

# PERFECT

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Year : 5

No. : 06

March 2023 / Issue 02

Price : ₹ 55



## India's Strong Ties With Fiji Guide India's Interests In The Pacific

Organic Farming: A Potential Catalyst For The Growth Of Indian Economy

Role Of ICT In Combating Corruption In The Public Sector

Need To Work On Sustainable Tourism Model In India

Increasing Role Of NDRF & Importance Of Other Institutional Mechanisms In Disaster Management

Growing Role Of AI In Various Sectors For India's Development

Aadi Mahotsav: The Cultural Medium For The Upliftment Of Tribal Community

**Prelims Special 2023: Economy**

# Why Perfect-7 Current Affairs Magazine?

1. First of all, Perfect-7 Current Affairs Magazine is published **every 15 days** to keep students up-to-date with current affairs, while other coaching institutes have monthly magazines which aggregate the current affairs of the month. Due to large number of current affairs, students are often unable to read all the articles. Eventually they become dependent on annual and half yearly magazines.
2. Perfect-7 magazine has been created keeping in mind the **UPSC and State PCS centric exams**, whereas the magazines of other coaching institutes include unnecessary and extra material in the name of UPSC and State PCS exams, causing confusion among the students.
3. **Perfect-7 magazine has 7 editorial articles by subject experts on important events during 15 days, 42 articles on important events, 7 brain-boosters in creative style, current affairs, one liner, preliminary and mains exam related questions etc.** are given. Along with this there is also a section on eminent personality which shows the contribution of the historical personality towards the country and society. In this way, no important information and news is missed in the period of 15 days for UPSC and State PCS exams.
4. Along with this, through the **case study section**, students learn about the situations, an officer has to face during his tenure and what could be the possible solution.
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6. In current affairs based classes, preparation is done through Perfect-7 Magazine, which enables quality preparation of the students.
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8. Perfect-7 Magazine contains prelims and mains exam focused mock questions through which students can make their preparation more precise.

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## Message



**Vinay Kumar Singh**

**Founder**

**Dhyeya IAS**

Current Affairs has an important role in the examinations conducted by Union Public Service Commission and State Public Service Commissions. It is necessary for the candidate to have knowledge of relevant information on issues of national and international importance. Perfect 7 Magazine is being presented fortnightly to the students to fulfill this requirement. Preparation of civil services exam is only completed when candidates have holistic knowledge and analysis of the dynamic nature of the current affairs. 'Perfect7' keeps this vision and approach and understands the multidimensional need of students at the content level, so this magazine has presented the current affairs with relevant issues of general studies. Keeping in mind the needs of mains exam, current articles on 7 burning issues, Ethics Case Studies, Biographies of important personalities, coverage of most useful topics of various sections of General Studies and the most important current affairs issues are being covered for Preliminary Examination in which emphasis is being given on national, international, environment, ecology, art and culture, science and technology, economic issues.

Brain boosters with 7 themes based graphics are being presented in a concise form to enhance the conceptual understanding of the students. Apart from this, updated information on Global Initiatives, Global Institutions, Structure of Organizations, Functioning, Important Reports, and Indices will be included in this magazine, which is asked prominently in the Civil Services Examination. To give emphasis on facts and analysis, keeping in view the trends of new nature of questions in Preliminary and Main Examination of Civil Services, an inclusive magazine is being provided to the students so that they can give the right direction to their preparation by understanding the new requirements of Civil Services Examination. Columns have been included in the format of the magazine keeping in mind the factual needs of the candidates, mental development, developing writing technique etc. Along with this, we have been introducing new segments according to the changing needs of the candidates and these initiatives will continue in future also. Hope this issue will prove useful for all of you. Your suggestions are always welcome.

Best wishes.



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## Increasing Role Of NDRF & Importance Of Other Institutional Mechanisms In Disaster Management

***“It is not the disaster, but the lack of preparedness for the disaster that kills”.***

- Recently, an earthquake of magnitude 7.8 devastated the major parts of Turkey and Syria, one of the most seismically active regions in the Mediterranean and the world.
- According to the World Health Organization, it was the “worst natural disaster” in the European region for a century. About 14 million people have been affected by the disaster, i.e., one-sixth of the country’s population. More than 3.3 million people had been forced to leave the quake zone.

### Operation Dost:

- Keeping the spirit of its age-old tradition of Vasudhaiva Kutumbakam, India launched “Operation Dost” for search-and-rescue and to provide emergency relief materials to earthquakes hit Turkey and Syria. Under Operation Dost, India sent search and rescue teams, National Disaster Response Force (NDRF), materials, medicines, medical equipment, and consumables. In addition to this, the Indian Army’s team of medical specialists also provided relief to the injured at a field hospital.
- The NDRF team helped to extricate live victims from under the rubble and provided first-aid to the injured and received global appreciation for its efforts.

### Disaster Management:

- The Disaster Management Act, of 2005 defines “disaster” as a natural or manmade event that causes substantial loss of life, property, and environment.
- Disaster management encompasses all activities including preparedness, early warning systems, rescue, relief, and rehabilitation. The term disaster includes natural calamities, health-related disasters (epidemics), industrial disasters, etc.

### Legal Framework for Disaster Management in India:

The legal Framework to govern and regulate disaster response and mitigation activities comprise the following:

- State Essential Services Maintenance Acts (ESMA) which govern incidents involving disruption of essential public services.
- State laws dealing with public order and local governments.
- State Public Health Acts.
- Various Regulations/Codes/Rules relating to different aspects of disaster management e.g. Coastal Zone Regulations, Building Codes, Fire Safety Rules, etc;
- The Code of Criminal Procedure, which deals with public nuisance;

- The Army Act, which empowers civil administration to seek help from the army during the crisis;
- In addition to these acts, the Disaster Management Act, 2005 was notified on 26th December 2005. This Act provides for the legal and institutional framework for the effective management of disasters.
- Further, the National Policy on Disaster Management (NPDM) has been prepared in pursuance of the Disaster Management Act, 2005 with a vision to build a safe and disaster-resilient India by developing a holistic, proactive, and technology-driven strategy through a culture of prevention, mitigation, preparedness, and response. The Policy covers all aspects of disaster management.

### Disaster Response Systems/Institutions in India:

- The Disaster Management Act, 2005 envisages a unified structure of disaster management in the country. The Act mandates the creation of new institutions and the assignment of specific roles for Central, State, and Local Governments in collaboration with NGOs and Civil Society.
- Under the provisions of the Act, the National Disaster Management Authority (NDMA) has been established under the Chairmanship of the Prime Minister and the National Executive Committee (NEC) of Secretaries has been created to assist the NDMA in the performance of its functions.
- At the State level, a State Disaster Management Authority has been created under the Chairmanship of Chief Minister of the State, which has been assisted by a State Executive Committee.
- At the District level, District Disaster Management Authorities have been created under the Chairmanship of District Magistrates.
- The Act also provides for a National Institute of Disaster Management for human resource development in the field of disaster management.
- National Disaster Management Plan (NDMP) defines the roles and responsibilities of various stakeholders including Central Ministries/ Departments, State Governments, UT Administrations, District Authorities, Local Self Governments, and Civil Societies.

### National Disaster Management Authority (NDMA):

NDMA is the apex body for Disaster Management headed by the Prime Minister of India. It was created by the Disaster Management Act, 2005. NDMA is mandated to lay down the policies, plans, and guidelines for Disaster Management. It also has some executive functions for ensuring timely and effective responses to disasters. Some of the initiatives are as follows:

1. National Disaster Management Services was conceived in 2015-16 to provide the communication infrastructure and technical support for Emergency Operation Centre (EOC) operations across the country at the time of disaster.
2. Earthquake Disaster Risk Indexing (EDRI) was started for 50 important cities in Seismic Zone IV & V areas. This will help the administrative bodies in comparing the overall risk across large number of cities to implement appropriate disaster mitigation measures.
3. NDMA through Building Materials & Technology Promotion Council (BMTPC) has prepared Upgraded Earthquake Hazard Maps and Atlases for the country to the district level showing major faults, earthquake zones, and epi-centre of past earthquakes of a magnitude of 5 and above.
4. NDMA has taken up a project for disaster risk management by establishing a GIS Server and creating a database to integrate data obtained from various stakeholders on the GIS platform to increase disaster preparedness, mitigation, response, and relief management efforts.
5. The Aapda Mitra scheme of NDMA has provision for training 6000 community volunteers in disaster response in 30 most flood-prone districts.

#### **Role of NDRF in Disaster Management:**

- NDRF, created under the Disaster Management Act, 2005, is India's specialized force for responding to natural disasters and chemical, biological, radiological, and nuclear defence (CBRN) emergencies. It functions under the Ministry of Home Affairs, Government of India, within the overall command, control, and leadership of the Director General.
- NDRF is a force of 12 battalions, organised on para-military lines, and manned by persons on deputation from the para-military forces of India.
- In September 2014, NDRF in its first-ever experience of handling urban floods, conducted rescue and relief operations in Jammu & Kashmir.
- Again, in October 2014, NDRF personnel saved many lives due to the destruction caused by cyclone Hud-Hud on the east coast.
- Till date, NDRF has rescued over 1.48 lakh precious human lives and also evacuated more than 7 lakh stranded persons from disaster situations within the country and abroad. The effective response of NDRF during the Japan Triple Disaster-2011 and Nepal Earthquake 2015 was acclaimed globally. During the recent earthquake in Turkey NDRF performed its responsibilities effectively and received global appreciation.

#### **India's Collaboration at the Global Level in Disaster Management:**

- India plays an active role in global initiatives on disaster management. India is a signatory to the Sendai Framework (2015-2030) for Disaster Risk

Reduction.

