals, the beneficiaries will receive <b>food security allowance</b>.</li> <li>▪ Grievance redressal mechanism at the District and State levels.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Launched in April, 2020 as part of <b>Atmanirbhar Bharat</b> to supply free food grains to migrants and poor amid Covid-19.</li> <li>• More than <b>81.35 crore people</b> will be provided 5 kg free wheat/rice per person / month along with 1 kg free whole chana to each family per month.</li> <li>• This is over and above the regular monthly entitlements under <b>NFSA</b>.</li> <li>• Families belonging to the Below Poverty Line - AAY and PHH categories will be eligible for the scheme.</li> </ul>

### 1.9 Minimum Support Prices

#### Meaning:

It is a policy decision not enforceable by law - a sort of market intervention by the Government of India to protect agricultural producers from a dramatic drop in farm prices during abundant output years.

#### Objectives:

- It is a price guarantee for farmer's output intended to prevent farmers from selling their crops in distress and to buy food grains for public distribution.
- For example, if the market price for a commodity falls below the designated minimum price due to excessive production and a market imbalance, government agencies will purchase the whole quantity produced by farmers at the declared minimum price.

#### Announced by:


- The Cabinet Committee on Economic Affairs (chaired by the PM) based on the recommendations of the Commission for Agricultural Costs and Prices (CACP) at the start of the sowing season for specific crops.

#### Crops covered:

- The government has announced minimum support prices (MSPs) for 22 specified crops as well as a fair and remunerative price (FRP) for sugarcane (total 23).
- 14 kharif crops, 6 rabi crops and two other commercial crops are mandated.

### 1.10 Biofuels

- Any hydrocarbon fuel that is produced from an organic matter (living or once living material) in a short period of time (days, weeks, or even months) is considered a biofuel.
- Biofuels may be solid, liquid or gaseous in nature.
  - Solid:** Wood, dried plant material, and manure
  - Liquid:** Bioethanol and Biodiesel
  - Gaseous:** Biogas
- These can be used to replace or can be used in addition to diesel, petrol or other fossil fuels for transport, stationary, portable and other applications. Also, they can be used to generate heat and electricity.
- Some of the main reasons for shifting to biofuels are the rising prices of oil, emission of greenhouse gases from fossil fuels and the interest in obtaining fuel from agricultural crops for the benefit of farmers.
- The government has set some ambitious goals for the energy sector which include electrification of all census villages by 2019, 24×7 electricity and 175 GW of renewable energy capacity by 2022, reduction in energy emissions intensity by 33%-35% by 2030 and producing above 40% electricity from non-fossil fuels by 2030.




**National Bio Fuels Policy 2018**

**Vision :**


- ▶ Help in doubling farmer's income
- ▶ Provide boost to agriculture sector
- ▶ Reduce import dependency
- ▶ Creating new employment opportunities
- ▶ Promote environment friendly fuels
- ▶ Waste to Wealth creation
- ▶ Augment ongoing initiatives like Make in India, Swachh Bharat Abhiyan & Skill Development

Twitter: dpradhanbjp | Website: Dpradhanbjp.com | Facebook: DharmendraPradhanOdisha



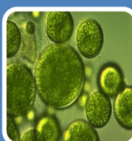
**1<sup>st</sup> Generation Biofuel**

- 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**.

### 1.11 EU's Carbon Border Tax

The European Union (EU) agreed on a preliminary deal for an EU Carbon Border Adjustment Mechanism (CBAM) on imported goods such as iron and steel, cement, aluminium, fertilisers, electricity and hydrogen.

- The CBAM/ a carbon border tax/ carbon leakage in- [www.insightsonindia.com](http://www.insightsonindia.com) 117 strument was proposed by the EU in 2021 and will be applicable from October 1, 2023.

## 1.12 Data on polluted rivers

The number of polluted stretches in India's rivers have fallen from 351 in 2018 to 311 in 2022 though the number of most polluted stretches is practically unchanged, according to a report from the Central Pollution Control Board (CPCB).

DATA DIVE

### STATE OF RIVER POLLUTION

#### 30% sites have polluted water

Of the 222 sites monitored by the Central Water Commission for water quality between 2012-13 and 2016-17, water quality at 67 locations was beyond the permissible limits. Out of the 67 sites, 14 sites fell in category I (severely polluted) and 12 sites fell under category II. This excludes Ganga and Brahmaputra, the two most important and polluted river basin systems

#### What is Biochemical Oxygen Demand (BOD)

The amount of dissolved oxygen that must be present in water in order for microorganisms to decompose the organic matter in the water. It is a used as a measure of the degree of pollution. The BOD value is most commonly expressed in milligrams of oxygen consumed per litre (mg/L). If the BOD level is higher than 3mg/L, it is unfit for drinking

#### THE OTHER STORIES

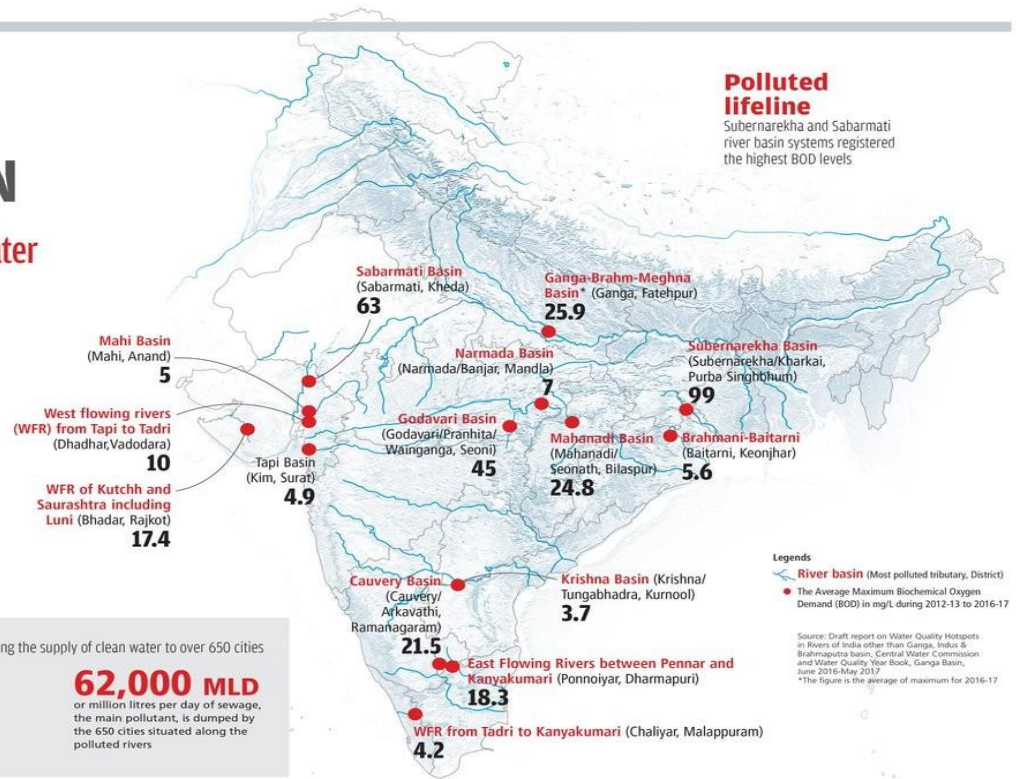
**Rivers in distress** | River pollution is threatening the supply of clean water to over 650 cities

**275 rivers** are polluted out of the monitored 445 rivers. It was 121 in 2009

**302** the number of polluted river stretches. It was 150 in 2009

**62,000 MLD** or million litres per day of sewage, the main pollutant, is dumped by the 650 cities situated along the polluted rivers

Source: SoE in Figures 2016



## 1.13 Losar festival

### Context:

PM extended his greetings on the occasion of the Losar festival (the beginning of the Tibetan new year) It consists of the offering of prayers, dances, and songs in the honour of Ibex and the pilgrimage of Mount Kailash.

- Losar is the Tibetan word for 'new year'
- Ladakhi Buddhists make a religious offering before their deities in the domestic shrines or in the Gompas.

## 1.14 What it takes to become a National Party in India

With 12.9% seats, AAP is set to be recognised as the 9th national party by the Election Commission of India (ECI).

### What is a National Party?

#### ECI Criteria:

1. If it secures six per cent of valid votes polled in any four or more states at a general election to the Lok Sabha or to the Legislative assembly; and, in addition, it wins four seats in the Lok Sabha from any state or states; or

2. If it wins two per cent of seats in the Lok Sabha at a general election; and these candidates are elected from these states; or
3. If it is recognised as a state party in four states.

### **1.15 Karnataka: Hike in SC, ST quota**

1. The Karnataka government tabled a Bill in the Legislative Assembly to increase reservations for Scheduled Castes (from 15 per cent to 17 per cent) and Scheduled Tribes (from 3 per cent to 7 per cent) in the state.
2. While the SCs make up 16 per cent of the state's population, the STs constitute 6.9 per cent (six point nine).

#### **Concerns raised:**

1. The decision breaches the 50 per cent cap on quotas and may be challenged in the judiciary.

#### **Why the quota has been increased?**

While the percentage of SC/STs in the state has increased but the reservation percentage has not increased in line with it.

### **1.16 Official recognition of Esports**

1. The President of India in the exercise of the powers "conferred by clause (3) of article 77 of the Constitution" amended the rules governing Esports and asked the Ministry of Electronics and Information Technology and the Sports Ministry to include "e-Sports as part of multi-sports events".
2. IT Ministry (MeitY) will be the nodal agency for online gaming-related matters
3. Sports ministry will be responsible for including esports in the curriculum.

#### **What Is E-Sports?**

ESports turns online gaming into a spectator sport. It mimics the experience of watching a professional sporting event, except instead of watching a physical event, spectators watch video gamers compete against each other.

### **1.17 E-Sanjeevani**

**Context:** National Telemedicine Service of India achieves 8 crore consultations

#### **About eSanjeevani:**

1. E-health initiative of the Ministry of Health and Family Welfare, it strives to provide an alternative to conventional physical consultation via the digital platform.
2. It has garnered the distinction of being the world's largest government-owned telemedicine platform.

### 1.18 GHAR- Go Home And Re-Unite

**Context:** National Commission for Protection of Child Rights (NCPCR), has developed and launched a portal namely GHAR - GO Home and Re-Unite (Portal for Restoration and Repatriation of Child).

**GHAR:** The GHAR portal has been developed to digitally monitor and track the restoration and repatriation of children according to the protocol.

NCPCR is a statutory body (set up in 2007) under the administrative control of the Ministry of Women & Child Development, Government of India.

### 1.19 Pradhan Mantri Adi Adarsh Gram Yojana

**Context:** Ministry of Tribal Affairs has revamped the existing Scheme of ‘Special Central Assistance to Tribal Sub-Scheme (SCA to TSS) with the nomenclature ‘Pradhan Mantri Adi Adarsh Gram Yojana (PMAAGY)’.

**The objective of the scheme:**

1. To achieve integrated socio-economic development of selected villages through a convergence approach.
2. It includes preparing Village Development Plan based on the needs, potential, and aspirations.
3. The scheme envisions mitigating gaps prominently in 8 sectors of development viz. Road connectivity, Telecom connectivity, School, Anganwadi Centres, Health Sub-Centre, Drinking water facility, Drainage and solid waste management.

### 1.20 Bharat(BH) series registration mark

**Context:** Ministry of Road Transport and Highways (MoRTH) has allowed the conversion of regular vehicle registrations into Bharat Series (BH) numbers as part of measures to widen the scope of the BH series ecosystem.

- Earlier, only new vehicles could opt for the BH series mark.

**What is the BH number plate?**

- The Government of India introduced the BH Number Plate or Bharat Series

**Everything you need to know about BH Number Plate**

**Who is it for?**  
Any Private vehicle and also for defence, central and state government, government PSUs and private sector vehicles companies as well having office in more than 4 states.

**What is the format?**  
YY BH #### XX.  
YY = Year, BH is Bharat and #### is number.

**Road Tax?**  
Motor vehicle road tax needs to be paid on a biennial basis for 14 years from the date of first registration.

**How do I apply?**  
All the applications for BH registration plates will be processed via the designated online portal. The BH numbers will be generated randomly.

**Why BH is introduced?**  
Remove the hassle of re-registration of the vehicle when it moves from one state to another.

IND 21 BH AA####

Registration Number for non-transport vehicles in August 2021. The BH Series number plate removes the obligation of transferring vehicle registration after moving from one state to the other.

### 1.21 Ayurswasthya Yojana

**Context:** AYURSWASTHYA Yojana is run by the Ministry of AYUSH.

#### **About Ayurswasthya Yojana:**

- Ayurswasthya Yojana is an umbrella scheme that has been developed to roll out authentic classical Ayush interventions for promoting community health care.
- It has two components: AYUSH and Public Health Initiatives (PHI) and Centre of Excellence (CoE)



### 1.22 India urged to adopt ASEAN consensus on Myanmar

**Context:** Indonesian Foreign Minister urged the Indian counterpart to adopt the ASEAN policy on Myanmar.

#### **ASEAN's 5- point consensus on Myanmar:**

1. Calls for an immediate end to violence in the country.
2. Dialogue among all parties
3. The appointment of a special envoy
4. Humanitarian Assistance by ASEAN.
5. Special Envoy's visit to Myanmar to meet with all parties

### 1.23 UNSC Resolution 2593

**Context:** India joins other nations in criticising Taliban's ban on Women in universities.

#### **What is the resolution 2593?**

1. United Nations Security Council Resolution 2593 was adopted on 30 August 2021, following the Fall of Kabul and subsequent Taliban takeover in Afghanistan.
2. According to the resolution, the Security Council demands that Afghan territory not be used to threaten or attack any other country or to shelter and train terrorists.
3. It reaffirms importance of upholding human rights including those of women

### 1.24 YK Alagh

1. The former Minister and Economist passes away at 83.
2. Remembered for being a democratic and follower of an inclusive approach to development.
3. As the Chair of the Planning Commission Task Force, he constructed a separate poverty line for rural and urban areas for the first time, based on Nutritional requirements (less than 2400 calories in rural areas and 2100 calories in urban areas).



4. As the head of the Agricultural Prices Commission, he set up its econometrics cell which recommends MSP for different crops.
5. He chaired a High-powered committee whose report paved way for setting up cooperative businesses as “Producer Companies”.

### **1.25 Banks’ NPAs written off**

**Context:** Banks have written off bad loans worth Rs 10, 09, 511 crores in the last 5 fiscal years as told by the finance minister in the parliament.

#### **What are NPA/ Bad loans?**

A non-performing asset (NPA) is a loan or advance for which the principal or interest payment remained overdue for a period of 90 days.

#### **How are they classified?**

1. Substandard assets: Assets which have remained NPA for a period less than or equal to 12 months.
2. Doubtful assets: An asset would be classified as doubtful if it has remained in the substandard category for a period of 12 months.
3. Loss assets: As per RBI, “Loss asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted, although there may be some salvage or recovery value.”

#### **Writing off of Bad loans/NPA::**

- Writing off a loan essentially means it will no longer be counted as an asset.
- By writing off loans, a bank can reduce the level of non-performing assets (NPAs) on its books
- An additional benefit is that the amount so written off reduces the bank’s tax liability.

#### **Why do banks write off?**

- After the write-off, the lender moves the defaulted loan, or NPA, out of the assets side and reports the amount as a loss.
- After the write-off, banks are supposed to continue their efforts to recover the loan using various options.
- They have to make provisioning as well.
- The tax liability will also come down as the written-off amount is reduced from the profit.