- Further, India is one of the participating countries with the United Nations International Strategy for Disaster Reduction (UNISDR).
- In September 2019, India launched the Coalition for Disaster Resilient Infrastructure (CDRI) with headquarters in New Delhi. It aims to promote the resilience of new and existing infrastructure systems to climate and disaster risks in support of sustainable development.
- The government of India has a partnership with various International Agencies in the field of Disaster Management such as the UNISDR, The World Conference on Disaster Risk Reduction, the Global Platform for Disaster Risk Reduction.

#### **Way Forward:**

- Nature of activities in the disaster management process and the vertical and horizontal linkages require coordination between the Union, State, and local governments on the one hand and a host of government departments and agencies on the other.
- The experience from past disasters demands a holistic and agile system for dealing with disasters. This requires strengthening the existing legal framework, removal of loopholes, and ensuring an effective coordination mechanism and an administrative structure with unity of command and well-defined responsibilities at all levels.
- For this Second Administrative Reform Commission in its report "Crisis Management" recommended that, "Management of Disasters and Emergencies, natural or manmade", may be included in List III (Concurrent List) of the Seventh Schedule of the Constitution.
- Disaster management planning requires a wider perspective and expertise. Keeping in view this fact, some other suggestions from the 2nd ARC report are of paramount importance that include suggestions like:
  - » Developments in science and technology should be used for mitigating the adverse impacts of disasters.
  - » Specialized manpower and equipment for dealing with disasters also needs to be readily available.
  - » A repository of best practices needs to be created so that these could be replicated, adapted.
  - » National and regional early warning systems need to be developed and deployed.
- But despite all the preparedness for the management of disaster, it would always be worthwhile to mitigate its impact. Prevention is always better than cure. As Benjamin Franklin once opined that "By failing to prepare, we are preparing to fail"



# Organic Farming: A Potential Catalyst For The Growth Of Indian Economy

**Prime Minister**, Shri Narendra Modi has asked people for Organic Farming at home. He was responding to a tweet by a Rajya Sabha MP, who was showing various varieties of vegetables grown on a rooftop.

According to the FAO, organic agriculture is a system that relies on ecosystem management rather than external agricultural inputs such as synthetic fertilizers and pesticides. It involves the use of natural and environmentally friendly farming techniques, such as crop rotation, composting, and biological pest control. It is a sustainable method of farming that helps to preserve the health of the soil, enhance biodiversity, and promote healthier food choices.

## Organic Farming in India:

- India has a long history of organic farming, with traditional farming practices dating back thousands of years. However, due to the green revolution, the country has seen a decline in traditional farming practices and shifted towards modern farming practices that use various chemicals to increase productivity.
- In recent decades, there is an increased shift towards organic farming due to increased consciousness of the harmful effects of modern farming practices. The government of India too has recognized the importance of organic farming and has been taking various steps to promote it.
- It is worth mentioning that India has the largest number of organic producers in the world and ranks ninth in terms of its area of agricultural land under organic cultivation (PIB 2020) and Sikkim was declared the first –fully organic state in the world.
- However, a mere 2.78 million hectares, which is roughly about 2% of the net sown area, is being used for organic farming in India. Although India is the second-largest exporter of organic products in Asia, its export volume comprises just about 0.55% of the global trade in organic produce. This shows that organic farming continues to remain a niche area in India which requires a massive push from all stakeholders.

## Impetus for organic farming in India:

### Supply-side-

- Rising costs of chemical inputs, such as fertilizers and pesticides
- Premium prices received by organic farmers are a way to increase the profitability of small and marginal landholding farmers.

### Demand side-

- During the past decade, the demand for organic products has grown by 16% per annum.

- Increased demand for Non-Genetically Modified Organisms (Non-GMO).
- Organic farming has the potential to be a catalyst for the growth of the Indian economy due to its Ecological, Economical, and Social benefits.

## Ecological Benefits:

### Healthier soil-

- It nourishes the living component of the soil i.e. the microbial inhabitants that release, transform, and transfer nutrients.
- It feeds soil biota and builds soil organic matter which contributes to good soil structure and water-holding capacity.
- It uses techniques like crop rotation, mechanical tillage, hand-weeding, cover crops, and mulches, to manage weeds, insects, and disease organisms.

## Cleaner Environment-

- It is much better for the environment as the energy consumption is much less when compared to chemical farming.
- It uses fewer inputs and completely avoids synthetic fertilizers which otherwise pollute the soil, water, and air.
- It also releases much less carbon dioxide than other farming systems.

## Economical benefits:

### For farmers:

- It could reduce dependency on external inputs and costly technologies thus reducing the competitiveness and disparity among the farmers in a community.
- By switching to it, farmers can reduce their production costs by over 25% as compared to the cost of conventional farming.

## Profitable and Efficient Production:

- By incorporating natural processes like natural cycles, nitrogen fixation, and pest-predator relationship.
- Improved management and conservation of soil, water, energy, and biological resources.
- **Increased exports-** As organic produce, are in high demand in many countries. This can help to boost the country's foreign exchange reserves.
- **Employment generation-** It can create employment opportunities, especially in rural areas, where there is a high incidence of unemployment. This can help to reduce poverty and improve the standard of living of the people.

## Social Benefits:

- **Healthier population-** Organic food is known to be healthier than conventionally grown food as it is free from harmful chemicals. This can lead to a healthier population and reduced healthcare costs.

- It aids in the revival of culture and brings back the indigenous knowledge, beliefs, and value system that are on verge of extinction now.

#### **Government Initiatives to Promote Organic Farming--**

- **Mission Organic Value Chain Development for North East Region (MOVCD)-** It is a Central Sector Scheme, a sub-mission under the National Mission for Sustainable Agriculture (NMSA) that aims to develop certified organic production in a value chain mode to link growers with consumers and to support the development of the entire value chain.
- **Paramparagat Krishi Vikas Yojana (PKVY)-** Launched in 2015, it promotes Organic farming through the adoption of organic villages in a cluster-based approach and a Participatory Guarantee System (PGS) certification. This program included 13.9 million certified organic farmers in 29,859 organic clusters, covering 0.59 million hectares (about 0.4% of the cropped area in India).
- **Certification Schemes-** Food Safety and Standards Authority of India (FSSAI) provides certification to the organic product under the tagline and logo of "Jaivik Bharat".
- **Participatory Guarantee System (PGS)-** PGS India is a self-certification system meant for the domestic market only and comes under the Ministry of Agriculture and Farmers Welfare.
- **National Program for Organic Production (NPOP)-** It is a third-party certification program run under the Ministry of Commerce and Industry since 2001. This program laid down the norms and guidelines governing the production of organic food.
- **Agri-Export Policy 2018-** Focus on clusters and Marketing and promotion of "Produce of India" have positively impacted organic farming in India
- **Zero-budget Natural Farming-** Zero-budget natural farming is a method of chemical-free agriculture, drawing from traditional Indian practices. In budget 2022-23, the government proposed that chemical-free farming will be promoted throughout the country, starting with fields within a 5-km wide corridor along the Ganga River.
- In budget 2023-24, Rs 459 crore has been set aside to turn natural farming into a widespread movement. 10,000 Bio Input Research centres would be established to support 1 crore farmers in Natural Farming over the course of three years
- **Concerns related to organic farming-** However, at the policy level, apprehensions have been raised on the efficacy of organic farming in feeding the vast population, particularly in densely populated nations such as India given the effect like-
  - » Loss of yield,
  - » High Cost of production per unit quantity of

agricultural products and

- » Farm profitability.
- Many studies in India have reported a reduction in crop yields to a significant extent and an increase in the variability in crop yields due to organic farming.
- Some other studies have pointed out that because of the low yields in organic agriculture, there is a need for more land for agriculture by diverting forest land to meet the food demand, which will negatively impact the environment.
- It was ascertained that the main problem while converting to organic farming was the lack of certification (57 percent), resulting in no premium price.
- Along with this, there are infrastructure bottlenecks as organic products of North East find it difficult to reach the marketplace due to infrastructural constraints.

#### **Way Forward:**

- Nevertheless, some studies have also pointed out that gains of organic agriculture in terms of increased farm-level biodiversity, organic matter, and organic carbon content in the soil more than compensate for the losses due to lower yields through enhancing sustainability.
- Thus, there is a wide divergence of opinions about the costs and benefits of organic agriculture. With the recent episode of shifting from conventional to organic farming in Sri Lanka and the consequent reduction in crop yields, the food crisis, highlights the negative consequence of the unplanned and blanket adoption of organic agriculture. India needs to adopt a gradual calibrated approach to shift from conventional to organic agriculture, which requires a holistic examination of the possible impacts and consequences of organic agriculture. Therefore the way forward could be-
  - » Training the farmers and helping them acquire knowledge and skills about organic agriculture and ready to change their behaviour to shift from conventional farming to organic farming.
  - » Formation of clusters to ease the adoption of various components of organic agriculture technologies.
  - » Reform in PKVY- The organic agriculture profitability is location-specific, but the PKVY scheme was implemented in all regions without seeing suitability and profitability. Hence, there is a need to identify and prioritize locations and crops, for vertical expansion and reap the benefit of scale and brand. As funds are thinly distributed over large areas; focusing on specific areas can also ensure adequate availability of funds in priority zones.



## India's Strong Ties With Fiji Guide India's Interests In The Pacific

**India's** External Affairs Minister S Jaishankar was on an official visit to Fiji from 15-17 February. He attended the 12th World Hindi Conference, co-sponsored by the Ministry of External Affairs and the Government of Fiji, and also met the Prime Minister of Fiji. Addressing the Indian diaspora in Suva, the capital of Fiji, the External Minister said that the Indian diaspora has set milestones of its own and is a great asset to the country they live in, to India, and to the world. The Indian Foreign Minister, in reference to Fiji, said that whenever we look at the Indo-Pacific, we see Fiji as an important partner with which India has a historical and established relationship.

Fiji is vulnerable to natural calamities and India always stood by Fiji during its hard times. During Corona, India sent one lakh vaccine doses to Fiji as a part of vaccine diplomacy, with the intention to help Fiji. Furthermore, India is planning to support Fiji in renewable energy and providing IT support to its MSMEs. India has also announced a Visa Waiver Agreement with Fiji for holders of Diplomatic and Official passports. As a consequence of the visa waiver, holders of diplomatic and official passports in India and Fiji will now be able to enter, visit, stay, and return to each other's territory without a visa for more than 90 days.

When the China issue was discussed between the new Acting Prime Minister of Fiji and the Foreign Minister of India, Fiji said that "We have many old friends. There are no new friends in this region (Indian Pacific region). We have been friends with India. We have been friends with China. We will continue our relationship positively." On the other hand, Fiji is somewhat aware of China's intention in the Indo-Pacific region and its possible consequences, which is why Fiji has rejected China's proposed agreements related to economics and other fields in the past few times.

China wanted to have a Free Trade Agreement with the island countries of the Pacific Ocean which Fiji declined and recently, Fiji terminated another agreement with China which was an accord signed in 2011 with Beijing to train its police. Under the deal Fijian officials were trained in China while Chinese officials were deployed in Fiji for three to six months. Fiji has also clarified that officers from other countries - Australia and New Zealand - can serve in Fiji's police force as their systems are similar to Fiji's. The nation's Prime Minister Sitiveni Rabuka has clearly stated that we do not need Chinese police personnel. Fiji is of the view that its democratic and judicial system is different from that of China in its

framework and thus, it does not need Chinese police forces to consolidate its own security system.

### **Visit to Fiji and Endeavoring India's Interest in the Pacific:**

➤ During his visit to Fiji, the Indian Foreign Minister said that India will co-host the third meeting of the India Pacific Islands Cooperation forum this year. This forum is considered very important for the success of India's Indo-Pacific strategy. It aids in accomplishing India's Island Diplomacy, the Sagar Vision. The Forum for India Pacific Islands Cooperation (FIPIC) is a major platform for enhancing India's engagement with the island nations of the Pacific Ocean. India aims at regional stability, regional integration, and collective regional development through regional organization. Nevertheless, India also seeks to achieve some specific goals by tying up with some regional organizations. The forum for the Indian-Pacific Islands Cooperation (FIPIC) is one such organization with specific objectives in mind.

➤ Freedom of navigation in the Pacific Ocean region, in other words, freedom of maritime commercial authority, protection from maritime crime and increasing threats to the presence of islands from global reparations, reforestation changes, and competition for fisheries and other resources, plastics, and oil, are some aspects where FIPIC has an important role to play. It is also crucial from the point of view of dealing with the growing concern on islands made of coral reefs, ranging from inclusion to marine biodiversity. The Forum was formed in November 2014 under the leadership of India to meet with the island countries of the Pacific Ocean.

### **Composition of FIPIC:**

➤ It has 14 member countries including India, where all nations, except India, are island countries of the Pacific Ocean. Its members include Fiji, Cook Islands, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Its first summit was held in November 2014 in Suva, Fiji, while its second summit was held in August 2015 in Jaipur, India.

➤ Although the countries of this organization are countries with relatively small land areas, nevertheless, these exclusive zones are economically expansive. Therefore, India can work with them for the development of the ocean economy or blue economy. It has also been seen as an oceanic leap by the Indian Prime Minister

to promote India's engagement in the Pacific region. The total annual trade between India's Pacific Island Countries in 2014-15 was around 300 million dollars, of which India's exports to these countries were 200 million dollars while imports were 100 million dollars.

- When this forum was launched in the year 2014, India proposed to help these countries with many projects. The most prominent proposal among these was to set up a special fund of one million dollars for adaptation to climate change and to promote clean energy and open a trade office for these countries in India. Pan Pacific Islands e-Network to be launched to promote digital connectivity among the Pacific Island countries and give Visa on Arrival facility to 14 Pacific Island countries. Cooperation between these countries and India regarding space technology should be ensured and diplomats of Pacific Island countries should be trained by India. India has increased its grant-in-aid from \$1.25 lakh to 2 lakh annually for each country of this organization to run community projects in 14 Pacific island countries.
- In the second summit at the level of Heads of Government, FIPIC member countries strongly supported India's candidature for permanent membership of the United Nations Reform and Security Council. During the summit, the Indian Prime Minister announced all possible assistance and technical help to the member countries to prevent natural disasters. The Indian Prime Minister further raised the issue of cooperation sought by Fiji to set up a medical center in Fiji. India expressed its desire to cooperate in setting up this center in Fiji, along with a pharmaceutical plant there and invest in Fiji's tourism sector. Fiji and India have also emphasized on increasing cooperation in matters related to defense and security.
- In the summit, India talked about cooperation in developing the infrastructure sector, and building roads, highways, and airports in Papua New Guinea. Papua New Guinea expected a line of credit of \$100 million from the Exim Bank of India during the summit. On the other hand, Vanuatu thanked India for the cash assistance of \$ 2.5 million in order to fight Cyclone Pam. Furthermore, Nauru appreciated the Indian assistance given in the construction of the sea wall to deal with the rising sea water level. India had talked about helping Nauru in capacity building in disaster management.
- In May 2017, the India Pacific Islands Sustainable Development Conference was organized by the Ministry of External Affairs of India in Fiji. In this session, India announced giving 1 million

dollars to Fiji's trust fund for organizing COP 23 of UNFCCC in Fiji. In this session meeting were held between India and FIPIC countries on blue economy, adaptation-mitigation measures to combat climate change, disaster preparedness, health, International Solar Alliance and Intended Nationally Determined Contributions (INDCs) related to climate change.

### **India Pacific Islands Leaders Meeting, 2019:**

- The India Pacific Islands Leaders Meeting was held in New York on 24 September 2019 on the sidelines of the 74th session of the United Nations General Assembly. India's relations with the Pacific Island countries have strengthened after the Act East Policy. India has strengthened its developmental agenda in the Pacific Islands. In this meeting, FIPIC countries discussed achieving the Sustainable Development Goals, promoting renewable energy cooperation, joining the recently formed Global Coalition on Disaster Resilient Infrastructure, and collaborating for capacity building.
- Apart from this, it is also important to mention that many countries of this organization have taken membership in the International Solar Alliance. Mutual cooperation between India and these countries are very important to deal with disaster management, global warming, and climate change. In this meeting, the Indian Prime Minister announced a grant of one million dollars to each Pacific island country, which is a total grant of \$ 12 million, for the implementation of high-impact development projects in Pacific island countries.
- Apart from this, a line of credit of \$150 million was also announced by India to run solar and renewable energy and climate-based projects as per the requirement of each country in the region. In the health sector, the Indian Prime Minister proposed to organize the Jaipur Foot Artificial Limb Fitment Camp at the Pacific Regional Hub under the India for Humanity Program here. In order to increase people-to-people contact between the Pacific Island countries and India, the Indian Prime Minister announced the Distinguished Visitors Program in this meeting, under which eminent people from these countries would be able to visit India.
- India has also made it clear that it would welcome the visit of parliamentary delegations from Pacific Island countries to India. It is noteworthy that in the year 2020, there was talk of holding the third FIPIC summit in Port Moresby, the capital of Papua New Guinea, but this could not happen due to the Covid pandemic. India has now started appealing to these countries to make the third summit a success.



## Role Of ICT In Combating Corruption In The Public Sector

**The** first G20 Anti-Corruption Working Group (ACWG) meeting, under the G20 chairmanship of India, began on 1st March 2023 in Gurugram, Haryana. As part of the meeting, a brief program was organized on the theme 'Leveraging ICT to combat corruption in the public sector'.

### Introduction:

- Corruption has been a major problem since the beginning of the state. But in recent years, the importance of ICT in fighting corruption has been recognized globally. Many countries are using ICT to increase the efficiency of their systems and ensure transparency, which will help reduce corruption somewhere. It is noteworthy that ICT not only enables the empowerment of citizens through access to information but also narrows the loopholes in public service delivery systems.

### Definition of Corruption:

- According to the United Nations, corruption is a serious crime that undermines the social and economic development of a country. Presently, no country, region, or community is spared from corruption. It has spread to all parts of the world, be it political, social, or economic. It undermines democratic institutions, contributes to governmental instability, and slows economic growth.
- According to DH Bailey, corruption is the misuse of power for personal gain, which may not necessarily be related to money.

### About ICT:

- According to the Information Technology Association of America, information technology is the study, design, development, implementation, support, or management of computer-based information systems, especially the application of software and computer hardware.
- Along with this, the process of sending this data by a sender to the receiver is a part of communication technology, therefore information and communication technology is related to the management of computer-based data and its communication.

### Role of ICT in combating corruption in the public sector

#### Minimum Government Maximum Governance:

- Inclusivity through transparency and efficiency through ICT is promoting the mantra "Minimum Government, Maximum Governance". The

Government has taken steps to expose government data for public review/analysis through ICT such as digital submission of Budget and Economic Review, automation of government processes such as Single Window Clearance and digitization of processes for the provision of industry, and decision-making of officials are increasingly using ICTs to prevent and restrict interactions with gatekeepers/officials to access key services. Due to this, red tape and licensing systems are getting weakened. It is worth noting that there are more possibilities of corruption in red tape, and that's why these applications of ICT are helping to reduce corruption.