## 2. INTERNATIONAL RELATIONS

### 2.1 Lessons from Russia's Ukraine War

#### Frame of reference

- It has been more than 10 months since Russia's invasion of Ukraine but the conflict is not over yet and security experts are trying to understand Russian President Putin's real intentions for going to war.
- The current situation also offers many lessons to other emerging and established powers which need to be looked into.



#### North Atlantic Treaty Organization (NATO)

##### About

- A military alliance established by the North Atlantic Treaty (Washington Treaty).
- The treaty was signed in April, 1949, by the United States, Canada and several Western European nations.
- It is headquartered at Brussels, Belgium.

##### Membership

- As of December 2022, there are 30 member states, with the Republic of North Macedonia becoming the latest member to join the alliance in 2020.
- NATO also has what it calls the Membership Action Plan.
- It helps aspiring members prepare for membership and meet key requirements by providing practical advice and targeted assistance.

##### Objective and working

- NATO was originally established to provide collective security against the Soviet Union.
- A key provision of the treaty is Article 5 states that if one member of the alliance is attacked in Europe or North America, it is to be considered an attack on all members.
- That effectively put Western Europe under the "nuclear umbrella" of the US.
- NATO has only once invoked Article 5 in September 2001 following the 9/11 attacks on the World Trade Center in the US.
- NATO's protection does not extend to members' civil wars or internal coups.

#### The war has undermined the Image of Russia

Before the war, the Russian president had created an aura of power around himself and Russia.

- He disrupted Georgia's ambition to join the North Atlantic Treaty Organization (NATO).
- Made forays into West Asia neutralizing Israel and Turkey, both American allies.
- Took Crimea without a fight and turned Russia again into an energy superpower.
- As of now, Russia's superior troops have been struggling to cope with battlefield setbacks in Ukraine.
- There is a sense of ambiguity as the Russian objectives are not clear because
- Russia continues to fight but there have been tactical setbacks.
- When Russian troops were retreating, annexation of four Ukrainian regions was announced which practically closed off the path towards talks.
- The Russian president then offered talks even as Russian missiles kept pounding Ukrainian infrastructure.

### **Shaping of a new world order**

- The world order has been historically multipolar but in the aftermath of the disintegration of the Soviet Union, the U.S came to prominence as a unilateral power in the 1990s.
- In recent years, however, there have been signs of the passing of American unilateralism. America's wars in the Muslim world did not proceed as Washington had expected.
- As the U.S. got stuck in Afghanistan and Iraq, Russia became more aggressive, Iran more defiant, and China more powerful.
- The Ukraine war, Europe's largest land war since World War II, is the most visible manifestation of America's declining unilateralism.
- Thus, the war itself offers some key lessons to understand contemporary geopolitics.

### **Lessons to be learnt**

#### **The US unilateralism is declining**

- Russia's invasion of Ukraine, a NATO ally, would go down in history as one of the pivotal moments of 21st century geopolitics which is the manifestation of the weakening of the US.
- The world is returning to its essential anarchy (as the realists say) in which great powers compete for maximizing their powers.
- The U.S. seems to have realized that the world has changed and its response to Russia's aggression in Ukraine shows it.

#### **A possible grouping of the world powers**

- The US has taken pains to keep the Western alliance together.
- It wants a coalition of democracies against dictatorships and other such authoritarian regimes.

- The US admits that the ‘rules-based order’ i.e., an American-centric world faces systemic challenges from Russia and China.

### **Limitations of great powers**

- The Ukraine war also tells us about the limitations of great powers in shaping the outcome of conflicts with smaller ones.
- For instance, the failed intervention of the U.S. in Vietnam, its invasion of Afghanistan, and the Soviet intervention in Afghanistan.
- But historical examples do not deter offensive nations and Russia had miscalculated the power of Ukrainian nationalism and the resolve of the West.
- The West has been supplying Ukraine with money, weapons including advanced rocket systems and artillery, intelligence and mercenaries.
- The constant support of the west has not only kept Ukraine on its feet but the West has been tactically using the Ukrainian territory to weaken Russia who has been under tremendous pressure.

### **China’s takeaway**

#### **On Taiwan issue**

- If Russia successfully takes control of Ukraine, this encourages China to do the same with Taiwan.
- Additionally, if Ukraine (together with the rest of the West, led by the USA), is successful in dealing with Russia, China will not be tempted to invade Taiwan.

#### **On China-Russia bonhomie**

- During the Cold War, the U.S. exploited the divisions between the Soviet Union and China to prevent the formation of a strong Eurasian alliance.
- But now China and Russia are exploiting this Ukraine conflict to take their relationships to a new level. This is definitely a bad sign for the West and the USA.

#### **On growing power of the dragon**

- China would like to see the U.S. being distracted in Europe while it strengthens its ties with Russia and spreads its influence elsewhere.
- It is the U.S. who needs introspection whether the time, resources and energy it is spending on Ukraine (to weaken Russia) is worth it in a changing world where China is its most powerful rival.

### **Conclusion**

- The Russia-Ukraine issue is certainly a complex international political issue which makes it difficult to choose between politics and moral imperative for countries like India.

- The lessons from the Ukraine -Russia conflict can surely help India establish a balance between politics and moralist standpoint and mould its foreign policy in order to achieve its motto of Vasudhaiva Kutumbakam.

## **2.2 India-US Trade Policy Forum: Addressing Indian industry's Trade Concerns**

### **Frame of reference-**

- The Union Commerce & Industry Minister of India is on an official visit to New York and Washington DC this week.
- He will participate in the 13th edition of India-US Trade Policy Forum in which the minister and his US counterparts will have one on one meeting and joint sittings on crucial issues.



### **More on the News**

#### **The joint forum is likely to take up wide ranging issues of India's interests which includes**

- Renewal of trade benefits under the Generalized System of Preferences (GSP) scheme.
- Removal of penal tariffs on steel and aluminium.
- Sorting out regulatory issues on health-related products.
- Speeding up visa approvals.

#### **The US agenda is expected to focus on**

- Liberalization of digital trade.
- Intellectual Property (IP) protection.
- Lowering of import tariffs.
- Redressal of market access restrictions for farm products.
- Prioritization of labour-related issues.
- The India-US talks are also likely to take up current issues such as disruptions in supply chains due to the Ukraine war and the Covid-19 situation in China and the need for diversification.

### **India-US bilateral trade**

- According to data by the Ministry of Commerce and Industry the US was India's top trading partner in 2021-22 surpassing China.
- Bilateral trade between the US and India stood at USD 119.42 billion in 2021-2022 as against USD 80.51 billion in 2020-21.

- Exports to the US increased to USD 76.11 billion in 2021-22 from USD 51.62 billion in the previous fiscal year.
- Although imports rose to USD 43.31 billion as compared to USD 29 billion in 2020-21.

### **Trade Surplus**

- The US is one of the few countries with which India has a trade surplus.
- India had a trade surplus of USD 32.8 billion with the US in 2020-21.

### **Major export Items**

- Major export items from India to the US include petroleum, polished diamonds, pharmaceutical products, jewellery, frozen shrimp.

### **Major imports**

- Major imports from the US include petroleum, rough diamonds, liquified natural gas, gold, coal, waste and scrap, almonds etc.

### **Leveraging the Indian Diaspora**

- About 4.2 million Indian Americans/Indian origin people reside in the US and the Indian Americans constitute the third largest Asian ethnic group in the US.
- Indian Americans are one of the most successful immigrant communities in the US and are excelling in diverse fields, including politics.
- In 2020-21, the U.S. had 23% share in India's total remittances and surpassed Saudi Arabia to become India's top source country for remittances.
- The nearly 200,000 Indian students in the United States contribute \$7.7 billion annually to the U.S. economy.
- The Indian diaspora has been a catalyst in cementing closer ties between India and the U.S.
- The Indian Diaspora can help Indian economy through proactive means such as
- Buying of India-made products, including handlooms and handicrafts for gifting needs and festive occasions.
- Can present India investment opportunities to investors in the US.
- Contribute to India's growth story through philanthropy, knowledge transfers and taking innovation to India.

### **Issues at hand**

#### **Issue of Generalized System of Preferences (GSP)**

- The GSP scheme for India, that allowed Indian exporters tariff benefits on a number of products, was withdrawn by the Trump administration in 2019 and its restoration is one of India's many demands.

**Tariffs and duties**

- India also looks to remove penal tariffs on Indian steel and aluminium.
- Both the countries cite market barriers including both tariff and non-tariff barriers, as well as multiple practices and regulations that disadvantage foreign companies.

**Visa and related issues in services**

- A key issue for India is long delays in appointments for US visas and USA's temporary visa policies, which affect Indian nationals working in the United States

**Issues related Intellectual Property (IP) rights**

- The two sides differ on how to balance IP protection to incentivize innovation and support other policy goals, such as access to medicines.
- Based on concerns owing to its treatment of patents, infringement rates, and protection of trade secrets the US had kept India on the “Special 301” Priority Watch List for 2020.

**Way forward****Initiate Tariff related reforms**

- To resolve the issues at hand both countries should cooperate on tariffs because removing the tariffs ultimately will be beneficial for the bilateral trade relationship.
- India should take the initiative and consider unilaterally removing its retaliatory tariffs; it will represent India as willing to be a constructive player in trade talks.

**Countering China**

- From a strategic point of view, one of the ways that India can counter China is through deepening trade ties with partners who are committed to supporting India’s growth.
- A deal with the US will be beneficial for India, both strategically and economically.

**Create conducive environment for investments**

- A vibrant trade strategy to attract investors can complement the Production-Linked Incentive (PLI) schemes, and help to boost both manufacturing and exports.
- India needs to improve the efficiency of ports, shipping, Customs, etc., via automation which would be a big boost for participation by MSMEs.

**Facilitating Digital Growth**

- To promote further growth in the digital sphere, which represents over USD 100 billion of bilateral trade, the two must address several foundational issues; digital service tax, cross-border data flows and common cellular standards.

### Explore scope of free trade agreements

- Although as of now the two countries do not have any FTA but the new age free trade agreements are based on reciprocal economic benefits and enhanced trade facilitation, India can resort to ways which will facilitate smoother trade
- The new-age FTAs demand more holistic and diversified trade opportunities with trade in services, e-commerce, labour, climate/environment, digital trade, public procurement, supply chains etc.

### Conclusion

- A vibrant partnership and cooperation between the world's oldest and largest democracies is critical and should continue to be strengthened in response to increasing threats in the Indo-Pacific region.
- Thus, the Forum's outcome would hold great significance not only for the two countries but for other nations as well and therefore the representatives of both the countries should work to create a conducive environment to facilitate more open, secure and transparent trade, and resilient supply chains.

## 2.3 Crisis in the International Laws

### Frame of reference

- 2023 is going to further test the limits of international law, not just because of Russia's ongoing illegal war, but also due to several other factors that will play out in the next 12 months and beyond.

### Key Highlights:

- Securitisation, populism, and protectionism threaten the core universal values enshrined in international law.
- Currently the world is facing some major challenges which need to be settled down.



### Geo-economic Challenge:

- The world post-World War II was a bipolar one with great power competition between a 'capitalist' America and a 'communist' Soviet Union.
- The end of the Cold War led to the disintegration of the Soviet Union and the collapse of communism.
- This 'unipolar' moment gave a leg-up to multilateralism and led to three decades of "relative harmony" among the major powers.
- However, even during this period, the North Atlantic Treaty Organization bombed Kosovo and the Western forces invaded Iraq in complete disregard to the U.N. Charter.



- The ‘relative harmony’ phase saw the spread of democracy, greater acceptance of universal human rights, and a global consensus for maintaining international rule of law with multilateral institutions and independent international courts acting as referees.
- However, these universal values are under threat as we have entered a multipolar world involving the securitisation of international law.
- Now, International law faces a new ground reality the dwindling of the ‘liberal’ and ‘capitalist’ West and the rise of an ‘autocratic’ China and ‘expansionist’ Russia.
- The Westphalia notion of international law is now pitted against Chinese and Russian versions that believe in gaming international law for national interests.
- As this clash between different visions of international law sharpens in 2023.
- Therefore, it will push international law into a deeper crisis.

#### **State of Lawlessness in the World:**

- The concomitant spread of economic protectionism is seen as important fallout of the rise of the geo-economic order.
- The rise of China has caused controversy in the U.S., which is desperate to ensure its continued hegemony.
- The USA is fast backtracking on the neoliberal consensus of interdependence and non-discrimination in international economic law.
- The Inflation Reduction Act in the U.S., which aims to transition to clean energy by providing massive industrial subsidies to domestic American companies at the cost of imports and foreign companies, can be seen as an example of the USA policy.
- Similarly, rejection of the recent World Trade Organization (WTO) panel reports by the USA, that held the U.S.’s protectionist industrial policies masquerading as national security objectives illegal, is another indication.
- The U.S. has also strangled the WTO’s effective dispute settlement mechanism by relentlessly blocking the appointment of the Appellate Body members.
- All these challenges are only going to become ominous in 2023 leading to greater lawlessness in the world economy.

#### **Challenge caused by the Populist:**

- International law in 2023 will continue to face challenges from populist and ethno-nationalist regimes in several countries such as Hungary, Turkey, Poland, and Israel.

- Populists attack the legitimacy of international law by referring to it as foreign law, which is inimical to their national interests.
- International law, in the populist scheme of things, is often reduced to a mere law of coordination.
- This law of coordination is not aimed at international cooperation to develop and espouse common global values, but only to ensure a minimal relationship between countries with common ideational moorings.
- Populists also attack international institutions and international courts for thwarting them from pursuing the interests of the ‘pure’ people they claim to represent.
- They enact domestic laws to protect the ethnic identity of the ‘pure’ people even if these laws undermine international law.

### **Characterisation of the Crisis: Views of the Scholars**

- Some Scholars characterize the crisis in international law in different ways such as-
- B.S. Chimni believes that a crisis in international law will exist if the phenomenon of imperialism is not addressed.
- James Crawford argued that crises occur in international law because of “the absence of any constitutional order, other than constitutional order of States”.
- Jan Klabbers contends that the crisis of international law today is the crisis of liberal democracy.
- Regardless of the characterisation, the fact remains that the liberal international legal order is under attack from many sides.

### **Conclusion:**

- The international community should fight back against the relentless assaults posed by securitisation, populism, and protectionism on core universal values to establish peace in the world.

## **2.4 Kuki-Chin Refugees and the Issue of refugees in India**

### **Frame of reference-**

- Recently, in the media it was alleged that several Kuki-Chin refugees were “pushed back” by the Border Security Force (BSF) personnel at the Indo-Bangladesh border in Mizoram.

### **Background:**

- Hundreds of refugees have landed in Mizoram from Bangladesh following an intensive operation by Bangladeshi security forces against militants.
- According to the government officials these refugees mainly of Kuki-Chin community have crossed the border at Lawngtlai near the trijunction of India, Myanmar and Bangladesh in south Mizoram.

- The issue has been politicized on the grounds of Kuki-Chin being ‘ethnic Mizos’ and subsequently not allowed to enter Mizoram by the BSF.
- Although the BSF officials refuted the claims and stated that the refugees were offered food and medical supplies, they left when they were told that entering into India would amount to them being illegal immigrants.



### 1951 Refugee Convention

- The 1951 Refugee Convention is a UN treaty that defines who a refugee is and establishes the rights of such persons and also of those who are granted asylum.
- It is the main legal document that governs the working of the UNHCR.
- It is also called the Convention Relating to the Status of Refugees or the Geneva Convention of 28 July 1951.
- The Convention is both a status and rights-based instrument and is underpinned by a number of fundamental principles, most notably non-discrimination, non-penalization and non-refoulement.
- Non-refoulement is a fundamental principle of international law that forbids a country receiving asylum seekers from returning them to a country in which they would be in likely danger of persecution based on “race, religion, nationality, membership of a particular social group or political opinion”.
- India is not a signatory to the 1951 Refugee Convention.