#### Direct Benefit Transfer:

- The government is now directly transferring the money of the beneficiaries into their accounts. In many schemes including MNREGA, the beneficiary is direct, due to which the possibility of distribution of money among other people is decreasing. Jan Dhan, Aadhaar, and Mobile are reducing the possibility of inclusion errors, exclusion errors, and forgery, which helps reduce corruption.

#### Digital Payments:

- Another important step taken by the government was the implementation of BHIM (Bharat Interface for Money) which is a mobile application developed by the National Payments Corporation of India. BHIM application facilitates e-payment directly through banks and can be used on all mobile devices. Thus collectively Jan Dhan Yojana Aadhaar Act and BHIM Application have provided a Smart Government where subsidy flow reaches the beneficiary in a timely and effective manner. Along with this, due to the increase in digital payments, black money has also been curbed.

#### Major initiatives:

- Measures such as Government e-Market (GeM) have helped improve accountability in public procurement. CVC has also tried to create a mass movement against corruption through e-Sankalp. Along with this, transparency has increased due to the live proceedings of the courts, which helps reduce corruption somewhere. The flow of funds to urban and rural local bodies has been identified by the Comptroller and Auditor General (CAG) as an important area of their audit. The CAG has also taken note of the

large amount of digital information generated by the increasing automation of tax filing, assessment, and collection processes. Now CAG is considering increasing the applications of Artificial Intelligence in its functioning.

#### Awareness:

- Corruption increases due to a lack of public awareness. With the increasing use of ICT, there has been an increase in public awareness and awareness of rights. For example, DigiLocker has over 144.6 million registered users and UMANG has done over 3.36 billion transactions through the digital platform. Under Direct Benefit Transfer, India has created over 1.35 billion digital identities for its residents and over 470 million basic accounts have been opened for citizens to directly access all social welfare schemes. Over 11,000 product categories, over 260 service categories, and 2.5 lakh service offerings are available on the Government e-Marketplace with approximately 2.8 million products listed.
- It is clear from these figures that public awareness has increased, due to which the responsibility of the government will also increase, which will ultimately reduce corruption.

#### Challenges Before ICT in Eradicating Corruption: -

##### Digital divide:

- The NSO report suggests that 20% of Indians above the age of 5 have basic digital literacy, while it is 40% in the crucial age group of 15 to 29 years. While 42% of the total households in cities have internet access, only 15% of the total households in rural areas are connected to the internet. This affects access to ICT and hence the fight against corruption is also affected.

##### Cyber attack:

- According to the report of cyber security firm Indusface, India is extremely vulnerable to cyber attacks, the highest number of cyber-attacks globally took place in India. In the year 2022, about 60 percent of the cyber attacks in the whole world took place on Indian systems. In the last 5 years, the incidents of cyber attacks in India have increased from 53 thousand to more than 14 lakhs. Therefore, these cyber security statistics affect the application of ICT.

#### Banking- Political Leader and Bureaucracy Alliance:

- Many times the money received through direct benefit transfer to illiterate people is influenced by the bank employee-politician-bureaucracy nexus. Sometimes this nexus perpetrates corruption by creating accounts with fake IDs and misguiding uneducated people or educated people to take their share in Direct Benefit Transfer.

#### Social acceptance of corruption:

- Social acceptance of corruption is a matter of great concern. Today people have become used to corruption. In earlier times, where people used to take a bribe to do wrong work, today a bribe has to be given to get the right work done at the right time. And the bigger problem is that the public has accepted corruption in the system.

#### Conclusion:

It is true that now ICT has played an important role in reducing corruption, but the corrupt always find new ways. Along with this, cyber-attacks, digital inequality, and acceptance of corruption are reducing the impact of ICT. But this initiative of G-20 countries under the leadership of India will strengthen the role of ICT in the eradication of corruption.





## Growing Role Of AI In Various Sectors For India's Development

In a recent SCO meeting held in Lucknow, India's CAG emphasized on the use of artificial intelligence in the auditing process.

### Introduction:

- At present, the application of artificial intelligence is happening in almost all fields. With the remarkable progress in the field of robotics, virtual reality, cloud technology, big data, artificial intelligence and machine learning, and other technologies, possibilities of ushering in the fourth industrial revolution are being explored in India shortly. At present, there are about 40-42 thousand Artificial Intelligence professionals working in our country. Bangalore has become a major center of Artificial Intelligence in India. Thus, there is a continuous increase in the applications of artificial intelligence in India as well.

### What is Artificial Intelligence?

- Artificial intelligence mainly refers to developing an understanding of machines.
- Experts believe that artificial intelligence will play a major role in the fourth industrial revolution.
- Using artificial intelligence, India can progress in the fields of agriculture, digital governance, education, technology, military, health, etc.
- There is a lot of potential for the development of artificial intelligence due to the large database in India.
- The use of artificial intelligence will also be helpful in India's goal of reaching a 5 trillion economy.

### New Applications of Artificial Intelligence in India:

#### In the education Sector:

- Recently United Nations Educational, Scientific and Cultural Organization (UNESCO) released a report Status of Education in India Report 2022: Artificial Intelligence in Education. The report suggests that AI-based techniques such as 'image recognition' and 'computer vision' can help teachers assess students in large classes. The report noted that in 2018, a government think tank NITI Aayog recognized the importance of AI education in India and saw it as a national priority.
- Ministry of Tribal Affairs (MTA) has signed an MoU with Microsoft for the digital transformation of schools like Eklavya Model Residential Schools (EMRS) and Ashram Schools.

#### In the Defense Sector:

- Recently a robot named 'Daksh' has been developed by the 'Defence Research and Development Organisation'. This robot is capable of destroying objects proving fatal to human life. This initiative will prove to help protect the lives of the security forces working in sensitive areas and developing their working capacity.
- Along with this, India's Defense Research and Development Organization has also built a robot named Sarp. This robot is capable of assisting rescue teams during disasters.

#### Environment:

- Recently the researchers of 'The Indian Institute of Science', Bangalore developed an 'Artificial Leaf'. It is noteworthy that this artificial leaf is capable of absorbing more carbon dioxide than the natural leaf. Therefore, it will help reduce the greenhouse effect and will act as a catalyst to meet the Glasgow goals of India.

#### Railway:

- 'Indian Railway Catering and Tourism Corporation (IRCTC) Limited has developed a chatbot named 'Askdisha' (ASKDISHA). Through this, a customer availing any facility from the Railways can ask his questions by speaking or writing. The chatbot is also capable of answering customer queries. Along with this, Railways have used a technique called Kavach for safety.

#### Social Empowerment:

- A mega virtual summit titled 'Responsible Artificial Intelligence for Social Empowerment 2020' (RAISE 2020) was jointly organized by NITI Aayog and the Union Ministry of Electronics and Information Technology. Its objective was to promote the use of artificial intelligence to ensure social empowerment in India.

#### Youth Empowerment:

- Apart from this, the 'Responsible Artificial Intelligence for Youth Program' has also been launched in India. The objective of this program is to provide opportunities to all the Indian youth living in rural, urban, and remote areas of India to give suggestions to solve the socio-economic problems of India through artificial intelligence. Thus it increases the participation of youth in socioeconomic development.

#### Artificial intelligence in the health sector:

- AI-enabled chatbot was used by MyGov to ensure

communication with people for diagnosis of corona pandemic. Similarly, the Indian Council of Medical Research used Watson Assistant on its portal to answer specific queries of staff and data entry operators related to various testing and diagnostic facilities.

- The Nightingale-19 robot is one of the promising applications of artificial intelligence in the healthcare sector. It enables doctors and other health care practitioners to use video interactive techniques to interact with patients as well as deliver food and medicines.
- FebriEye is an AI-based thermal screening system that measures and alerts visitors to fever levels through real-time and automated, monitoring.

#### **In international cooperation:**

- The Government of India has launched a 'US India Artificial Intelligence Initiative' (USIAI) in collaboration with the United States of America. It will promote artificial intelligence between the two countries. Along with this, India also became a founding member of this group by joining the 'Global Partnership on Artificial Intelligence' (GPAI).

#### **Challenges in the Implementation of Artificial Intelligence:**

- Artificial intelligence will affect privacy somewhere. At a time when India lacks a Personal Data Protection Act, the power of artificial intelligence can violate fundamental rights.
- Artificial intelligence technology can be biased somewhere due to the manufacturer or the program itself (on which this technology is based). Which will give rise to inequality.

- Most of India's population is unaware of artificial intelligence. In such a situation, working on the inherent possibilities of artificial intelligence technology in the present context will prove to be relatively complicated.
- Along with this, the increasing application of artificial intelligence will affect employment somewhere. An employment crisis can prove to be a big problem in front of such a large population.
- The biggest shortcoming in the field of artificial intelligence is also related to investment because the domestic investment conditions in India are not good right now. In such a situation, our dependence remains on foreign investment in this sector. Therefore, to optimally exploit the potential present in this sector, we will need a lot of foreign investment. Which can also affect sovereignty.

#### **Conclusion:**

Although the Government of India seems committed to increasing the applications of artificial intelligence rapidly and India is among the top 5 countries with the application of artificial intelligence, the country still has vast potential for its development. India has also determined the National Strategy for AI which helps increase the opportunities and capabilities of artificial intelligence in India. However, to fully implement the applications of artificial intelligence, there is a need to introduce it to the public and increase the opportunities for domestic investment. If the challenges are resolved, then undoubtedly India will become the carrier of the fourth industrial revolution by harnessing the possibilities of artificial intelligence.