### Who are Kuki-Chins?

- Kuki-Chin is a Christian community from Bangladesh’s Chittagong hill tracts (CHT).
- It shares close ethnic ties with people in Mizoram and is largely Christian.
- Although the Chin-Kuki group consists of Gangte, Hmar, Paite, Thadou, Vaiphei, Zou, Aimol, Chiru, Koireng, Kom, Anal, Chothe, Lamgang, Koirao, Thangal, Moyon and Monsang.
- The term Chin is used for the people in the neighbouring Chin state of Myanmar whereas Chins are called Kukis on the Indian side.
- Other groups like Paite, Zou, Gangte, and Vaiphei identify themselves as Zomi and have distanced themselves from the name, Kuki.
- The refugees were first noticed in November 2022 in the aftermath of an action by the Bangladesh Rapid Action Battalion against some insurgents belonging to the group.

**Why are the Kuki-Chins facing action from Bangladeshi forces?**

- Bangladesh's CHT is home to a dozen Buddhist and Christian ethnic groups collectively known as the Jumma people.
- The Kuki-Chins have organized themselves under the umbrella of Kuki-Chin National Front (KNF), which was formed to carve out an autonomous state encompassing areas from Rangamati and Bandarban in Bangladesh's CHT and safeguard the interests of the community.
- The KNF operates an outfit known as the Kuki-Chin National Army (KNA) as the armed wing of the Kuki-Chin National Front (KNF) to realize its goals.
- The KNA has been alleged—to have links with an Islamist group, forged ties with rebel groups in India's northeast and Myanmar, involved in cross-border activities and murdering civilians in Bangladesh.
- In the garb of all these allegations the Rapid Action Battalion (RAB) of Bangladesh forces has launched attacks on groups, arrested community members and has been on offensive for the last 10 months.

**What is the role of India?****Close ties with North East India**

- Many of these refugees like the other refugees share close religious and cultural ties with Indian people in the North- East.
- Even many are involved in commerce and interpersonal relations.
- Thus the government is pressurized at times from locals to provide a passage and refugee to such migrants.

**Political implications**

- Sometimes elected representatives from North East politicize the issue and advocate the refugee of such migrants and the government has to concede the demand.
- For Instance in this case a Rajysabha MP is pressing for the safe passage of these Kuki-Chin refugees citing 'discrimination on ethnic grounds'.

**Impact of refugees in India****Undermined national security**

- Illegal immigrants and refugees undermine the national integrity in many ways and have serious national security ramifications and pose serious security threats.

**1. Law and Order issues**

- The rule of law and integrity of the country are undermined by the illegal migrants who are engaged in illegal and anti-national activities.
2. They are engaged in entering the country clandestinely, fraudulently acquiring identity cards, exercising voting rights in India and resorting to trans-border smuggling and other crimes.

### 3. Human trafficking

- In the recent decades, trafficking of women and human smuggling have become quite rampant across the borders.
- Poverty and hunger forces either the parents to sell the girls to traffickers or the girls themselves leave home and fall prey to traffickers.

#### Clash of Interests

- It impacts the interests of local populations in the areas seeing large-scale influxes of illegal immigrants.

#### Rise of Militancy

- The persistent attacks against the Muslims perceived as illegal migrants in Assam has given way to radicalisation.
- This has led to formation of militant organizations, such as the Muslim United Liberation Tigers of Assam (MULTA).

#### United Nations High Commissioner for Refugees (UNCHR)

- The United Nations High Commissioner for Refugees (UNHCR) is a UN Refugee Agency.
- It is a global organization dedicated to saving lives, protecting the rights and building a better future for refugees, forcibly displaced communities and stateless people.
- It was created in 1950 to help millions of Europeans who had fled or lost their homes.
- It is headquartered at Geneva, Switzerland.

#### Framework to deal with refugees in India

##### Constitutional provisions

- Article 51 states that the state shall endeavour to foster respect for international law and treaty obligations in the dealings of organized people with one another but there is no concrete provision on refugees.
- Although law and order is a State subject under the Indian Constitution, international relations and international borders are under the exclusive purview of the Union government.

##### Legal provisions

- India is not a signatory to the 1951 United Nations Convention and 1967 Protocol Relating to the Status of Refugees, and it does not have a national law on refugees as of now.
- The issues related with refugees are dealt with existing laws governing Indian Citizenry such as The Citizenship Act, 1955, The Land Acquisition Acts, The Foreigner's Tribunals of 1964 and some specific procedures such as NRC in Assam and Multipurpose Identity Card etc.

#### Conclusion

- Despite being a developing and most populous country India has always been generous towards refugees but such policy cannot sustain for long given the present geo-economic and geo-political developments.

- There is an imminent need that India comes with a clear policy and legislation to deal with cross border refugees.

## **2.5 How the International Year of Millets will boost Indian millets**

### **Frame of reference -**

- As proposed by India, United Nations General Assembly (UNGA) has declared 2023 as the International Year of Millets (IYM).
- Prime Minister aims to make IYM 2023 a ‘People’s Movement’ and also to position India as the ‘Global Hub for Millets’.



### **How has the Indian government taken a lead in spearheading this?**

#### **Rebranding:**

- In April 2018, millets were rebranded as “Nutri Cereals” and the same year, the government declared it the National Year of Millets to generate more production and demand.

#### **Opening ceremony:**

- On December 6, 2022, the Food and Agriculture Organization (FAO) organized the opening ceremony for the IYM 2023 in Rome.
- A delegation of senior government officials from India also participated.

#### **Millet Luncheon:**

- The Department of Agriculture and Farmers Welfare last month hosted a special ‘Millet Luncheon’ for the Members of the Parliament, which was attended by the Vice-President and the Prime Minister.

#### **G20 Meetings:**

1. Millets have been made an integral part of the G-20 meetings and delegates will be given a true millet experience through tasting, meeting farmers, and interactive sessions with start-ups and FPOs.

#### **Promotion through various activities:**

2. The Ministry of Sports and Youth Affairs has planned 15 activities in January — engaging sportspersons, nutritionists, and fitness experts through video messages, and conducting webinars on millets with leading nutritionists, dieticians, and elite athletes.

#### **Fairs and exhibitions:**

- The Ministry of Food Processing Industries will be organizing Millet Fair-cum-exhibitions in Andhra Pradesh, Bihar, and Madhya Pradesh.

- FSSAI will organize Eat Right Melas in Punjab, Kerala, and Tamil Nadu.
- Chhattisgarh, Mizoram, Rajasthan, Maharashtra, Uttarakhand, and Punjab are scheduled to carry out specific activities for sensitization and promotion of IYM besides conducting millet-centric activities including Mahotsav/melas and food festivals, training of farmers, awareness campaigns, workshops/seminars, placement of hoardings and distribution of promotional material in January.

**Showcasing the diversity of Indian millets:**

- The Agricultural and Processed Food Products Export Development Authority (APEDA) will be participating in a trade show in Belgium where it will showcase the diversity of Indian millets.

**Global celebration:**

- Indian embassies across more than 140 countries will be participating in the celebration of IYM during 2023 by conducting side events involving the Indian diaspora through exhibitions, seminars, talks, and panel discussions.

**The positives of millets:****Nutrition:**

- Nutritionally superior to wheat and rice owing to their higher levels of protein with a more balanced amino acid profile, crude fibre and minerals such as iron, zinc, and phosphorous, millets can provide nutritional security and protect against nutritional deficiency, especially among children and women.
- Anaemia (iron deficiency), B-complex vitamin deficiency, and pellagra (niacin deficiency) can be effectively tackled with an intake of less expensive but nutritionally rich food grains like millets.
- Millets are Nutri-cereals which are highly nutritious and known to have high nutrient content which includes protein, essential fatty acids, dietary fibre, B-Vitamins and minerals such as calcium, iron, zinc, potassium and magnesium.

**Health:**

- Millets can also help tackle health challenges such as obesity, diabetes and lifestyle problems as they are gluten-free, have a low glycaemic index and are high in dietary fibre and antioxidants.
- They help in rendering health benefits like reduction in blood sugar level (diabetes), blood pressure regulation, thyroid, cardiovascular and celiac diseases.

**Low input requirements:**

- Additionally, millets do not require high-quality soil to grow and hence can easily cater to the need of the growing population.
- Millets are hardy and drought-resistant crops. This has to do with their short duration (70-100 days, against 115-150 days for rice and wheat), lower water requirement (350-500 mm versus 600-1,250 mm) and ability to grow even on poor soils and in hilly terrain.

- They can withstand higher temperatures, making them the perfect choice as ‘climate-smart cereals’.

**Livelihood:**

- Millet’s production has great potential to generate livelihoods, increase farmers’ income and ensure food and nutritional security, not only in India but also in other parts of the world.
- Unless consumption is increased, the demand will not be generated to motivate farmers for shifting to millets.

**Can government policies, (eg MSP) play a role in increasing millet production and use in India?**

- Even though the MSP of millets (ragi, bajra, and jowar) has been raised by 80-125 percent between 2013-14 and 2021-22, their combined production has dropped by 7 percent to 15.6 million tonnes during the last eight years.
- While Bajra output has been stagnant, both jowar and ragi production has declined.
- This points to the requirement of policy-level intervention so that farmers get remunerative prices for millets and their returns become higher than that of crops such as paddy.

**The export market for Indian millets:**

- The \$470-million (in 2021) global millets market is projected to register a CAGR of 4.5 percent during the 2021-2026 period.
- APEDA has set a target of \$ 100 million in millet exports by 2023-24 from \$64.28 million in 2021-22.

**Way Forward:**

- The International Year of Millets-2023 would provide an opportunity to globally promote millets as nutritious cereals.
- A combination of central funding with decentralised procurement linked to nutrition goals — specifically the eradication of hidden hunger among school-age children can do for millets what the Food Corporation of India achieved with rice and wheat.
- Accelerating the Incubation of Millet Start-ups is an essential forward linkage for catering to various dynamic segments in domestic and global markets.
- Customer’s mindfulness and the focus on health & well-being should be correctly captured and in demand for super foods and functional foods should be fuelled with millet-based products.
- Roping in the private sector for inclusive investment will go a long way in taking millets not only a Pan-India but also mainstreaming in export markets as a run-up for the International Year of Millets-2023.



## 2.6 India's Dilemmas in an Asian Century

### Frame of reference

- The geopolitical and economic rise of Asia coincides with several regional and global developments which have the potential to undermine the stability and prosperity India had hoped an Asian century would bring.
- The year 2022 was a significant year for India and the rest of the world, and the geopolitical fault lines that were put in motion by 2022 are likely to become much sharper in 2023.



### Key Highlights:

- The withdrawal of the U.S. from much of continental Asia and the aggressive rise of China and the Ukraine war appear to have ended the great power show in Asia, or at least for some time.
- The two major powers Russia and China are trying, to undermine the global balance of power, with several regional powers such as Iran, Turkey and Saudi Arabia in tow.
- Although Asia may be on the rise globally but volatility will remain as its partner.

### Asian Century and Multipolarity:

- Asian century cannot be meaningful in a unipolar world. One alternative to a unipolar world is a multipolar world with Russia, China, Japan, India and other smaller powers asserting themselves on the global stage.
- The other alternative is a China-dominated Asia. However, it is clear that a China-dominated Asia won't serve India's geopolitical interests

### Would a multipolar Asia be useful to Indian interests?

- A multipolar world/Asia will have shifting alliances, formal, informal, secret, open and in-between pacts and competing coalitions.
- This competition for dominance will invariably take away the relative 'stability' of the current world order where the power of the U.S. is on the decline and that of China is (still) on the rise.
- This also does not serve India's geopolitical interest.
- One of the likely implications of a multipolar world in which Asia takes the centre stage would be a sharpening of opposition against the current global financial order.

- The weaponisation of globalisation and trade, sanctions against Russia and Russia's attempts in turn at evading them with help from its Asian partners (China, Iran, Turkey, India, etc.) will pose serious challenges to dollar-based trade and Western payment systems such as SWIFT.
- The aftermath of the Ukraine war has led to a serious search in parts of Asia for alternative trading arrangements and payment mechanisms.

### **India's Dilemmas:**

- India has consistently campaigned for a multipolar world where key Asian powers have a place at the high table of international politics. Yet it may hesitate to engage the emergent Asian century for various reasons:

#### **First**

- India has a status quoist (A supporter of the status quo) view of the world order despite its frequent calls for change and likes slow, peaceful and consensual transformation of the system which is not what is happening today.

#### **Second**

- **Unstable Multipolarity:** A bipolar international system dominated by China and the U.S. is not favorable for India. If such a world leads to bipolar rivalry, India could often be the target of China.

#### **Third**

- If a bipolar world leads to great power accommodation between the U.S. and China, India's situation could be more problematic. If the U.S. accommodates China as a peer, it could mean the U.S. accepting China's sphere of influence. This could make India a casualty on the platform of great power politics.

### **How Real is the Emergence of a China-U.S. G2?**

- The more the Ukraine war goes on, the more the U.S./West could attempt to create a working relationship with China (early signs of it with the German Chancellor reaching out to China).
- China has not gone all out in support of Russia's war efforts this could encourage the West/U.S. to do that.
- For China, an American offer of accommodation in a G2 format outweighs the utility of a closer strategic partnership with an embattled Russia.

### **Conclusion**

- An Asian century with dominating China is highly possible, which is evident from its growing material power, both economic and military, especially with the U.S.'s focus firmly entrenched in the Russia-Ukraine theatre.
- A "Post-Indian South Asia," stuck in the Chinese sphere of influence but not wholly hostile to Indian interests can also be a possibility.

- Navigating the emergent Asian century is not going to be easy for India, but being mindful of its many moods is a good start.

## **2.7 Lessons from Tawang: The Five changes India needs to make in dealing with China**

### **Frame of reference-**

- Recently, after fifteen days of the salami-slicing attempt in Yangtse (Tawang), the Chinese foreign minister, Wang Yi, declared that “China and India have maintained communication through the diplomatic and military channels and both countries are committed to upholding stability in the border areas”.
- However, Wang Yi gave no explanation for the PLA(People’s Liberation Army) intrusions which have gone on regularly for over two decades.



### **Do you know about the Sino-Indian border dispute?**

- It is an ongoing territorial dispute over the sovereignty of two relatively large, and several smaller, separated pieces of territory between China and India.
- The first of the territories, Aksai Chin, is administered by China as part of the Xinjiang Uygur Autonomous Region and Tibet Autonomous Region and claimed by India as part of the union territory of Ladakh.
- The other disputed territory is south of the McMahon Line in Arunachal Pradesh.
- The McMahon Line was part of the 1914 Simla Convention signed between British India and Tibet, without China's agreement.
- China disowns the agreement, stating that Tibet was never independent when it signed the Simla Convention.

### **Key Highlights:**

- Ease in occupation of disputed territory through the salami-slicing tactics, which had long been considered no man’s land, is the main reason for PLA intrusions.
- Placing blocks on the routes which were regularly patrolled by India is the first sign of salami-slicing tactics.
- Since 2020, these intrusions have become more violent have resulted in brawls, scuffles and the use of crude, lethal sticks between the PLA and Indian soldiers.

- A huge deployment of men and material
- China strengthened its deployments on the Line of Actual Control (LAC) in Eastern Ladakh, leading to its part-occupation of Depsang Plains and salami-slicing attempts in the Galwan valley, Pangong Tso area and a few other locations.
- These deployments have been supplemented by over 60,000 fully armed troops on the LAC, equipped for a conventional war.
- At many locations, these deployments are in eyeball to eyeball situations.

### **What five changes should India make to strengthen its position across LAC vis-a-vis China?**

#### **The rules of engagement (ROE) should be reviewed:**

- China has repeatedly flouted all five agreements on LAC/border issues, signed with India since 1993.
- Today, there is neither peace nor tranquility on the LAC.
- Only the Indian army follows the ROE more seriously, no sign of similar seriousness from the PLA.
- It is high time to review ROE and the Indian soldier on duty should be given more power of offensive capabilities rather than defensive only.
- Indian soldiers should be allowed to fire if, despite warning, the adversary continues to advance toward our position.

#### **India can review its LAC perceptions:**

- Why does India continue to use terms like “our” and “their” perceptions of the LAC?
- The Chinese do not use the terminology of perception in their statements. In fact, it gives them a handle to continue with their aggression activities as happened post Galwan.
- India must give out our version of the LAC subject to a final resolution of the boundary dispute with China.

#### **Strengthening of intelligence and surveillance:**

- Intelligence is a nation’s first line of defence.
- Indian surveillance structure, is a critical constituent of safety, security and also grand strategy.
- In the kind of terrain where the military is operating, it is almost impossible to defend “every inch of territory”.
- Thus, India needs reliable and timely information to mobilise adequate forces where the adversary is expected to strike or intrude.

**Done away with dual command and control mechanism:**

- The Western and Central sectors of the LAC are guarded by the Indo-Tibetan Border Patrol (ITBP) backed by the army.
- However, ITBP and the army both work under different ministries.
- Despite several discussions, there is no unified command and control, which often leads to a lack of coordination, responsibility and accountability.
- The ITBP units deployed on the LAC need to be placed under the operational control of the army.

**Strengthening of offensive capabilities of Indian army:**

- During training, India diligently inculcates and imbibes an offensive spirit in the Indian military.
- And yet, most of the time, India expects the military to remain defensive and passive on the border.
- The need is that India's frontline military formations should not only be capable of defending intrusions but also plan and be prepared to retaliate proactively — Kailash Range style — taking advantage of the high altitude mountainous terrain.

**Way Forward:****Improve military infrastructure:**

- India should be engaged in improving its border military infrastructure.
- Political and diplomatic talks should be prioritized for expected “disengagement” of troops whenever intrusions happen.
- Strengthening of round-the-clock, high level of intelligence, all-weather surveillance capabilities and assessments for the troops on the ground.

**Learn from the past mistakes:**

- In 2020, despite satellite imagery, high altitude UAVs and availability of a host of modern surveillance equipment, India failed to assess and react to the Chinese troops' movements in Eastern Ladakh.
- Indian intelligence and surveillance structure along the northern border requires urgent focus and improvement wherever gaps exist.

### 3. ECONOMY

#### 3.1 Development Programmes under CSR Funds of Coal India Ltd

- Development programmes in the peripheral areas of coal mines are undertaken through the Corporate Social Responsibility (CSR) funds. As per CSR policy of Coal PSU, CIL, at least 80% of the CSR funds every year have to be spent within a radius of 25 kms. of mines/project sites/establishments by subsidiaries of CIL. The key areas covered are Healthcare & Nutrition, Sanitation & Water supply, Education & Livelihood, Rural Development, Environmental Sustainability and Disaster Management. Other themes covered are Women Empowerment and Welfare of the differently-abled.

#### **What is Corporate Social Responsibility (CSR)?**

- Corporate Social Responsibility is a management concept whereby companies integrate social and environmental concerns into their business operations and interactions with their stakeholders.
- CSR also called corporate citizenship, is generally understood as being the way through which a company achieves a balance of economic, environmental and social imperatives, while at the same time addressing the expectations of shareholders and stakeholders.
- Corporate social responsibility, or CSR, is a type of self-regulation that demonstrates a company's accountability and commitment to advancing the social and environmental well-being of communities and society.
- In India, the concept of CSR is governed by clause 135 of the Companies Act, 2013
- India is the first country in the world to mandate CSR spending along with a framework to identify potential CSR activities.

#### **The CSR provisions within the Act are applicable to companies with**

- Business net worth was INR 500 crore or more.
- Annual company turnover is INR 1000 Crore or more.
- Companies Net profit is INR 5 Crore or more.
- According to the Act, businesses should devote 2% of their average net earnings over the previous three years to CSR initiatives.
- According to the Act, businesses must form a CSR committee that will advise the board of directors on a corporate social responsibility policy and periodically review it.

#### **What are some CSR Activities?**

- The indicative activities, which can be undertaken by a company under CSR, have been specified under Schedule VII of the Act.

#### **The activities include:**

- Eradicating extreme hunger and poverty,

- Promotion of education, gender equality and empowering women,
- Combating Human Immunodeficiency Virus, Acquired Immune Deficiency Syndrome and other diseases,
- Ensuring environmental sustainability;
- Contribution to the Prime Minister's National Relief Fund or any other fund set up by the Central Government for socio-economic development and relief and funds for the welfare of the Scheduled Castes, the Scheduled Tribes, other backward classes, minorities and women etc.

### **Types of Corporate Social Responsibility**

1. Environmental Responsibility:
2. Ethical Responsibility:
3. Philanthropic Responsibility:
4. Financial Responsibility:

### **3.2 Total number of Registered Geographical Indications (GI) rise to 432**

- Famous Gamosa of Assam, Tandur Redgram of Telangana, RaktseyKarpoo Apricot of Ladakh, Alibag White Onion of Maharashtra get their GI tags
- India having a diverse culture is home to various arts and crafts mastered by many generations over the years. Adding to the present collection of GIs, 09 new items from various states of India such as Gamosa of Assam, Tandur Redgram of Telangana, RaktseyKarpoo Apricot of Ladakh, Alibag White Onion of Maharashtra etc. have been given the coveted GI Tags. With this the total number of GI Tags of India comes to 432. The top 5 states holding maximum number of GIs are Karnataka, Tamil Nadu, Uttar Pradesh, Karnataka and Kerala.
- Several initiatives have been undertaken by DPIIT in collaboration with various stakeholders where exclusive GI products showcased Indian tradition, culture and enterprising activities under a single umbrella.
- Further, giving a boost to build up cross-cultural societies within the country, such activities will not only promote the transfer of diverse products amongst the states but will also contribute in building a better vibrant cultural society in the future.

### **What is GI Tag?**

- A GI or Geographical Indication is a name or a sign given to certain products that relate to a specific geographical location or origins like a region, town or country.
- Using Geographical Indications may be regarded as a certification that the particular product is produced as per traditional methods, has certain specific qualities, or has a particular reputation because of its geographical origin.

- Geographical indications are typically used for wine and spirit drinks, foodstuffs, agricultural products, handicrafts, and industrial products.
- GI Tag ensures that none other than those registered as authorized users are allowed to use the popular product name. In order to function as a GI, a sign must identify a product as originating in a given place.

### **Who accords and regulates Geographical Indications?**

- Geographical Indications are covered as a component of intellectual property rights (IPRs) under the Paris Convention for the Protection of Industrial Property.
- At the International level, GI is governed by the World Trade Organisation's (WTO's) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).
- In India, Geographical Indications registration is administered by the Geographical Indications of Goods (Registration and Protection) Act, 1999 which came into force with effect from September 2003.
- The first product in India to be accorded with GI tag was Darjeeling tea in the year 2004-05..

### **Benefits of GI Tags**

#### **The Geographical Indication registration confers the following benefits:**

- Legal protection to the products
- Prevents unauthorised use of GI tag products by others
- It helps consumers to get quality products of desired traits and is assured of authenticity
- Promotes the economic prosperity of producers of GI tag goods by enhancing their demand in national and international markets

Along with the benefits, there are certain issues associated with GI tags as well. Off late, there has been a rise in disputes over the question of the place of origin of the product under consideration. This gets aggravated due to a lack of clear historical evidence.

For example, the disputes surrounding the origin of Roshogulla, a popular dessert, from eastern India. Both West Bengal and Odisha claim that the dessert originated in their own states. By 'winning' a GI tag, each state is looking to promote its own cultural and regional jingoism over the other.

As a point of discussion, this sort of unhealthy competition tends to polarise the country on regional, cultural and linguistic lines. Most states in their rush to corner as many GI tags as possible have forgotten to pay attention to enhance the value of products already having a GI tag.

As a result, neither the local community nor the customer is benefitting economically. This trend undercuts the very idea of GI protection to native endemic products.



### **3.3 Primary Agricultural Credit Societies**

- PACS (Primary Agricultural Credit Societies) constitute the lowest tier of the short-term cooperative credit structure in the country at panchayat/ village level. They serve as a crucial link in sustaining the rural economy of the country by providing short-term and medium-term credit and other input facilities such as fertilizers, pesticides, seeds, etc. to farmers. There are nearly 95,000 PACS in the country, with a member base of around 13 crores. These are refinanced by NABARD through 351 District Central Cooperative Banks (DCCBs) and 34 State Cooperative Banks (StCBs). The StCBs and DCCBs together provide nearly ₹ 5 lakh crore rural credit annually, out of which ₹ 1.3 lakh crore is refinanced by NABARD.
- In order to improve transparency, increase efficiency, ensure speedy disbursement of loans, have seamless accounting with DCCBs and StCBs and reduce imbalances in payments, a project for Computerization of 63,000 functional PACS in three years with a total financial outlay of ₹ 2,516 Crore has been approved by the Cabinet Committee on Economic Affairs vide its decision dated 29th June, 2022. This project entails bringing all the functional PACS onto an ERP (Enterprise Resource Planning) based common software, linking them with NABARD through StCBs and DCCBs. Implementation of Common Accounting System (CAS) and Management Information System (MIS) would enable PACS to carry out their operations online and obtain refinance/ loans from NABARD through DCCBs and StCBs. Presently, the economic activities undertaken by PACS are restricted by their respective byelaws, which in most cases, have become outdated and need to be revised. In order to strengthen the PACS and diversify their business activities to make them vibrant economic entities at Panchayat level, model byelaws of PACS have been prepared by the Ministry after consultation with all the States/ Union Territories, Ministries/ Departments concerned in Government of India, NABARD, NAFSCOB, State Cooperative Banks, District Cooperative Banks, etc. These Model byelaws of PACS will enable them to undertake more than 25 business activities which, inter alia, include dairy, fishery, floriculture, setting up of godowns, procurement of foodgrains, fertilizers, seeds, LPG/CNG/Petrol/Diesel distributorship, short-term & long-term credit, custom hiring centers, common service centers, Fair Price Shops (FPS), community irrigation, Business Correspondent activities, Common Service Centre, etc.

### **3.4 Model Cooperative Villages**

- The aim of the MCV programme is to create 'Atmanirbhar Gaon' through the vision of 'Sahakaar se Samridhi'. The objective is to adopt a Primary Agricultural Credit Societies (PACS) centric, household-oriented approach to ensure provision of livelihood opportunities to at least two members of each household, aiming at enhancing the production per unit per establishment. Implementation of the programme in other States would be considered by NABARD after studying the outcome of the pilot projects in Gujarat.
- NABARD is playing a pivotal role in coordination between different stakeholders such as Government of Gujarat, Cooperative Banks (GStCB/ DCCBs), Community Based Organizations (CBOs), etc. in

facilitating saturation of all possible eligible schemes and initiatives of the Government and other stakeholders

### **3.5 Make in India facilitates investment, fosters innovation, helps build best in class infrastructure**

- 'Make in India 2.0' focuses on 27 sectors
- Employment in manufacturing increases from 57 million in the year 2017-18 to 62.4 million in the year 2019-20
- Despite Covid related disruptions trend of positive overall growth of Gross Value Addition (GVA) seen in manufacturing sector
  
- 'Make in India' is an initiative which was launched on 25th September, 2014 to facilitate investment, foster innovation, build best in class infrastructure, and make India a hub for manufacturing, design, and innovation. It is one of the unique 'Vocal for Local' initiatives that promoted India's manufacturing domain to the world.
  
- 'Make in India' initiative has significant achievements and presently focuses on 27 sectors under Make in India 2.0. Department for Promotion of Industry and Internal Trade (DPIIT) coordinates action plans for 15 manufacturing sectors, while Department of Commerce coordinates 12 service sector plans. Investment outreach activities are done through Ministries, State Governments and Indian Missions abroad for enhancing International co-operation and promoting both domestic and foreign investment in the country.
  
- In addition to ongoing schemes of various Departments and Ministries, Government has taken various steps to boost domestic and foreign investments in India. These include the introduction of Goods and Services Tax, reduction in Corporate tax, interventions to improve ease of doing business, FDI policy reforms, measures for reduction in compliance burden, policy measures to boost domestic manufacturing through public procurement orders, Phased Manufacturing Programme (PMP), to name a few.
  
- The series of measures taken by the Government to improve the economic situation and convert the disruption caused by COVID 19 into an opportunity for growth includes Atmanirbhar packages, investment opportunities under National Infrastructure Pipeline (NIP) and National Monetisation Pipeline (NMP), India Industrial Land Bank (IILB), Industrial Park Rating System (IPRS), soft launch of the National Single Window System (NSWS), etc. An institutional mechanism to fast-track investments has been put in place, in the form of Project Development Cells (PDCs) in all concerned Ministries/ Departments of Government of India
  
- The activities under the Make in India initiative are also being undertaken by several Central Government Ministries/ Departments and various State Governments. Ministries formulate action plans, programmes, schemes and policies for the sectors being dealt by them, while States also have their own Schemes for attracting investments.

**3.6 ADB, India sign \$300 million loan to improve connectivity in Assam**

- The Asian Development Bank (ADB) and the Government of India signed a \$300 million loan to upgrade over 300 kilometres of state highways and major district roads (MDRs) in Assam.
- The project will expand state highways and major district roads from single lane to two lanes and introduce new climate- and disaster-resilient structures. It will establish pedestrian and public transport facilities, elevate highways in flood-prone areas, and include landslide prevention structures in hilly and mountainous areas.
- Community schools, water, health, and sanitation facilities, and heritage and tourism sites will be restored in affected indigenous peoples' villages. To protect wildlife and habitats in project areas, viaduct structures will be constructed to avoid human–elephant conflict in the elephant habitats. In addition, community road users, drivers, motorcycle riders, schoolteachers, and students will be informed and trained on road safety. The project will strengthen the capacity of the Assam Public Works (Roads) Department in managing road assets, integrating climate and disaster resilience in road projects, and ensuring safeguards such as environment, resettlement, and indigenous peoples concerns are considered.

**3.7 ADB, India sign \$220 million loan to strengthen power sector in Tripura**

- The Asian Development Bank (ADB) and the Government of India signed a \$220 million loan to improve energy security, quality of supply, efficiency, and resilience of power sector in Tripura.
- A reliable electricity supply will lead to social and economic benefits and improved conditions for schools, hospitals, and other social services.
- The project components will be designed to withstand heavy rainfall, lightning, and storms with high wind speeds to help the region remain resilient to potential climate change risks. Distribution underground cabling will be installed by the horizontal directional drilling method or tunneling method to minimize road openings and reduce socio-environmental impacts during project implementation.

**3.8 India, ADB sign \$125 million loan to improve Urban Services in Tamil Nadu**

- The Government of India and Asian Development Bank (ADB) signed a \$125 million loan to develop climate-resilient sewage collection and treatment, and drainage and water supply systems in three cities in the state of Tamil Nadu.