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## Need To Work On Sustainable Tourism Model In India

**Emphasizing** the need to develop the tourism sector while protecting the ecosystem has become one of the biggest needs for India today. Without sustainable tourism, neither sustainable development nor inclusive growth can be accomplished. Many benefits can be obtained by sustainable development of the tourism sector, and relevant ministries of the Government of India have been active in this direction. In order to develop sustainable tourism destinations and to promote sustainable tourism in the country, recently the Ministry of Tourism of India, in collaboration with Indian Institute of Tourism and Travel Management, United Nations Environment Program and Responsible Tourism Society of India, has organized the 3rd Regional Workshop on Development of Tourism Destinations to establish sustainable and responsible tourism destination in Hyderabad. This witnessed wide participation of senior government officials and tourism industry stakeholders from the States/UTs of the Southern Region namely Andhra Pradesh, Karnataka, Kerala, Lakshadweep, Puducherry, Tamil Nadu, and Telangana. The Indian Institute of Tourism and Travel Management, the Central Nodal Agency for Sustainable Tourism, briefed the participants on the salient features of the Sustainable Tourism Criteria for India (STCI). Participants also took the Travel for Life Pledge to reaffirm their commitment to travel responsibly.

Sustainable tourism is an initiative to transform a traveler into a responsible tourist. The initiative urges tourists to step out of their comfort zones and be considerate while traveling. It reminds the traveler that their vacation destination is someone's home. Sustainable tourism is defined as tourism that meets the needs of current tourists and host regions while protecting and enhancing opportunities for the future. From leisure, adventure, sports, and MIC to tourist places, all can contribute to tourism. The objective of sustainable tourism is to create awareness among tourists by promoting initiatives like go green, having zero carbon footprint, focusing on eco-friendly products, supporting local products, walking as far as possible, taking care of heritage sites, and promoting sustainable tourism among co-travelers. In this context, a mobile application called 'Swachh Paryatan' can be mentioned which was launched in the year 2016 which facilitates citizens to report any issues of cleanliness at various tourist places

across the country. The 12 areas emphasized by UNESCO for sustainable tourism strategy include:

- Disaster Management, Pollution Control, Visitor Management, Tourist Traffic Management, Hazard Management, Waste Management, Natural Resource & Ecosystem Management, Quality Standards/Control Mechanism, Tourism Enterprise Development Administration, Energy, Gender Based, Marketing & Branding.
- In 2005, the World Tourism Organization and the United Nations Environment Program issued 'Guidelines for making tourism more sustainable/responsible', in which the first and most important thing was done in sustainable or responsible tourism is that, that while fulfilling the needs of visitors, industry, environment, and the host communities, the present and future economic, social, and environmental impacts are fully taken care of. It is not a specific form of tourism, rather it seeks to make all forms of tourism more sustainable. It ensures the optimum use of environmental resources, which is a key element in tourism development, maintains essential ecological processes, and helps in the conservation of natural resources and biodiversity.
- Considering India's G20 Presidency, green tourism has been identified as one of the key priorities, the Regional Workshops for Sustainable Tourism reinforce India's efforts to mainstream sustainability in the tourism sector. The Tourism Working Group is working on a roadmap for using tourism as a vehicle to achieve the Sustainable Development Goals.
- The need to implement and mainstream the concept of sustainable tourism was emphasized at the meeting of the 3rd Regional Workshop on Development of Sustainable and Regional Tourism Destinations in Hyderabad. The initiative of the Ministry of Tourism to organize Regional Workshop for Sustainable Tourism is an attempt to acquaint people with the initiatives taken by the Central Government for the development of sustainable tourism. In this meeting, an appeal was made to strengthen Sustainable Tourism by discussing the following:
  - » Success stories of Swadesh Darshan 1.0, the flagship centrally sponsored scheme of the Ministry of Tourism for building tourism infrastructure, were shared.

- » The need to sensitize tourists and create demand for responsible travel was stressed. The meeting deliberated on launching the responsible travel campaign and how to educate tourists about responsible behavior.
- » In this meeting, Mr. Kaushik Chandrasekhar of UNEP shared some of the landmark efforts like the Global Tourism Plastics Initiative launched in November 2021 at Climate Change COP 26 and the Glasgow Declaration on Climate Action in Tourism. State-level interventions and guidelines on plastic waste management in the tourism sector were highlighted. He encouraged the stakeholders to join such initiatives.
- » Presentations were also made by the representatives of the State and Union Territory Tourism Departments of the Southern Region, highlighting their sustainable tourism best practices. States and Union Territories Had a detailed conversation regarding the positive economic, environmental, social, and cultural impacts of their actions such as obtaining Blue Flag certification for several beaches, economic growth by implementing carrying capacity, responsible tourism initiatives, and the global recognition of rural tourism development.

### Study of the Carrying Capacity of Mussoorie Ordered by NGT :

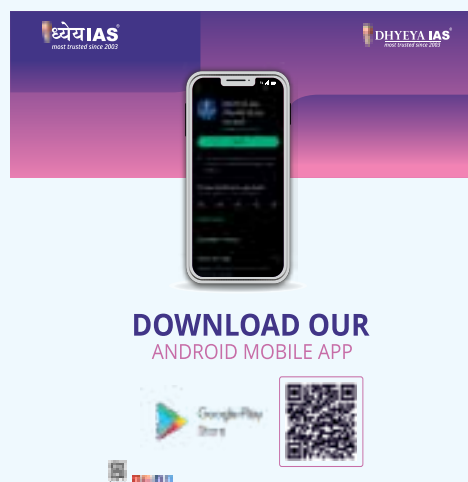
- Recently, keeping protection of sustainable tourism at focus, the NGT said that the carrying capacity of Mussoorie should be assessed to prevent damage to the environment. For this, the court directed the formation of a nine-member joint committee under the chairmanship of the Chief Secretary of Uttarakhand. The tribunal has said that the study needs to be done to see how much construction can be allowed in Mussoorie and what safeguards should be put in place for the same. In this order dated January 31, 2023, the court has asked what all other relevant safety measures must be taken apart from the aspects including maintaining the integrity of the ecosystem in terms of existing buildings and vehicular traffic, cleanliness, soil stability, and flora/fauna.
- The role of this committee will therefore be to suggest remedial measures to prevent environmental damage in the light of carrying capacity, hydro-geological studies, and geomorphological studies covering other related and incidental issues. The NGT had asked the committee to submit its report within two

months.

- Significantly, in view of the Joshimath disaster in the media and the displacement of a large number of people and damage to property due to it, the court has initiated suo moto action in this matter. In Joshimath there were displacement due to land subsidence. For this, over capacity and unplanned construction is being considered responsible.
- This is also a warning for Mussoorie, where such unplanned construction is going on in full swing. The court was informed in this case that the carrying capacity study of Mussoorie was conducted in 2001 by the Lal Bahadur Shastri National Academy of Administration (LBSNAA). The Institute suggested that no further construction there was viable. Along with this, the National Green Tribunal (NGT) has completely banned the commercial use of the water of Mussoorie Lake.

### Mountain tourism as sustainable tourism:

- Sustainable Development Goals 8 and 12 include tourism in the mountains as a goal. Sustainable Development Goal number 8 states that it focuses on promoting “sustainable, inclusive and sustainable economic growth” so that policies can be better formulated and implemented to promote sustainable tourism by the year 2030. This will give a boost to local culture and products along with employment generation.
- While Sustainable Development Goal No. 12 is related to “ensuring sustainable production and consumption patterns”. Its purpose is to develop and use tools to monitor sustainable development impacts for sustainable tourism, so that jobs can be created and local culture and products can be promoted.



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## Aadi Mahotsav: The Cultural Medium For The Upliftment Of Tribal Community

The preservation of the distinctive culture, civilization, religion, custom, tradition, dress, language, food, lifestyle and community characteristics of the tribal community is very important to secure the tradition of unity in diversity of India. This is the reason that the Government of India organizes various programs from time to time to inform the country's society about the multi-faceted aspects of the life of tribal community. Aadi Mahotsav is an important link in this chain. Aadi Mahotsav has an unprecedented contribution in promoting tribal culture and literacy. The work regarding connecting the tribal community with the tradition of Ek Bharat Shreshtha Bharat, Incredible India is being done continuously, due to which the process of cultural integration of the tribal community has been accelerated and Aadi Mahotsav has given it a new edge.

Celebrating the spirit of tribal culture, crafts, cuisine, commerce, and traditional arts, Aadi Mahotsav is an annual initiative of the Tribal Cooperative Marketing Development Federation of India Limited (TRIFED) under the Ministry of Tribal Affairs. This year the Aadi Mahotsav program was organized from 16 to 27 February at Major Dhyan Chand National Stadium in Delhi. Prime Minister Narendra Modi inaugurated the Mega National Tribal Festival, the Aadi Mahotsav, at Major Dhyan Chand National Stadium in Delhi. He also paid floral tributes to tribal freedom fighter Birsa Munda.

According to the Prime Minister's Office, over 200 stalls at the venue displayed the rich and diverse heritage of tribes across the country. This program was organized to make the market available to the products of tribals and to give recognition to their art and culture. In this festival, people get a chance to come face to face with tribal crafts, culture, cuisine, and trade. Handicrafts, handlooms, pottery, jewelry, etc. were the centers of attraction in it. While inaugurating the Aadi Mahotsav, and elaborating on the Van Dhan Mission, the Indian Prime Minister had said that more than 3000 Van Dhan Kendras have been set up in various states. Around 90 minor forest produce have been brought under the MSP, which is 7 times the number in 2014. Similarly, the tribal society is benefiting from the growing network of Self Help Groups (SHGs) in the country, with 1.25 crore tribal members in more than 80 lakh SHGs functioning in the country.

### Promotion of Tribal Food Culture:

- Around 1000 tribal artisans and artists from 28 states participated in the 11-day Aadi Mahotsav

fair. Tribal chefs from 13 states added flavors to millets, in which the special flavors Ragi Halwa, Kodo Kheer, Mandiya Soup, Ragi Bada, Bajra Roti, Bajra Ka Churma, Madua Ki Roti, Bhel, Kashmiri Raita, Kebab Rogan Josh were formally involved. Tribal flavors of Tamil Nadu, Gujarat, Madhya Pradesh, Rajasthan, Jharkhand, Chhattisgarh, and Jammu and Kashmir were also enjoyed in this festival.