**3.9 ADB, India sign \$350 million loan to improve in Maharashtra**

- The project will construct 5 km of major district roads connecting Nanded and neighboring Telangana. The project will promote gender equality and social inclusion in highway programs, schools, health, and social services and set up integrated service centers to provide basic sanitation, education, and other services. Skills training for enterprises led by poor women and disadvantaged groups will be conducted to provide livelihood opportunities. The project will demonstrate the private sector's effectiveness in

undertaking long-term road maintenance for greater life-cycle quality and operational efficiency. It will also develop a good practice handbook for climate change adaptation and disaster risk reduction in road design and maintenance.

### **3.10 Asian Development Bank (ADB)**

- Asian Development Bank (ADB) was established in the year 1966, with head office at Manila (Philippines). It has 67 members from the Asia Pacific region. This bank was modeled on the lines of the World Bank.
- Japan holds the largest share in ADB with 15.677%, followed by U.S.A (15.567%), China (6.473%), and India (5.812%).
- The aim of the ADB is social development by reducing poverty in the Asia Pacific with inclusive growth, sustainable growth, and regional integration. This is carried out through an 80% investment in the public sector.
- ADB invests in infrastructure, health, public administration system, helping nations to reduce the impact of climate change and to manage natural resources.

**India started availing of ADB's assistance in 1986. The aim is of Asian Development Bank is to support India in the following fields:**

- Industrial competitiveness
- Jobs creation
- Growth acceleration of low-income states
- Environmental and climate change challenges

**There are six sectors in India where we can see ADB's presence:**

1. Transport
2. Energy
3. Water and urban services
4. Finance and public sector management
5. Agriculture and natural resources, and
6. Human development

### **3.11 Agricultural and processed food products exports up by 16% to USD 17.43 billion for period April-November FY 22-23 compared to same period last year**

- 74% percent of total export target for 2022-23 achieved in eight months (April-November FY 22-23)
- Export of processed fruits & vegetables up by 32.60% to USD 1310 million in eight months of current fiscal in compared to corresponding period last year

- The exports of agricultural and processed food products rose by 16 percent in the eight months (April-November) of the current Financial Year 2022-23 in comparison to the corresponding period of FY 2021-22.
- According to the provisional data by the Directorate General of Commercial Intelligence and Statistics (DGCI&S), the overall export of Agricultural and Processed Food Products Export Development Authority (APEDA) products increased by 16 percent growth in terms of USD during April-November 2022 to USD 17.43 billion from USD 15.07 billion over the same period of the last fiscal.
- The initiatives taken by the APEDA (Agricultural and Processed Food Products Export Development Authority) that works under the Ministry of Commerce and Industry have helped the country in achieving 74 percent of its total export target for the year 2022-23 in eight months of the current fiscal.
- For the year 2022-23, an export target of USD 23.56 billion has been fixed for the agricultural and processed food products basket and an export of USD 17.435 billion has already been achieved in eight months of the current fiscal.
- As per the DGCI&S provisional data, processed fruits and vegetables recorded a growth of 32.60 percent (April-November 2022), while fresh fruits registered four percent growth in compare to corresponding months of the previous year.

### **3.12 Combined Index of Eight Core Industries increases by 5.4 per cent (provisional) in November 2022 compared to November 2021**

- Final growth rate of Index of Eight Core Industries for August 2022 is revised to 4.2% from its provisional level 3.3%
- Cumulative growth rate of ICI during April-November 2022 was 8.0% (provisional) as compared to corresponding period last year
- The combined Index of Eight Core Industries increased by 5.4 per cent (provisional) in November 2022 as compared to the Index of November 2021. The production of Cement, Coal, Electricity, Steel and Fertilizers increased in November 2022 over the corresponding month of last year. ICI measures combined and individual performance of production of eight core industries viz. Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity. The Eight Core Industries comprise 40.27 percent of the weight of items included in the Index of Industrial Production (IIP). Details of annual and monthly indices and growth rates are provided at Annex I & II respectively. Final growth rate of Index of Eight Core Industries for August 2022 is revised to 4.2% from its provisional level 3.3%. The cumulative growth rate of ICI during April-November 2022 was 8.0% (provisional) as compared to the corresponding period of last year.

**Coal**

- Coal production (weight: 10.33 per cent) increased by 12.3 per cent in November, 2022 over November, 2021. Its cumulative index increased by 17.2 per cent during April to November 2022 over corresponding period of the previous year.

**Crude Oil**

- Crude Oil production (weight: 8.98 per cent) declined by 1.1 per cent in November, 2022 over November, 2021. Its cumulative index declined by 1.4 per cent during April to November, 2022 over the corresponding period of previous year.

**Natural Gas**

- Natural Gas production (weight: 6.88 per cent) declined by 0.7 per cent in November, 2022 over November, 2021. Its cumulative index increased by 0.7 per cent during April to November, 2022 over the corresponding period of previous year.

**Petroleum Refinery Products**

- Petroleum Refinery production (weight: 28.04 per cent) declined by 9.3 per cent in November, 2022 over November, 2021. Its cumulative index increased by 5.7 per cent during April to November, 2022 over the corresponding period of previous year.

**Fertilizers**

- Fertilizers production (weight: 2.63 per cent) increased by 6.4 per cent in November, 2022 over November, 2021. Its cumulative index increased by 10.0 per cent during April to November, 2022 over the corresponding period of previous year.

**Steel**

- Steel production (weight: 17.92 per cent) increased by 10.8 per cent in November, 2022 over November, 2021. Its cumulative index increased by 7.1 per cent during April to November, 2022 over the corresponding period of previous year.

**Cement**

- Cement production (weight: 5.37 per cent) increased by 28.6 per cent in November, 2022 over November, 2021. Its cumulative index increased by 10.8 per cent during April to November, 2022 over the corresponding period of previous year.

**Electricity**

- Electricity generation (weight: 19.85 per cent) increased by 12.1 per cent in November, 2022 over November, 2021. Its cumulative index increased by 9.7 per cent during April to November, 2022 over the corresponding period of previous year.

### **3.13 Bureau of Indian Standards published 21,890 standards for products, process specification, service sectors, code of practice and methods of test terminology**

- Bureau of Indian Standards (BIS), the National Standards Body of India, formulates Indian Standards in various sectors. Through its standards, BIS ensures quality consciousness amongst manufacturers, industry, consumers & various government departments. These standards benefit industry of any size and across all sectors by ensuring efficiency in processes and quality of products/services, help in adoption of new technologies, build productivity, reduce costs and enable access to markets. The standards also provide a range of other benefits including facilitating trade, providing investment confidence, fostering innovation and supporting government policies and regulations. These National Standards are developed with the objective of harmonious development of the activities of standardisation, and quality assurance of goods and articles. Till date, 21,890 Standards for products, process specification, service sectors, code of practice, methods of test terminology have been published by the BIS.
- As a policy, while developing any Indian Standard, BIS technical committees consider the availability of an International Standard (International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) on the subject. The committees try to align the standard with the International standards to the extent possible. At times, ISO/IEC standards are not adopted in totality by the concerned technical committee taking into account the country specific concerns on health, safety, environment, national security and prevention of deceptive practices. At present, 87% of the Indian standards are harmonized with ISO/IEC standards for which the International Standards exists.
- Government of India has identified twelve Champion Services Sectors (CSS) in the Indian National Strategy for Standardization (INSS) for focused attention so as to realize their full potential.

#### **These Champion Services Sectors include:**

1. Information technology and information Technology Enabled Services (IT & ITeS)
2. Medical Value Travel Services
3. Transport and Logistics Services
4. Tourism and Hospitality Services
5. Accounting and Finance Services
6. Audio Visual Services
7. Communication Services
8. Legal Services
9. Construction and Related Engineering Services
10. Environmental Services
11. Financial Services and
12. Education Services

**Bureau of Indian Standards**

- BIS is the National Standard Body of India for the harmonious development of the activities of standardization, marking and quality certification of goods.

**BIS has been providing traceability and tangibility benefits to the national economy in a number of ways by:**

- Providing safe reliable quality goods.
- Minimizing health hazards to consumers.
- Promoting exports and imports substitute.
- Control over proliferation of varieties etc. through standardization, certification and testing.



## 4. ENVIRONMENT

### 4.1 Arctic Report Card 2022

#### Why in News?

Recently, NOAA (National Oceanic and Atmospheric Administration) has released Arctic Report Card 2022.

#### About the Arctic Report Card

- It presents annually recent observations of environmental conditions in the Arctic relative to historical records since 2006.
- Nearly 150 experts from 11 nations compiled this year's assessment of Arctic conditions, the Arctic Report Card 2022.

#### Key highlights of the Arctic Report Card 2022:

#### Arctic Amplification

- According to 'Special Report on the Ocean and Cryosphere in a Changing Climate' in 2019 by the, the Arctic continues to warm more than twice as fast as the rest of the globe, with even greater warming in some locations and times of year.

#### What is Arctic amplification?

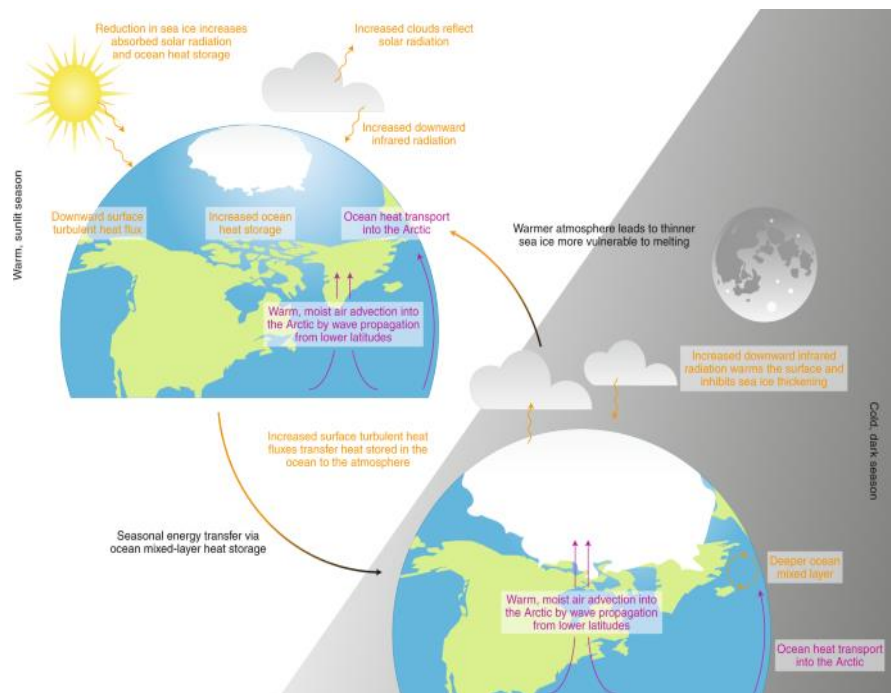
- Arctic amplification is a larger difference in temperature near the north and south poles than to the rest of the world due to global warming and recent changes in earth's atmosphere.
- It mainly affect when the **atmosphere's net radiation balance is affected by an increase in greenhouse gases.**

#### Causes of Arctic Amplification:

- Among the many global warming-driven causes for this amplification, the ice-albedo feedback, lapse rate feedback, stratospheric water vapour feedback and ocean heat transport are the primary causes.

#### Ice-albedo feedback :

- Sea ice and snow have high albedo (measure of reflectivity of the surface), implying that they are capable of reflecting most of the solar radiation as opposed to water and land.
- In the Arctic's case, global warming is resulting in diminishing sea ice.



- As the sea ice melts, the Arctic Ocean will be more capable of absorbing solar radiation, thereby driving the amplification.
- The rate at which the temperature drops with elevation i.e. lapse rate decreases with warming.
- Studies show that the ice-albedo feedback and the lapse rate feedback are responsible for 40% and 15% of polar amplification respectively.

#### Stratospheric water vapor feedback :

- A warmer climate increases stratospheric water vapor, and because stratospheric water vapor is itself a greenhouse gas, this leads to further warming.

#### Ocean heat transport :

- Enhanced oceanic heat transport (OHT) towards the Arctic is one of the many factors linked to stronger future Arctic warming and polar amplification in fully coupled global climate models

#### Consequences of Rapid Arctic Environmental Change:

<p><b>01</b> <b>Impact on global climate systems:</b> The Arctic play a vital role in regulating the Earth's climate - acting as our <b>cooling system</b>. Rapid arctic warming and melting affect the <b>global heal budget</b>, further impacting <b>atmospheric and oceanic circulations</b>.</p>	<p><b>02</b> <b>Carbon emissions:</b> The melting of the Arctic sea ice could release <b>100 billion tonnes of carbon di-oxide</b>, a "slow-motion time bomb", by the end of this century.</p>
<p><b>03</b> <b>Increased maritime traffic:</b> Satellite records from 2009 to 2018 showed increasing maritime ship traffic in the Arctic as <b>sea ice declines</b>.</p>	<p><b>04</b> <b>New economic avenues:</b> Melting Arctic sea ice and glaciers will open up new areas for <b>human exploitation</b> such as <b>fishing, oil and gas resources, and tourism</b> etc.</p>
<p><b>05</b> <b>Growing ocean life:</b> Due to a rise in the sea surface temperatures, most regions of the Arctic continued to show increased <b>ocean plankton blooms, or ocean primary productivity</b>.</p>	<p><b>06</b> <b>Impact on Arctic communities:</b> Livelihoods and physical safety are being threatened by the <b>rapid-melting ice, thawing permafrost, increasing heat, wildfires</b> and other changes.</p>

#### Significance of Arctic

- An area of geo-political, geo-economic and geo-ecological interest.
- Climate change causing melting of ice, making region more accessible for economic exploitation (oil & gas reserves, metals and minerals).
- Possibilities to open Northern Sea Route as a new trade route.
- Helps circulate world's ocean currents. Characterized as world's climate change "barometer".



## 4.2 Nature based solutions

### Why in News?

In recent World Economic Forum Annual Meeting topic of Nature-based solutions had discussed.

### What is Nature-based solutions?

- It is actions to protect, sustainably manage, or restore natural ecosystems, that address societal challenges such as climate change and simultaneously providing human well-being and biodiversity benefits.
- For example, flooding in coastal areas traditionally tackled with manmade infrastructure (like sea walls) can also be tackled by tree planting.

### **Finance for Nature 2022 report released by UNEP.**

According to report, finance going to NbS is currently USD 154 billion per year, which is less than half of USD 384 billion per year needed by 2025.

### **About UNEP:**

- The UNEP is an international environmental authority engaged in establishing a global environmental agenda and promoting the efficient implementation of the environmental dimension of the United Nations Sustainable Development Programme.
- **Stockholm Conference of 1972** resulted in the formation of a management body for these concerns, which was later called the United Nations Environment Programme.
- Headquartered is in **Nairobi**.
- The UNEP engages in developing global conventions on the environment and related issues. It hosts the secretariats of various conventions such as the Minamata Convention, Diversity, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Basel Convention, Stockholm Convention, Rotterdam Convention, Montreal Protocol, Vienna Convention.

## 4.3 Biggest Rare Earth Elements (REE) Deposit

### Why in the News?

Recently, Sweden discovers biggest rare earth elements (REE) deposit in Europe.

### **Rare earth metals are a group of 17 elements :**

- Lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium, scandium, yttrium.
- They are necessary components for critical sectors, like, cellular telephones, electric vehicles, and defence applications like guidance systems, lasers, etc.
- REE shares some common properties such as high lustre, high electrical conductivity etc. as well as some distinguishing properties, present in a few REEs, such as luminescence, magnetism etc.

- REE are fairly distributed across different geographies, the extraction of REE is most challenging part, because of complex processing and intensive environmental effects.

- At present more than 80% of the world's rare earths processing capacity is in China.

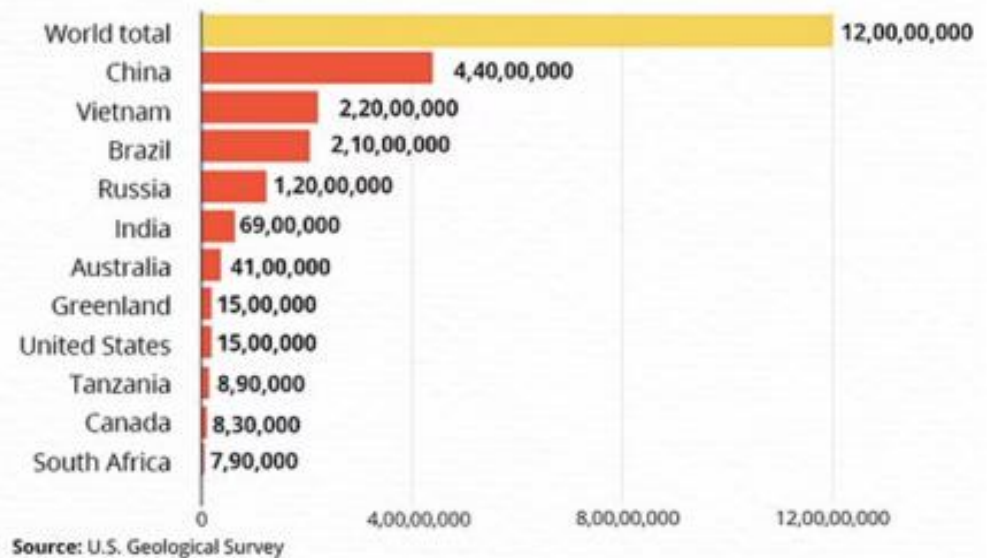
- India produces only 1% of global output despite having around 6% of world's reserves.

- Steps taken by India to explore REE

- Set up Khanij Bidesh India Ltd. (KABIL), Bilateral agreements like Australia-India Critical Minerals Investment Partnership.

## WHERE ARE THE WORLD'S LARGEST RARE EARTH RESERVES

Reserves in metric tonnes of REO (rare earth oxides) as of 2020



### 4.4 White tufted royal butterfly

#### Why in News?

Recently at Kalliyad (Kerala) White tufted royal butterfly species was spotted.

- It was earlier spotted in Agasthyakoodam and Shendurney Wildlife Sanctuary.
- It is protected under Schedule 2 of the Wildlife Protection Act, 1972.
- Butterflies, along with the moths and the skippers, make up the insect order Lepidoptera.



Lepidopteran life cycle has four stages: egg, larva (caterpillar), pupa (chrysalis), and adult (imago)

**About Shendurney Wildlife Sanctuary :**

- It is a protected area in the Western Ghats, India, located in Kollam district of Kerala and comes under the control of Agasthyamalai Biosphere Reserve.
- The Shendurney Wildlife Sanctuary is a treasure house of plant diversity.
- It has a presence of lion-tailed macaque, a highly endangered species.



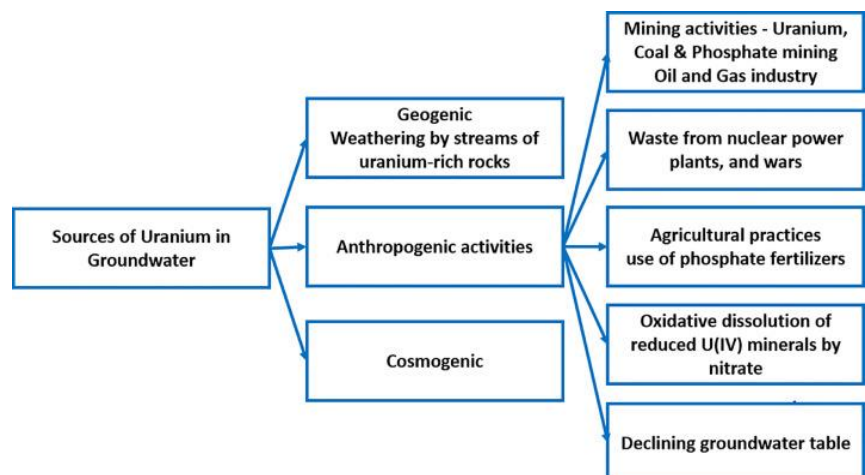
- The Shendurney Wildlife Sanctuary is that there is no sandalwood trees here

**About Agasthyamala Biosphere Reserve (ABR):**

- ABR is situated at the southern-most end of the Western Ghats and spread over two southern states Kerala and Tamil Nadu.
- It was established in 2001.
- In March 2016, it was included in the World Network of Biosphere Reserves of UNESCO.
- It is also home to rare endemic animals include tiger, Asian Elephant, and Nilgiri Tahr.
- It is home to Kanikaran tribe, one of the oldest surviving ancient tribes in the world.

**4.5 Uranium contamination in ground water****Why in News?**

- Recently, Central Ground Water Board published a report highlighted that 16 states have uranium levels beyond permissible limits in their groundwater.
- Safe levels prescribed by World Health Organization is 30 parts per billion (ppb).
- Punjab is worst-affected state followed by Haryana.



**Causes of uranium contamination:**

- The main source of uranium contamination was “natural,” but human factors such as groundwater table decline and nitrate pollution could be worsening the problem.
- Adverse health Effects of uranium contamination:
- Impaired renal function and kidney disease, bone toxicity etc.

**Tainted groundwater**

Sixteen States show a high prevalence of uranium concentrations above the WHO provisional guideline value (30µg/L)

- India has no standards for uranium levels in groundwater
- There have been reports of high levels of uranium in Andhra Pradesh
- Over-pumping of groundwater causes a decline in water levels
- This induces oxidation conditions that enhance uranium enrichment in shallow groundwater



Source: "Large-Scale Uranium Contamination..." Rachel M. Coyte et al.

**4.6 Reward Project**

**Why in News:** Officers from Sub-Saharan countries will visit Karnataka to learn from its experience of **Rejuvenating Watershed for Agricultural Resilience through Innovative Development (REWARD) Project.**

- REWARD Project was launched to help national and state institutions adopt improved watershed management practices.
- It a World Bank supported multi-State project.
- Watershed is geographical area drained by a watercourse and is considered an useful planning unit for integrated water and land resource management.
- Effective watershed management can help enhance livelihoods in rainfed areas, while building a more resilient food system.

**About Central Ground Water Board :**

- It is a national apex organization with responsibility to carry out scientific surveys, exploration, monitoring of development, management and regulation of country's vast groundwater resources for irrigation, drinking, domestic and industrial needs.
- Established in 1954, CGWB functions under the Ministry of Water Resources.
- **Mandate:** To Develop and disseminate technologies, and monitor and implement national policies for the Scientific and Sustainable development and management of India's Ground Water Resources, including their exploration, assessment, conservation, augmentation, protection from pollution and distribution, based on principles of economic and ecological efficiency and equity.
- **Vision:** Sustainable Development and Management of Ground Water Resources of the Country.
- CGWA was constituted under Environment(Protection) Act,1986 for the purpose of regulation and control of ground water development and management in the country.

## 4.7 Waterways network progress in India

### Why in News?

Recently, chairman of Inland Waterways Authority of India said Ministry will be doing ₹35kcr investments by 2047 to create a waterways network.

- Chairman of Inland Waterways Authority of India (IWAI) stated that plan will include developing waterways and jetties to improve navigable capacity of Indian rivers.
- India has an extensive network of inland waterways in form of rivers, canals, backwaters, and creeks that may supplement over-burdened railways and congested roadways.
- To promote Inland Water Transport (IWT), 111 waterways have been declared as National Waterways (NWs) under National Waterways Act, 2016.
- Of these, 13 NWs are operational.

### Benefits of IWT:

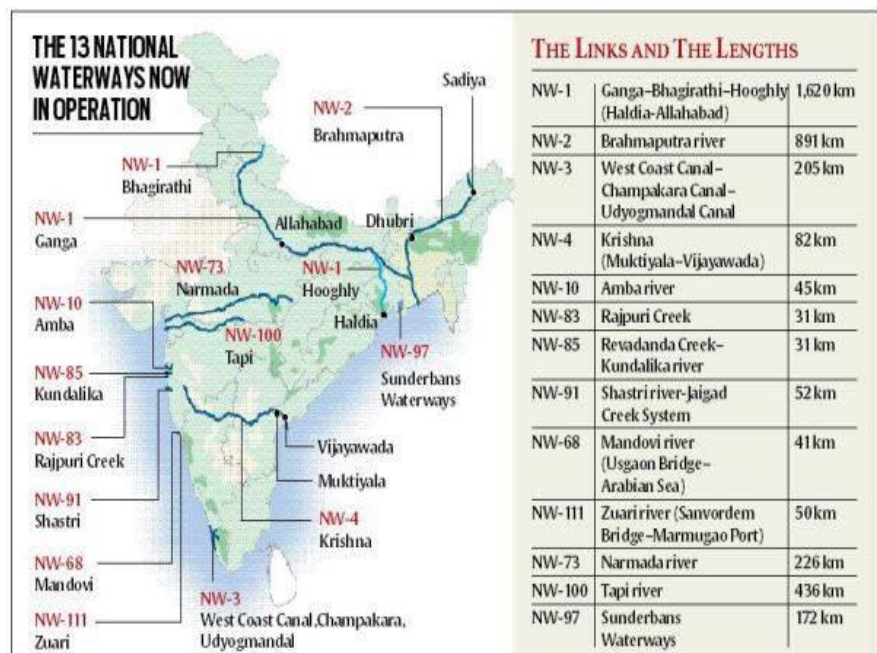
- The maintenance cost is less (less fuel consumption per tonne-km).
- It is comparatively less expensive than the rail and road transport.
- It is good for carrying heavy goods.
- Eco-friendly and cheaper better connectivity to hinterland require relatively less maintenance etc.

### Challenges faced in IWT:

- Decreased water flow due to industrial, agricultural and other uses.
- Inadequate water channel depth.
- Excessive Siltation,
- low technology adaption
- Navigation becomes difficult during the monsoons.
- It is a slow means of transport.
- The goods have to be loaded at the specific places due to the difference in depth and water volumes.

### Other initiatives taken

- PANI (Portal for Asset & Navigation Information) provides detailed information on various waterways.



- CAR-D (Cargo Data) Portal, a web based portal for all cargo and cruise movement data of NWs.
- Ro-Ro/Ro-Pax Service Commenced in Various NWs.
- In a related development, PM flagged off World's Longest River Cruise-MV Ganga Vilas (From Varanasi, UP to Dibrugarh, Assam via Bangladesh) with an aim to boost river cruise tourism.

#### 4.8 Asian water bird census

##### Why in News?

**Recently, Asian Waterbird census (AWC) 2023 being conducted in India.**

- AWC, an annual event, is a citizen science programme supporting conservation and management of wetlands and waterbirds.
- AWC is part of global International Waterbird Census (IWC) coordinated by Wetland International (WI).

##### **About Wetlands International:**

- It is a global organisation that works to sustain and restore wetlands and their resources for people and biodiversity.
- It is an **independent, not-for-profit**, global organisation, supported by government and NGO membership from around the world.
- Besides waterbirds, the organisation is also working on the protection of wetland areas.
- Wetlands International works in many thematic areas throughout the world, including the links between peatlands and climate change, as well as wetlands and waterbird migration

- Asian Waterbird census was initiated in 1987 in Indian subcontinent. In India, AWC is jointly coordinated by **Bombay Natural History Society (BNHS) and WI (global not-for-profit organisation).**
- BNHS, formed in 1883, is a NGO engaged in conservation of biodiversity research.
- BNHS has been designated as a Scientific and Industrial Research Organization (SIRO) by Department of Science & Technology.
- The BNHS logo is the great hornbill, inspired by a great hornbill

##### **Conservation activities by AWC :**

- Implementation of East Asian-Australasian Flyway Partnership Initiative (EAAFP) and Central Asian Flyway (CAF) Action Plan.
- EAAFP is an informal and voluntary initiative, to protect migratory waterbirds.



- CAF covers area of Eurasia between Arctic and Indian Oceans and associated island chains. Geographically it covers 30 countries of North, Central and South Asia and Trans-Caucasus.
- Bird Life International's Important Bird Area Programme.
- IUCN/Bird Life International's Global Species Programme (Red List).
- Wetlands International's Waterbird Population Estimates programme.
- Convention on Migratory Species (CMS), also known as Bonn Convention, provides a global platform for conservation of migratory animals and their habitats.

#### 4.9 Neelakurinji (Strobilanthes kunthiana)

##### Why in the News?

Recently, Ministry of Environment, Forest and Climate Change (MoEF) has listed Neelakurinji under **Schedule III of Wildlife (Protection) Act, 1972**, including it on list of protected plants.

(Above is Schedule of WFP)

##### About Neelakurinji :

- It is a shrub that grows in the shola forests of Western Ghats in South India. Neelakurinji flowers bloom once every 12 years.
- Plant is named after the famous Kunthi River which flows through Kerala's Silent Valley National Park, where plant occurs abundantly.
- Eravikulam National Park, near Munnar, is known for widespread blooming of kurinji.
- Blue colour of Kurinji has given Nilgiri hills its name, literally meaning Blue Mountains.


<b>Schedule I and part II of schedule II</b>	Animals which are in the category of <b>endangered species</b> . These are given <b>absolute protection from hunting</b> . Eg <b>Tiger</b>
<b>Schedule III and IV</b>	These also have roughly the same provisions of Section I and II, but cover animals that are not in danger of becoming extinct.
<b>Schedule V</b>	Delineates animals that can be hunted <b>like ducks and deers</b> with the prior permission of <b>chief wildlife warden. (Vermins)</b>
<b>Schedule VI</b>	Concerns cultivation and plant life and gives teeth to setting up more protected animal parks.


## NEELAKURINJI

Scientific name:  
**Strobilanthes Kunthiana**

These flowers are also known as **Kurinji**

They grow at an altitude of **1,300 to 2,400 m**





They are currently in full bloom in **Mullayanagiri peak, Chikmagalur, Karnataka**

In Neelakurinji, '**neela**' means **blue**, and '**kurinji**' refers to the flowers. The flowers give the Nilgiri Mountain range its name. **At maturity, the light blue color of flowers changes to purple bluish.**

#### 4.10 Tharu people

##### Why in News?

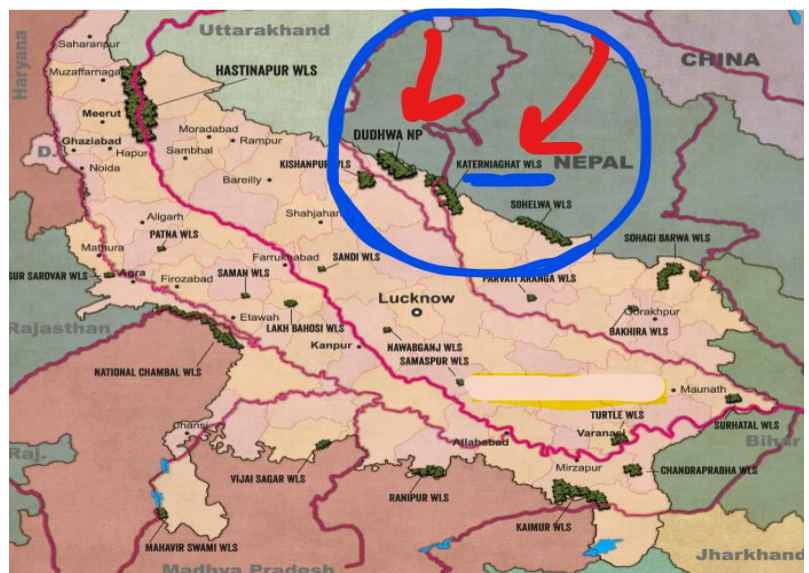
Recently, Forest Department of Katarniaghat division and NABARD planning to give skill-development training to Tharu people that live near KWS.