- The Scheduled Tribes (STs) constitute about 8.6 per cent of India's population, numbering about 104 million. There are over 730 Scheduled Tribes notified under Article 342 of the Constitution of India. Access to social and economic justice for these Scheduled Tribes is a constitutional obligation. The Government of India has focused on the development of tribes and the preservation of their heritage and culture as a priority. A significant increase of 12.32 per cent was made in the budget outlay of Rs 8451 crore for the Ministry of Tribal Affairs for the financial year 2022-23.

### Activities Initiated by Central Government for the Education of Children of Tribal community:

- The issue of providing education to the children of tribals was also discussed during the Aadi Mahotsav. Talking about the education facility for tribal children, the Indian Prime Minister had said, "Tribal children, no matter where they live in the country, their education and their future is the priority of the Central Government and significant progress has been made in this direction." The number of Eklavya Model Residential Schools (EMRS) has increased 5 times from 80 schools between 2004 and 2014 to 500 schools from 2014 to 2022. More than 400 schools have started functioning, teaching about 1 lakh children. The foundation stones for 20 EMRSs were laid by central and state level dignitaries in 2022-23. These schools are being set up in 14 districts of 6 states. Out of the 20 schools, 11 are in Nagaland, 5 in Odisha and one each in Gujarat, Madhya Pradesh, Maharashtra and Manipur. These schools are located in the most remote hilly and forest areas of the country. Significantly, in this year's budget, 38 thousand teachers and staff have been announced for these schools. Tribal students scholarship has been doubled. The Prime Minister also talked about the New Education Policy (NEP) in the Mahotsav, through which youth can choose to study in their mother tongue.

- Better infrastructure is being built in tribal areas. Thousands of villages in the country that were earlier affected by Left Wing Extremism are being connected with 4G connectivity. The youth here are now connecting with the mainstream through the internet and infra.

### The Three Schemes for the Overall Development of the tribals are as follows:

- **Prime Minister Adi Adarsh Gram Yojana:** For the welfare of the tribal community, the scope of the existing scheme of SCA to TSS (Special Central Assistance to Tribal Sub Scheme) has been increased. Under 'Pradhan Mantri Adi Adarsh Gram Yojana', the comprehensive development of 36,428 villages will be done in collaboration with the concerned ministries to develop them as model villages. The tribal population in these villages is more than 500 and is 50% of the total population. An amount of Rs 1354 crore has been allocated which will be used as a gap-filling arrangement for tribal welfare programs in addition to the STC component of Rs 87,524 crore allocated to various ministries for their respective schemes. The cabinet has approved an amount of Rs 7276 crore for the next five years.
- **Prime Minister's Tribal Development Mission:** The mission aims to achieve livelihood-driven tribal development in the next five years through the formation of Van Dhan Clusters. These Van Dhan clusters are organized as Van Dhan Kendras. The MFP collected by the tribals will be processed in these centers and marketed through Van Dhan Producer Enterprises. New haat bazaars and goods warehouses will be developed in the next 5 years as part of the "Self-reliant India campaign". TRIFED will be the nodal agency to implement the scheme. Forest products will be marketed through Tribe India stores. Under the mission, an amount of Rs 1612 crore has been earmarked for the next five years.
- **Venture Capital Fund for ST:** An amount of Rs 50 crore has been approved for a new scheme 'Venture Capital Fund for Scheduled Tribes (VCF-ST)', which aims to promote entrepreneurship among the ST community. The VCF-ST scheme will be a social sector initiative to promote ST entrepreneurship and will aid in developing and supporting start-up mindset by ST youth.

### The grant under Article 275(1) of the Constitution:

- Under the program relating to the provision of Article 275(1) of the Constitution, grants are released to 26 states with a Scheduled Tribe population for raising the level of administration in the Scheduled Areas and for the welfare of the tribal people. It is a special sector program and 100 per cent grant is provided to the states.

Funds are released based on the felt needs of the ST population to bridge the gaps in infrastructure activities in the areas of education, health, skill development, livelihood, drinking water, sanitation etc.

### Promotion of Entrepreneurship among Tribal Communities:

- The second phase of the GOAL program was launched on 28 June 2022 for the upliftment of tribal communities through digital entrepreneurship. The second phase of the Going Online As Leaders (GOAL) program was launched by the Minister of Tribal Affairs, Government of India. This program is a joint initiative of the Ministry of Tribal Affairs and META (Facebook). The GOAL 2.0 initiative aims to digitally skill one million youth by promoting entrepreneurship among the country's tribal communities and opening up opportunities for them to access digital technology.

### Aashwashan Campaign launched for Tribals:

- The TB Division of the Ministry of Tribal Affairs and Ministry of Health and Family Welfare organized a National Conference to publicize the features of the 100-day Aashwashan campaign under the 'Tribal TB Initiative' on 24th August 2022 at the National Tribal Research Institute (NTRI), New Delhi. The 'Tribal TB Initiative' is a joint initiative of the Ministry of Tribal Affairs and the Central TB Division of the Ministry of Health, supported by USAID as a technical partner and Piramal Health as an implementation partner.
- As a part of the Tribal TB Initiative, the Aashwashan campaign was launched on January 7 this year for active case finding of TB in 174 tribal districts of India. It was flagged off in the Nandurbar district of Maharashtra. Under this initiative, door-to-door screening for TB was done in 68,019 villages. Based on oral examination of 1,03,07,200 persons, 3,82,811 people were diagnosed with TB. Of these, 2,79,329 (73 per cent) samples were tested for TB and 9,971 people who were found positive for TB were treated as per the Government of India protocols.
- Thus it can be said that important steps are being taken in the direction of tribal welfare and empowerment in India. These include economic self-reliance of tribes, increase in literacy rate, expansion of health facilities, protection of cultural and forest rights, strengthening the provisions of PESA Act, 1996 and Forest Rights Protection Act, 2006 to ensure a just place for the tribal community in society and economy.

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# National Issue

## 1 Genetic Information: Right of Children

### Why in News:

Recently the Supreme Court ruled that children have the right to protect their genetic information from being revealed in DNA (deoxyribonucleic acid) tests without their consent. The judgment came on a petition filed by a man who questioned the paternity of his second child, accusing his wife of adulterous relations.

### Key findings of the Supreme Court's decision:

- Genetic information is personal and intimate.
- Children have the right to privacy and bodily integrity.
- Children should not be treated like material objects.
- Children should not become the focal point of a fight between husband and wife.
- Allowing DNA tests would also harm the dignity of the mother.
- The United Nations Convention on the Rights of the Child recognizes children's rights to privacy, autonomy, and identity.

### About DNA paternity test:

- DNA is the genetic material that children receive from their parents. DNA paternity testing uses a DNA profile to determine whether a person is the biological parent of a child. The 24-marker DNA profiles of the parent and child are compared to identify the biological parent.

### Status of Genetic Privacy in India:

- In 2018, the Delhi High Court held that discrimination in health insurance against people on the basis of their genetic origin in the absence of genetic testing is unconstitutional.
- Genetic discrimination violates Article 14, which guarantees equality before the law.
- In Justice KS Puttaswamy (Retd) and Anr vs. Union of India, SC held that the right to privacy is a fundamental right under Article 21.

### United Nations Convention on the Rights of the Child:

- The UNCRC is a binding human rights treaty that sets out the political, civil, economic, social, health, and cultural rights of children.
- It was adopted by the United Nations in 1989 and came into force in 1990. The Government of India ratified it on 11 December 1992.
- The Committee on the Rights of the Child (CRC) is a body of experts that monitors and reports on the implementation of the United Nations Convention on the Rights of the Child.

### Way Forward:

- This decision of the Honourable Supreme Court

will certainly have far-reaching implications. With this decision, children will not be deprived of this right to influence and understand their own sense of self just because they are children.

## 2 Neutral Citation

### Why in News:

Recently, Chief Justice of India (CJI) D.Y. Chandrachud announced that the Supreme Court will adopt a 'neutral citation system' for its judgements. The CJI expressed hope that the High Courts would also follow the neutral citation for their judgements. Delhi, Kerala, and Madras High Courts have already introduced it.

### About Neutral Citation:

- A neutral citation would mean that the court would provide its own citation, separate from that provided by traditional law reporters. Law reporters are periodicals or annual digests that publish judgments and often with an editorial note to make it accessible for lawyers to refer to precedents.
- A case citation is essentially an identification tag for a decision. Typically, this will include a reference number, the year of the decision, the name of the court that issued the decision, and shorthand for the journal that published the decision.
- For example, a citation in the magazine 'Supreme Court Cases' published by Eastern Book Company for the landmark Kesavananda Bharati case (1973) 4 SCC 225. In All India Reporter (AIR), the citation is AIR 1973 SC 1461.

### Need for implementation of Standard Quotation System:

- This would lead to the introduction and implementation of a uniform, reliable and secure methodology for identifying and referencing Supreme Court documents.
- Using machine learning tools to translate judgments from English to local languages by the court, completing 2,900 Supreme Court judgments so far. About 30,000 documents will be included in the neutral citation.
- A team of district judges and law researchers will assist in examining the translated versions of the judgments.

### Electronic Supreme Court Report (e-SCR) Project:

- The e-SCR project, launched by the CJI on January 2, 2023, aims to provide free access to around 34000 judgments to lawyers, law students, and the general public. The objective

of the e-SCR projects is to provide a digital version of the judgments of the Supreme Court.