##### About Tharu People:

- They are ethnic group indigenous to Terai region of Himalayan foothills, located in southern Nepal.
- In India, they mostly lived in Uttar Pradesh, Bihar, Uttarakhand.
- They speak various dialects of Tharu, a language of Indo-Aryan subgroup.

##### About Katarniaghat Wildlife Sanctuary:

- KWS is situated in Upper Gangetic plain falling in Terai of Bahraich district, UP. It is part of core area of Dudhwa Tiger reserve.
- It provides strategic connectivity between tiger habitat of India and Nepal.



#### 4.11 New Exoplanet

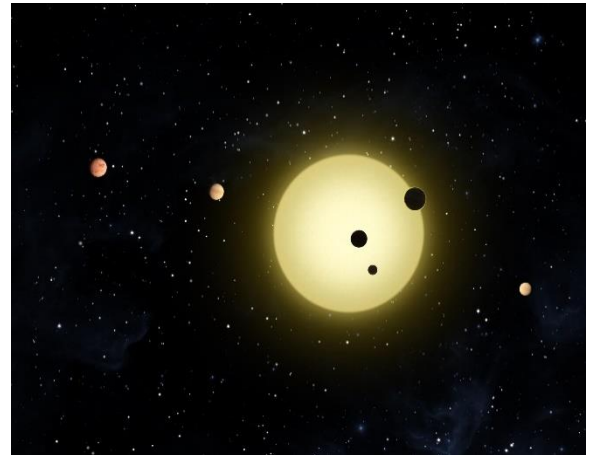
##### Why In news?

The NASA has recently announced that the James Webb Space Telescope has discovered its first new exoplanet (LHS 475 b) which is roughly the same size as Earth.

##### What is Exoplanets?

- Exoplanets are planets that **orbit other stars** and are **beyond our solar system**. Most of exoplanets discovered so far are in a relatively small region of Milky Way Galaxy.
- Exoplanets come in a host of different sizes. They can be gas giants bigger than Jupiter or as small and rocky as Earth. They are also known to have different kinds of temperatures — boiling hot to freezing cold.
- Studying exoplanets not only broadens our understanding of other solar systems but also helps us piece together information about our own planetary system and origin.

- This helps scientists determine if a discovered world is habitable or not. If an exoplanet is too close to the star, it might be too hot to sustain liquid water. If it's too far, it might only have frozen water. When a planet is at a distance that enables it to have liquid water, it is said to be in the "Goldilocks zone".
- Discovering exoplanets is tough as they are small and hard to spot around their bright host stars.
- Thus, scientists rely on indirect methods like transit method, which is measuring the dimming of a star that happens to have a planet pass in front of it.
- Most known exoplanets have been discovered using **the transit method**.
- **A transit occurs when a planet passes between a star and its observer.** Transits within our solar system can be observed from Earth when Venus or Mercury travel between us and the Sun



**Fig: Transit Method to discover Exoplanets.**

#### **4.12 Kunming-Montreal Global Biodiversity Framework**

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

- Recently, UN Convention on Biological Diversity's 15th Conference of Parties (COP 15) has adopted the "Kunming-Montreal Global Biodiversity Framework" (GBF)'s four goals, 23 targets for 2030

##### **The objective of COP15:**

- To adopt an ambitious and balanced global biodiversity framework to **replace the Aichi Biodiversity Targets**, which expired in 2020.
- COP 15 also agreed to establish within GBF, a multilateral fund for the equitable sharing of benefits between providers and users of **Digital sequence information (DSI)**, to be finalized **at COP16 in Türkiye in 2024**.

##### **The framework's 4 overarching global goals:**

<p>Goal A- substantially increasing the area of natural ecosystems, by 2050, the <b>extinction rate and risk of all species are reduced tenfold</b>. Genetic diversity of wild and domesticated animals to be <b>maintained</b>.</p>	<p>Goal C- ensuring <b>traditional knowledge</b> about genetic resources is <b>protected</b>.</p>
<p>Goal B- <b>restore the decline of biodiversity by 2050</b>.</p>	<p>Goal D- Adequate means of implementation, including financial resources, progressively closing the biodiversity finance gap of \$700 billion per year.</p>

- DSI is an emerging aspect of synthetic biology which involves certain functional genetic sequences being shared by different means.

## Decoding the 23 targets set at COP15

A total of 196 countries have signed a historic deal to protect 30% of the world for nature by 2030 in Montreal

REDUCING THREATS TO BIODIVERSITY	MEETING HUMAN REQUIREMENTS THROUGH SUSTAINABLE USE	TOOLS AND SOLUTIONS FOR IMPLEMENTATION AND MAINSTREAMING
<p>1) <b>Halting biodiversity loss:</b> Bringing the loss of areas of high biodiversity importance close to zero, while respecting the rights of indigenous people</p> <p>2) <b>Effective restoration:</b> At least 30% of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration</p> <p>3) <b>Mapping linkages:</b> Sustainable use of above areas is consistent with conservation outcomes</p> <p>4) <b>Saving endangered species:</b> Urgent steps to halt human induced extinction of threatened species; maintain their diversity through in situ and ex situ conservation</p> <p>5) <b>Protecting wild species:</b> Sustainable, safe and legal use of wild species; preventing overexploitation</p> <p>6) <b>Invasive alien species:</b> Mitigating their impacts by reducing rates of introduction by 50%; controlling them in priority sites such as islands</p> <p>7) <b>Tackling pollution:</b> Reduce pollution risks to levels that are not harmful to biodiversity and ecosystem functions</p> <p>8) <b>Climate crisis:</b> Minimise impact of climate change and ocean acidification through nature-based solutions</p>	<p>9) <b>Serving humans:</b> Ensure use of wild species yields benefits for humans, especially for those most dependent on biodiversity</p> <p>10) <b>Ecosystem productivity:</b> Sustainable management of areas under agriculture, aquaculture, fisheries and forestry for resilience and long-term productivity</p> <p>11) <b>Handling nature's contributions:</b> Restore, maintain and enhance nature's contributions to people through regulation of air, water, and climate</p> <p>12) <b>Biodiversity in urban fabric:</b> Increase the area and quality and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas</p> <p>13) <b>Sharing genetic resources:</b> Take effective legal, policy, administrative and capacity-building measures to ensure equal sharing of benefits of genetic resources</p>	<p>14) <b>Policy-making:</b> Integration of biodiversity and its values into policies across all levels of gov't, other sectors</p> <p>15) <b>Legal perils for businesses:</b> Regular assessments by transnational firms of their risks, dependencies, impacts on biodiversity; report on compliance with regulations</p> <p>16) <b>Making eco-friendly choices:</b> Encouraging people to make sustainable consumption choices, reduce global footprint of consumption</p> <p>17) <b>Biosecurity measures:</b> Adopting such steps for handling of biotechnology and distribution of its benefits</p> <p>18) <b>Removal of harmful incentives:</b> Identify by 2025, and eliminate/reform incentives harmful for biodiversity; cut them by \$500 bn per year by 2030</p> <p>19) <b>Biodiversity finance:</b> Increasing financial resources, mobilising \$200 billion per year by 2030</p> <p>20) <b>Technical cooperation:</b> Strengthen capacity-building and development, access to and transfer of technology</p> <p>21) <b>Sharing knowledge:</b> Access to information by decision makers, practitioners and public; access to technologies of indigenous peoples only with their consent</p> <p>22) <b>Equal representation:</b> Ensuring equitable representation in decision-making</p> <p>23) <b>Gender based review:</b> A gender-responsive approach by recognising women's rights and access to natural resources</p>
<p>Monitored wildlife populations have seen a 69% drop on average since '70, say WWF, LPF</p>	<p>Indigenous rights have been included in one-third of the new framework's targets</p>	<p>Signatories aim to ensure \$200bn per year is channelled to conservation initiatives</p>

### About Convention on Biological Diversity (CBD):

- Convention on Biological Diversity is a **legally binding** treaty to conserve biodiversity.
- It has been in force since **1993** and has been ratified by 196 nations.
- The **CBD Secretariat is based in Montreal, Canada.**
- The Parties (Countries) under CBD, **meet at regular intervals and these meetings are called Conference of Parties (COP).**
- India enacted **Biological Diversity Act in 2002** for giving effect to the provisions of the CBD.

### Objectives:

- **To provide guidelines for countries to protect biodiversity, ensure sustainable use, and promote fair and equitable benefit sharing.**
- **Achieving a historic deal to halt and reverse biodiversity loss on par with the 2015 Paris Agreement on climate change.**

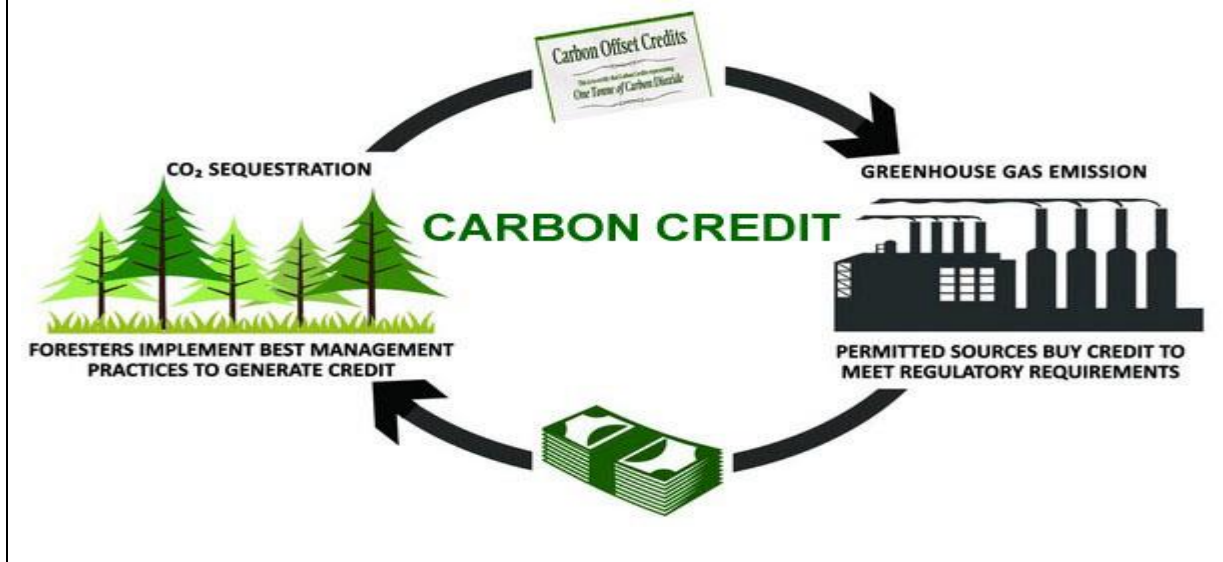
### 4.13 Energy Conservation (Amendment) Bill, 2022

**About the News:** Recently, Parliament passed the Energy Conservation (Amendment) Bill, 2022 which empowered the **Government to establish carbon markets in India** and specify a **carbon credit trading scheme.**

## Carbon Trading Mechanism.

### What is Carbon Credit:

- A carbon credit is tradable certificate or permit representing the right to emit a set amount of carbon dioxide or the equivalent amount of a different greenhouse gas.
- One carbon credit is equal to one tonne of carbon dioxide, or in some markets, carbon dioxide equivalent gases.



### Carbon Market:

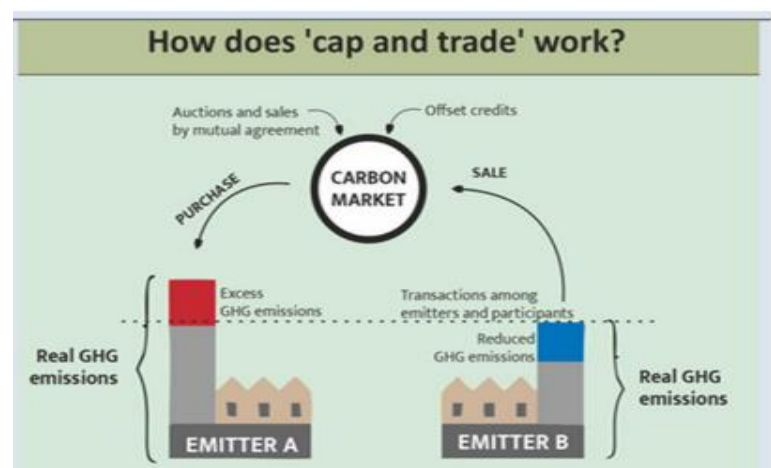
- Carbon Markets are trading systems in which carbon credits are sold and bought.
- Article 6 of the Paris Agreement provides for carbon markets to fulfil NDC targets.
- 2 types of Carbon Markets

#### Voluntary markets

- Carbon credits here are called Verified Emission Reductions (VER).
- A corporation looking to compensate for its unavoidable GHG emissions purchases carbon credits from an entity engaged in projects that reduce, remove, capture, or avoid emissions.

#### Compliance markets

- Set up by policies at the government level, they mostly operate under a principle of a 'cap-and-trade' system.
- Issues with the Bill Lack of clarity on the trading mechanism- whether it will be akin to the cap-and-trade schemes.



- No clarity on whether certificates under already existing schemes would also be interchangeable and tradable, i.e., Renewable Energy Certificates etc.

#### **4.14 Disaster Management**

##### **Disaster Management Plan (DMP) for the power sector**

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

Central electricity authority released Disaster Management Plan (DMP) for the power sector.

##### **About Disaster Management Plan:**

- DMP provides a framework for proactive and integrated approach to strengthen disaster mitigation, preparedness, emergency response, and recovery efforts for the power sector.
- Growth of power sector is directly correlated with economic growth of the country and any disruption due to disaster creates severe hardship to human beings.
- According to Disaster Management (DM) Act, 2005 every Ministry/ Department of Government of India shall prepare a DMP.
- DMP is also consistent with **Sendai Framework** for Disaster Risk Reduction (DRR), COP21 and PM's Ten Point Agenda for DRR.

##### **Key features of DMP**

- A four-tier structure at Central, Regional, State and Local Unit Levels, with intervention and response depending on severity of disaster /calamity.
- Risk assessment of power infrastructure, i.e. electric power generation stations, transmission distribution etc. to evolve methods for finding quantitative risk involved.
- While uncertainty caused by climate change is unavoidable, electric utilities can manage risks by considering different climate scenarios and potential impacts on their assets.
- Use of social media for emergencies and disasters on an organizational level to disseminate information as well as for emergency communications and issuing warnings etc.

## 5. SCIENCE & TECHNOLOGY

### 5.1 Exploration of deep-sea resources by MATSYA 6000 at depth of 6000 meters

#### Why in News?

India aims to send three persons to a depth of 6000 meters for exploration of deep-sea resources.

- As part of the Samudrayan mission under MoES, a self-propelled manned submersible (MATSYA 6000) will carry three person persons to a depth of 6000 meters for exploration of deep-sea resources,
- MATSYA 6000 is being developed by the National Institute of Ocean Technology (NIOT) Chennai.

#### The **National Institute of Ocean Technology (NIOT)**

- It was established in November 1993 as an autonomous society under the Ministry of Earth Sciences in India.
- NIOT is headed by a director.
- The institute is based in Chennai.

#### Objectives:

- To develop indigenous technologies to solve problems associated with the harvesting of non-living and living resources in India's exclusive economic zone.
- As prescribed by the 1982 United Nations Convention on the Law of the Sea, is an area of the sea in which a sovereign state has special rights regarding the exploration and use of marine resources, including energy production from water and wind.
- EEZ is about two-thirds of the land area of India.

- It is being developed under Deep Ocean Mission (DOM), MoES as nodal ministry for DOM.
- DOM aims to explore deep ocean for resources and develop deep sea technologies for sustainable use of ocean resources.
- It will be a mission mode project to support Blue Economy initiatives.
- Blue Economy is sustainable use of ocean resources for economic growth, improved livelihoods etc.
- Its size in India is about 4% of the GDP.

#### Objectives of DOM

- Development of Technologies for Deep Sea Mining, and Manned Submersible.
- Development of Ocean Climate Change Advisory Services.
- Technological innovations for exploration and conservation of deep-sea biodiversity.
- Deep Ocean Survey and Exploration.
- Energy and freshwater from Ocean.

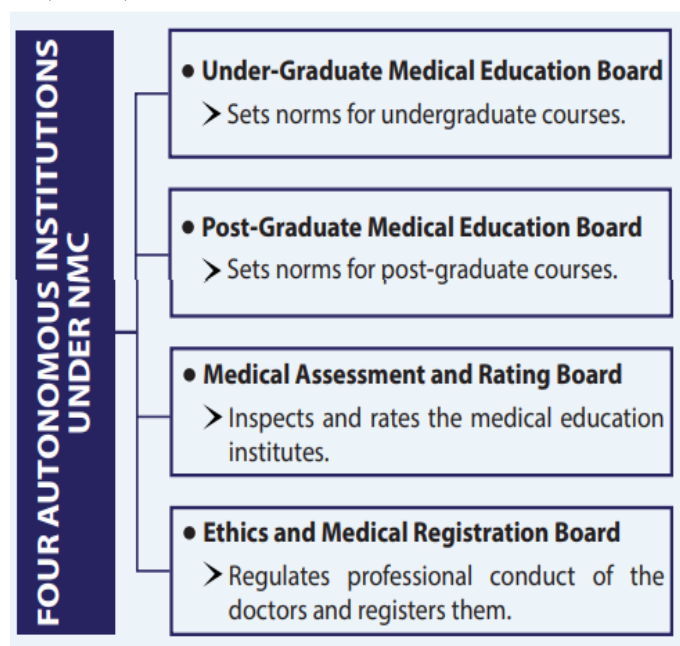
## 5.2 National Medical Commission (Amendment) Bill 2022

### Why in News:

- Ministry of Health and Family welfare released draft national medical commission (amendment) bill 2022 to amend the existing National Medical Commission (NMC) Act, 2019.

### Key highlights of draft bill

- Introducing a fifth autonomous body, namely Board of Examinations in Medical Science (BEMS), under NMC.
- BEMS will take over the functions of National Board of Examinations.
- It will conduct National EXIT Test or NExT, a common exam for Postgraduate Medical Education admission and a licentiate exam for Medical Graduates.



- It is conducted for both those who have foreign as well Indian degrees.
- It will accredit medical institutions for diploma, diplomate and postgraduate fellowships, and super-specialty fellowships etc.

### **National Medical Commission (NMC):**

- NMC is the apex medical education regulator, constituted by National Medical Commission Act, 2019.
- It Improves access to quality and affordable medical education.
- Ensure the availability of adequate high-quality medical professionals across India.
- Promote equitable and universal healthcare.

## 5.3 Blockchain to be used to push farm exports

### Why in news?

**NITI Aayog and Himachal Pradesh government** has launched a pilot project using blockchain technology, on apple farming that will be replicated for other products such as grapes, mangoes in future.

- **India ranks second in fruits and vegetable production in the world, after China, but its share in global fruits and vegetable market is just 1%.**
- **Lack of quality produce** and traceability has hampered India's food exports apart from disincentivizing growers.



**Benefit of Blockchain:**

- Blockchain will help bridge this gap by removing redundant processes.
- Ensuring quality control.
- Monitoring produce across the entire storage and supply chain.
- Blockchain technology can provide lower cost and faster payment options to agri-commerce participants.

**Food traceability**

- It help to trace the origin and content of food.

**Other opportunities of using blockchain technology in agriculture:****Self-executing smart contracts:**

- Especially in agricultural insurance, green bonds, and traceability, together with automated payments.

**Land registrations:**

- To provide an incorruptible ledger of land records.

**Supply chains:**

- To provide an immutable record from farm to retail store.

**Streamline subsidy distribution:**

- Direct payments without need for documents or multiple points of authorization.

**What is Blockchain ?**

- It is an electronic system that allows for record-keeping of transactions in real time.
- When participants in a blockchain system complete a transaction, the time, date, nature and cost of the exchange is recorded.
- Once the parties have confirmed the accuracy of the information, it is then permanently and indelibly recorded, and can be made accessible to every other participant in the system.
- Blockchain technology therefore instantaneously creates a “consolidated record that constitutes a single and shared version of the truth.”
- Improved informational transparency and accuracy increase trust between parties, reduce costs, and boost efficiency. Thanks to these benefits, blockchain technology could be the key to modernizing agricultural commerce

**5.4 India’s Chairmanship for Wassenaar Arrangement (WA)****Why in the News?**

India assumed chairmanship of Wassenaar Arrangement (wa) for one year from january 1<sup>st</sup> 2023

- Wassenaar Arrangement is a voluntary Multilateral Export Control Regime (MECR) **to promote transparency and greater responsibility in transfers of conventional arms and dual-use goods and technologies** by facilitating: **Information sharing among WA participating states.**
- **conventional arms** :They are **the most commonly known and widely used weapons in conflict and crime settings** and encompass a wide range of equipment, including battle tanks, armoured combat vehicles, large-caliber artillery systems, combat aircraft and unmanned combat aerial vehicles (UCAV), attack helicopters, warships, missile

#### **About Wassenaar Arrangement:**

- It prevents proliferation of Weapons of Mass Destruction (WMD) which includes nuclear, radiological, chemical, biological or other weapon.
- India joined WA (HQ: Vienna) in 2017.
- MECR are **voluntary and non-binding agreements.**

#### **Following are International Export Control Regime:**

<b>International Export Control Regime</b>	<b>About</b>	<b>India's Membership Status</b>
<b>Nuclear Supplier Group (NSG), 1975</b>	Prevents nuclear proliferation by implementing guidelines for nuclear and nuclear-related exports.	No
<b>Australia Group, 1985</b>	Ensures that exports do not contribute to development of chemical or biological weapons	Yes
<b>Missile Technology Control Regime (MTCR), 1987</b>	prevent proliferation of missile and unmanned aerial vehicle technology capable of delivering WMD.	Yes
<b>Zangger Committee, 1971</b>	Formed following coming into force of Nuclear Non-Proliferation Treaty (NPT). It maintains a Trigger List (triggering safeguards as a condition of supply) of nuclear-related strategic goods.	No

## Export Control Regime Examples

	Conventional Weapons	Weapons of Mass Destruction and their delivery systems			
		Missiles	Nuclear Weapons	Chemical Weapons and Biological Weapons	
Treaties			<b>NPT</b> Nuclear Non-proliferation Treaty	<b>BWC</b> Biological Weapons Convention	<b>CWC</b> Chemical Weapons Convention
International Export Control Regimes	<b>WA</b> Wassenaar Arrangement	<b>MTCR</b> Missile Technology Control Regime	<b>NSG</b> Nuclear Suppliers Group	<b>AG</b> Australia Group	

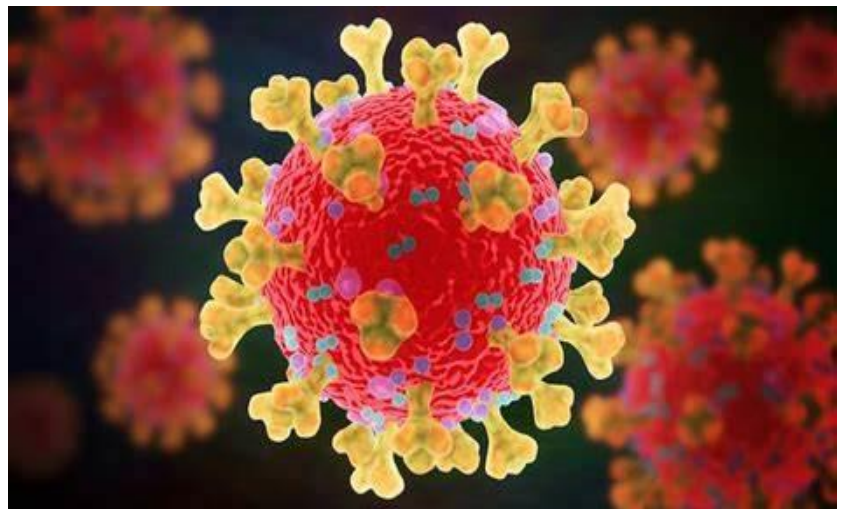
### 5.5 XBB.1.5 Omicron variant

#### Why in the news:

Recently, first case of XBB.I .5 variant is detected in Gujrat.

#### About:

- It is a new recombinant strain is highly immune evasive and appears more effective at binding to cells than related subvariants.
- Omicron subvariants XBB.1.5, BQ.1.1, BQ.1, BA.5 and XBB are causing almost all Covid-19 infections at present.



### 5.6 Star labelling program of Bureau of Energy Efficiency (BEE).

#### Why in the news?

Ceiling fans have come under the ambit of mandatory star labelling of BEE.

#### Standard and Labelling Program:

- It was launched in 2006, under Energy Conservation Act, 2001.
- Under it, a Star Rating was introduced on appliances a for visual representation of appliance's efficiency, i.e: Lowest energy

BEE Star Labels Explained

Look for stars on an appliance model. More stars means more electricity saving.

Look for the year on the label as star ratings change periodically when standards improve. A BEE 5 star rated model in 2013 may be equivalent to BEE 3/4 star model in 2014.

Appliance/Type	: XX/Split
Brand	: YYYY
Model/Year	: ABC/2007
Cooling Capacity (W)	: XX
Power Consumption (W)	: XX
Variable Speed Compressor	: Yes/No
Heat Pump	: Yes/No

Although BEE Star rated appliances do comply with Indian Standards, but higher star rating does not mean better quality.

BEE Star rating is available in following home appliances:  
Refrigerators, Air Conditioners, Water Heaters, T8 Tubelights, 1200 mm sweep Ceiling Fans.

**HOME**  
APPLIANCES

**Bijli Bachao!**  
...because saving electricity saves money

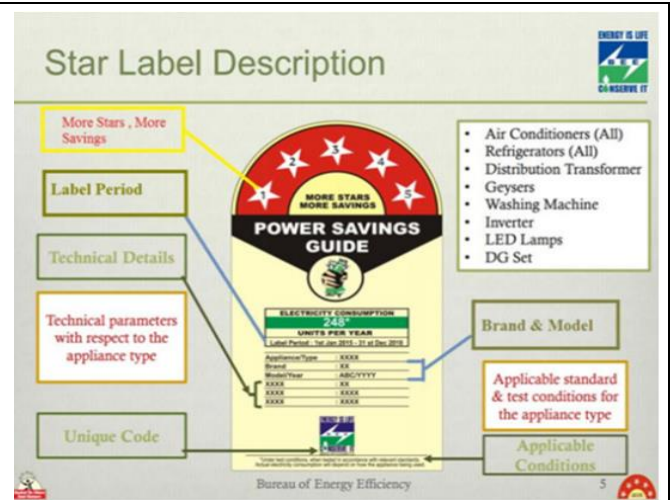
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consumption appliances having highest star and highest energy consumption having the least star.

- It is mandatory for several appliances including Frost Free and Direct Cool Refrigerator, LED Lamps, Room AC (Variable and Fixed speed), Colour TV, Refrigerators, TFL, Stationary Storage Type Electric Water Heater etc.

#### About BEE:

- The Bureau of Energy Efficiency is an agency of the Government of India, under the Ministry of Power created in March 2002 under the provisions of the nation's 2001 Energy Conservation mmAct.
- The agency's function is to develop programs which will increase the conservation and efficient use of energy in India.



### 5.7 INDIAN STANDARD FOR USB TYPE C RECEPTACLES, PLUGS AND CABLES

#### Why is the News?

Recently, BIS has published Indian Standard for USB type C receptacles, plugs and cables.

- **BIS under Ministry of Consumer Affairs** has introduced standard for USB Type-C port, plug and cables used in electronic devices like mobile phone, laptop etc.
- It aims to provide common charging solutions for various electronic devices sold in country by March 2025. USB i.e., Universal Serial Bus (an industry standard) is used for connecting a wide variety of devices to a processor.

#### USB Types:

- USB-A is a flat and rectangular shape;
- USB-B has multiple designs, but common shape is a square; and
- USB-C is a smaller rectangular with rounded corners.

#### About Universal Serial Bus (USB)

- It is an industry-standard that establishes specifications for cables, connectors and protocols for connection, communication and power supply (interfacing) between computers, peripherals and other computers.
- A group of seven companies began the development of USB in 1995: Compaq, DEC, IBM, Intel, Microsoft, NEC, and Nortel.
- Ajay V. Bhatt is an Indian-born American computer architect who defined and developed several widely used technologies, including USB (Universal Serial Bus),

- A broad variety of USB hardware exists, including 14 different connector types, of which USB-C is the most recent and the only one not currently deprecated.
- The Universal Serial Bus was developed to simplify and improve the interface between personal computers and peripheral devices, such as cell phones, computer accessories, and monitors, when compared with previously existing standard or *ad hoc* proprietary interfaces.
- USB data transfer rates are slower than those of other interconnects such as 100 Gigabit Ethernet.

In EU by 2024, all mobile phones, tablets and cameras will be sold with a USB Type-C charging port.

### Need for Common Charger:

- To reduce number of chargers per consumer, thus reducing e-waste in India (as of 2021, 5 million tonnes of e-waste generated in India).
- Step towards LiFE (Lifestyle for Environment) that nurtures a global network of individuals, i.e., ‘Pro-Planet People’ (P3).
- Ease out the technological ‘lock-in’ effect, whereby a consumer becomes dependent on a single manufacturer.
- BIS also published standards for digital television receivers with built-in satellite tuners and video surveillance security systems.

## The ABC's of USB

### Type - A



Large and flat – commonly found on the back of computers. They connect to host devices. They are asymmetrical and can only connect in one direction.

### Type - B

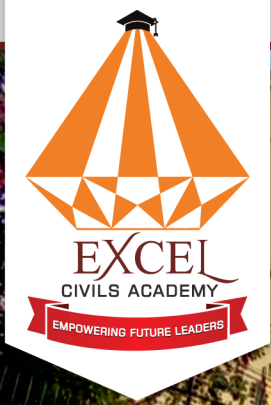


Full-sized, squared connector. They are found on the back of peripheral devices like printers and scanners. Smaller, flatter versions called Micro B and Mini B are used on mobile devices. They are asymmetrical and can only connect in one direction.

### Type - C



Small, flat and durable. They can connect to either host devices or peripherals. They are symmetrical, meaning there is no top or bottom, and can connect in either direction.



CAMPUS



CORRIDOR

LECTURE HALL - 1



LIBRARY



LECTURE HALL- 2



CANTEEN



LECTURE HALL - 3

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