### Way Forward:

Sometimes it is difficult to translate the decisions given by the court, in such a situation; since citations given by different entities may vary. This type of futuristic decision of the Supreme Court will not only increase the faith of the people in the law but the general public will also be able to access authentic information regarding the law in the regional languages.

## 3 Section-153A of IPC Used

### Why in News:

Recently, Congress leader Pawan Khera was arrested by the Assam Police for alleged hate speech under sections 153A, 295A, and 505 of the Indian Penal Code but later Supreme Court granted him interim bail. The use of these sections is often criticized for restricting freedom of speech and expression and abusing legal processes for political purposes.

### About these sections of the Indian Penal Code:

- Under Section 153A, 'promotion of enmity between different groups on grounds of religion, race, place of birth, residence, language, etc., and doing acts prejudicial to maintenance of harmony', is an offense punishable with three years imprisonment, Section 505 of IPC makes it an offense to make 'statements conducting to public mischief'.
- Section 295A- Deliberate and malicious act intended to outrage the religious feelings of any class by insulting its religion or religious beliefs.

### Hate Speech?

- There is no specific legal definition of 'hate speech', but if one's speech, writings, signs, etc. incite violence or spread disharmony between communities and groups, it is understood as hate speech. .
- The Law Commission of India in its 267th report stated that hate speech incites hatred against a group of persons generally defined in terms of race, ethnicity, gender, sexual orientation, religious belief.

### Judicial Review on Hate Speech:

- In 2014, the Supreme Court laid down a set of guidelines in the Arnesh Kumar vs. State of Bihar case to curb indiscriminate arrests. As per the guidelines, for offenses that carry a sentence of fewer than 7 years, the police cannot automatically arrest an accused before investigation.
- In 2021, the Supreme Court said that the state will have to prove intent for securing a conviction

under Section 153A.

- In Arup Bhuiyan vs. State of Assam 2011, the Court held that unless a person resorts to violence or incites another person to violence, he cannot be punished.

### Way Forward:

National Crime Records Bureau statistics show that the conviction rate of persons arrested under section 153A is very low. The conviction rate registered in the year 2020 at 20.2% however, suggests that there is a need to promote freedom of speech and expression so that democratic values can be protected.

## 4 Women Reservation Bill

### Why in News:

Bharat Rashtra Samithi (BRS) leader K Kavitha was on a day-long hunger strike in New Delhi, demanding passage of the Women's Reservation Bill (WRB). The Bill will reserve one-third of the total number of seats in state Assemblies and Parliament for women.

### History of Women Reservation Bill:

- The WRB was first introduced in 1996 by the HD Deve Gowda government. After the Bill failed to get approval in Lok Sabha, it was referred to a Joint Parliamentary Committee chaired by Geeta Mukherjee, which presented its report in December 1996. However, the Bill lapsed with the dissolution of the Lok Sabha and had to be reintroduced many times.
- In 2004, the UPA government included it in its Common Minimum Programme and finally tabled it, this time in Rajya Sabha to prevent it from lapsing again, in 2008. On March 9, 2010, the Bill was passed in the Rajya Sabha with 186-1 votes after immense debate, creating history. The Bill, then, reached the Lok Sabha where it never saw the light of day. When the House was dissolved in 2014, it lapsed once again.

### Need of the bill:

- As per the data compiled by the IPU, of which India is a member, women represent 14.44% of the total members of the Lok Sabha.
- As per the latest Election Commission of India (ECI) data: As of October 2021, Women represent 10.5% of the total members of the Parliament.
- The scenario for women Members of Legislative Assemblies (MLAs) across all state assemblies in India is even worse, with the national average being a pitiable 9%.
- In the last 75 years of independence, women's representation in Lok Sabha has not even increased by 10%.
- In electoral representation, According to an Inter-Parliamentary Union study, India ranks 149th out of 193 countries in terms of female

representation in the lower or single house of Parliament.

### Conclusion:

According to data from PRS, Rwanda (61 per cent), South Africa (43 per cent) and even Bangladesh (21 per cent), are ahead of India in this matter. While simply ensuring greater representation for women will not solve all issues that affect them, it will be a good start. As a study by the American Economic Association showed, "countries with higher share of women in national parliament are more likely to pass and implement gender sensitive laws." A 2010 study by the Harvard Kennedy School showed that female representation in village councils increased female participation and responsiveness to concerns such as drinking water, infrastructure, sanitation and roads.

## 5 National Flagship Programme on Fisheries

### Why in News:

- The government has inaugurated and launched three national flagship programmes on fisheries at the ICAR-CIBA campus in Raja Annamalaipuram, Chennai. These programmes include the Genetic Improvement Programme of Indian White Shrimp (*Penaeus indicus*), the National Surveillance Programme on Fish Diseases, the Aquaculture Insurance Product, and the Genetic Improvement Facility.

### National Surveillance Programme for Aquatic Animal Diseases (NSPAAD) Phase-II:

- The government of India has implemented the National Surveillance Programme for Aquatic Animal Diseases (NSPAAD) since 2013 for strengthening the farmer-based disease surveillance system
- To continue the efforts with intensity, the Government has sanctioned the NSPAAD: Phase-II under the Pradhan Mantri Matsya Sampada Yojana
- The phase-II will be implemented in pan-India and all the State Fisheries Departments along with Marine Products Export Development Authority (MPEDA) are expected to play an important role in this programme.

### Genetic improvement program of *Penaeus Indicus* (Indian white shrimp)-Phase-I:

- The farmed shrimp alone contributes about 70% of India's seafood exports worth Rs. 42000 crores. But the whole sector mostly depends on one exotic Pathogen Free stock of Pacific white shrimp (*Penaeus vannamei*) species which is quite risky
- To break this single-species dependence and to promote indigenous species, the government has

taken up the genetic improvement programme of the Indian white shrimp (*P. indicus*) as a national priority.

- This program will lead to Atamanirbharata for shrimp stock, which is at present imported from other countries.

### Shrimp Crop Insurance product:

- Shrimp farming is labelled as a "risky venture" contrary to the fact that India achieved about 430% growth in shrimp production during the last decade.
- The majority of the aquaculture farmers are small farmers, own 2-3 ponds and face huge obstacles to raise working capital for the crop, due to a lack of access to institutional credit and insurance
- ICAR-CIBA developed a Shrimp Crop Insurance product that charges a differential premium based on location and requirements of the individual farmer from 3.7 to 7.7 % of input costs
- Farmers will be compensated to the tune of an 80 % loss of input cost in the event of total crop loss. i.e., more than 70% crop loss.

### Conclusion:

India is the third-largest fish-producing country with a fish production of 14.73 million metric tonnes. Further, it is one of the largest exporters of farmed shrimp at around 7 lakh tonnes. Fisheries are the country's single-largest agriculture export, with a growth rate of 6 to 10 per cent in the past five years. While the growth rate of the farm sector in the same period is around 2.5 per cent. Diseases, on the other hand, cost the country approximately 7,200 crores per year. These three programmes can solve the problems faced by the fisheries sector in India.

## 6 Nano Di-Ammonium Phosphate

### Why in News:

Recently the central government has approved the commercial release of Nano Di-Ammonium Phosphate (Nano-DAP), which is expected to reduce subsidy and import dependence on the fertilizer. Nano-DAP will be manufactured by Indian Farmers Fertilizer Cooperative (IFFCO) with the help of Coromandel International. The Fertilizer Control Order Act regulates the sale, pricing, distribution, and other formalities of fertilizers in India. It is noted that from August 2021, commercial use of Nano-urea is being done in India.

### Key facts related to Nano Di-Ammonium Phosphate:

- Di-ammonium phosphate, also known as DAP, is an important fertilizer for agriculture in India. It contains both nitrogen and phosphorus which are primary macro-nutrients and are part of the 18 essential plant nutrients.

- [illegible]

- Lack of risk management system for Nano-fertilizers.
- Lack of production and availability of Nano fertilizers in the required quantity which limits the wide scale of Nano-fertilizers as a source of plant nutrients.
- High cost of Nano fertilizers.
- Lack of standardization in the manufacturing process.

Shortage of DAP can be met to a great extent by the use of Nano-DAP, it will increase crop yield, reduce the subsidy burden on the government, and reduce the import of fertilizers thereby benefiting foreign exchange reserves and it will increase farmers' income also.



On February 14, 2023, the Income Tax Department carried out a “survey action” on the offices of the British Broadcasting Corporation (BBC) in New Delhi and Mumbai. After continuing this survey for three days, a press release was issued by the Central Board

- Tax scrutiny is a natural outcome of the BBC's two-part documentary series, "India: The Modi Question", which the BBC released on January 17, 2023.
- Emergency secret order issued by the Ministry of Electronics and Information Technology, the documentary's web links were blocked on January 20, 2023.

- **Romesh Thappar v. State of Madras, 1950:** The Supreme Court observed that freedom of the press lay at the foundation of all democratic organizations.
- **Fundamental Right Under Article 19:** The Indian Constitution guarantees freedom of speech and expression under Article 19, which deals with the 'Protection of certain rights regarding freedom of speech, etc.
- **Implicit Right:** Freedom of the press is not expressly protected by the Indian legal system but it is impliedly protected under article 19(1) (a) of the constitution.

A law could impose only those restrictions on the exercise of this right, it faces certain restrictions under article 19(2), which are as follows:

- Sovereignty and integrity of India,
- Security of the State,
- Friendly relations with foreign States,
- Public order, decency, or morality or
- In Contempt of court,
- Defamation
- Incitement to an offense.

Doctrines for press freedom: The first cluster requires the application of the fundamental right to privacy drawn from the Supreme Court's judgment in *K.S. Puttaswamy vs Union of India* (2017). Its application to the criminal justice system is awaited in cases of electronic evidence. K. Basu guidelines as relevant for a digital India may also be a way out. The recent trend is an adaptation of an old template where a muscular executive sidesteps a direct response to a critical article and in bad faith directs legal scrutiny on the publication itself. The Supreme Court needs to revive and apply the doctrine of "effect and consequence" to consider a broader canvas of executive actions that will shape the practices of our criminal courts. In the BBC case: A relevant fact for a court to determine is not limited to allegations of tax evasion but whether the scrutiny is prompted by a documentary that is critical of the Prime Minister.



# International Issue



## 1 FATF Suspends Russia Over Ukraine War

### Why in News:

The Financial Action Task Force (FATF), a global organization that monitors financial crime, has suspended Russia's membership after finding that Moscow's conflict in Ukraine violated FATF principles.

### Reasons for suspended membership of Russia:

- The FATF recently expressed its sympathy for the people of Ukraine, who have "bore a terrible burden" at the hands of Russia's war of aggression.
- In this regard, the suspension of Russian membership is clearly in gross violation of the commitment to international cooperation and mutual respect among FATF members.
- The FATF has called on all jurisdictions to remain alert to threats to the integrity, safety, and security of the international financial system posed by Russia's war against Ukraine.
- Earlier in 2018, it had put Pakistan on its grey list for its actions related to terrorism financing.
- However, in 2022 the FATF announced that Pakistan had met its commitments and was no longer subject to enhanced monitoring.

### About FATF:

- FATF stands for Financial Action Task Force, which is an intergovernmental organization established in 1989.
- It was formed by the G7 countries to combat money laundering and terrorist funding by setting global standards and monitoring their implementation.
- Its main objective is to develop and promote policies to protect the global financial system against money laundering, terrorism, funding and other related threats to the integrity of the financial system.
- Its headquarter is located in Paris, France and it has 39 member countries including the USA, India, China, Saudi Arabia, and European countries like UK, Germany, and France.
- Over the years, FATF has identified 40 recommendations that set out the framework for anti-money laundering and combating terrorist financing measures
- FATF has the authority to warn and take action against countries that fail to comply with its standards such as suspension of membership and blacklisting.

### FATF list:

- **Blacklist:** Countries or territories known as uncooperative countries are blacklisted. These countries support terrorist funding and money

laundering activities. FATF makes regular amendments to add or remove entries in the blacklist.

- **Grey List:** Countries that are considered a safe haven for supporting terror funding and money laundering are put on the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.

### Conclusion:

By 2022, has blacklisted North Korea and Iran on terror financing and has put 12 countries on the grey list: Bahamas, Botswana, Cambodia, Ethiopia, Ghana, Pakistan, Panama, Sri Lanka, Syria, Trinidad and Tobago, Tunisia and Yemen. Therefore, the countries which are involved in anti-financial work and do terrorist funding and ignore the financial risk, FATF takes action by including them in their list according to their actions.

## 2 German Chancellor's visit to India

### Why in News:

Recently, German Chancellor Olaf Scholz came to India on a two-day visit. During this visit, he held representative-level talks with Indian Prime Minister Narendra Modi and signed a vision statement to increase cooperation on innovation and technology.

### Key points of the Meeting:

- The Vision Statement states that the two countries share a long history of cooperation in science & technology, research, and innovation, institutionalized under the 'Cooperation in Scientific Research and Technological Development' signed in May 1974.
- Both countries agreed to cooperate on Green Hydrogen. Indo-German Green Hydrogen Task Force was set up in September 2022 and is being finalized. Germany has come on board the Indo-Pacific Oceans Initiative (IPOI).
- Both countries discussed the progress of the Green and Sustainable Development Partnership (GSDP). This was launched during the state visit of Germany by Prime Minister Modi in May 2022 for the 6th IGC (Inter-Governmental Consultations).
- The climate goals announced by India and Germany during COP26 in Glasgow will expire in 2030. Hence this joint declaration will help both countries to achieve their respective goals.
- Under this declaration, Germany will also provide new and additional commitments of €10 billion for the development cooperation portfolio in India.
- India is in discussion with Germany to build six conventional submarines for the Navy in view of the increasing Chinese dominance in the Indian

Ocean.

- India and Germany agreed to work on development projects in third countries that are also called 'Triangular Development Cooperation', in which four projects are in various stages of implementation:

- » **Cameroon:** Production of seed potatoes through the Rooted Apical Cuttings technology.
- » **Malawi:** Agribusiness Incubator Model for Women in Agriculture and Food Systems.
- » **Ghana:** Development of bamboo-based enterprises for sustainable livelihood and income generation in Ghana.
- » **Peru:** Development of a geospatial portal prototype for planning, monitoring, and evaluating interventions and social programs of the Ministry of Development and Social Inclusion (MIDIS) of Peru.

### Trade Relations between the two Countries:

- Germany is India's largest trading partner in Europe with a total trade of US\$ 21.07 billion in 2020-21, accounting for 17.4% of the European market share. However, it accounts for less than 10% of the total trade with China.
- Germany is the 7th largest foreign direct investor in India since April 2000. The total FDI of Germany in India from 2000 to 2019 was US\$ 11.9 billion. Germany has a Bilateral Trade and Investment Agreement (BTIA) with India through the European Union.

### Way Forward:

There is a good opportunity for India-Germany to work in the current global situation as both countries share democratic values, making it a natural people-to-people connection. To use all these benefits in interests of the common man, both countries will have to work together on a better plan for the future.

# 3

## Windsor Framework

### Why in News:

Recently, Britain and the European Union reached an agreement in Northern Ireland in an attempt to resolve the complex issue over new trading rules that have fuelled post-Brexit tensions in Europe and on the island of Ireland. The deal could potentially resolve the issue of imports and border checks in Northern Ireland, one of the most challenging and contentious aspects of the exit of the United Kingdom from the European Union.

### About Windsor Framework:

- This new deal, called the 'Windsor Framework', will provide smooth-flowing trade within the UK and safeguard the sovereignty of Northern Ireland in the UK.
- It aims to fix issues created by the Northern

Ireland Protocol, an addendum to the Brexit deal agreed upon by Boris Johnson and the European Union in 2019.

- The Northern Ireland Protocol was created to align Northern Ireland with the European Union and provide an accessible trade route on the island of Ireland, meaning goods do not need to be checked between the Republic of Ireland and the province of Northern Ireland. The Windsor Framework will replace the Northern Ireland Protocol.



### What is the issue?

- Ever since the Anglo-Irish Treaty of 1921 established the Irish Free State, the island's counties, including Northern Ireland, have remained part of the UK.
- Violent clashes between Unionists (those based in Northern Ireland and favouring Britain) and Republicans (those who favoured reunification of the Republic of Ireland) led to what is known as The Troubles, killing over 3,500 and injuring hundreds of thousands.
- In 1998, the Belfast Agreement, also known as the Good Friday Agreement, was signed to settle disputes.

### Changes Introduced by Windsor Framework?

- To understand this, first, we need to know about some political factors. Great Britain is the main island that includes England, Wales, and Scotland, while the United Kingdom includes Northern Ireland and Great Britain. Now goods will first be screened in Northern Ireland before entering Ireland. With the new structure, some goods are being exempted from checking.

### Way Forward:

Uninterrupted movement of goods will be encouraged through the Windsor Framework, which will benefit Ireland and the UK as well as other European countries. This will also help in balancing the global supply chain.

## 4 FRINJEX- 23

### Why in News:

FRINJEX- 23, the first-ever joint military exercise between the Indian and French armies, was conducted between 7th and 8th March 2023 at Pangode Military Station, Thiruvananthapuram in Kerala.

### Key Takeaways:

- This is the first time when both nations engaged their armies in this format with each contingent comprising a Company group.
- The exercise was based on the theme 'Humanitarian Assistance and Disaster Relief Operations in a Contested Environment.'
- Enhancing coordination, interoperability, and cooperation between both forces at the tactical level was the aim of this exercise.
- The contingents involved were parts of the Thiruvananthapuram based Indian Army troops and the French 6th Light Armoured Brigade.
- The key aspect of the overall Indo-France strategic partnership is to further cement defence cooperation with France, which was done through this joint exercise.

### Scope of the Exercise:

- A joint command post, to secure an envisaged area for undertaking joint humanitarian assistance and disaster relief by establishing an Internally Displaced Population camp and move of disaster relief material, will be established and operationalised.

### Indo-France Strategic Partnership:

- India and France signed a partnership in 1998, which completed its 25 years in 2023, and has been a major driving force for their collaboration in key areas.
- The partnership symbolises their convergence of views on a range of international issues.
- Over the past 25 years, India and France have developed an intense and growing relationship based on the shared commitment to promoting security, sustainable development, and peace.
- Bilateral exercises such as Varuna, Garuda, and Shakti have been a regular feature between Army, Air force, and Navy between both nations.

### Major Defence Deals:

- India and France made a Rs 59000 crore deal in 2016 for Rafale Jets.
- In 2005, a contract of strategic importance was signed between India and France for the construction of 6 submarines through the Licence Agreement.

### Way Forward:

India and France come forward with a strong defence relationship and it can be further strengthened by increasing their cooperation in areas like defence

technology transfers and collaboration in defence production. The convergence in the case of the Afghanistan terror issue, France emerging as a mediator between USA and Iran, and India's commitment to Digital partnerships with France under Start Up India, all indicate the growing closeness between the two nations, which needs to be capitalised on in the coming years.

## 5 India-Australia Summit

### Why in News:

Australian Prime Minister visited India for the first in-person India-Australia Summit, in March 2023. The basis for the visit was to strengthen the new momentum in ties between the two countries through deeper trade, investment, and defence relations.

### Current Status of the Relationship:

- Over the years, both have developed a strong bilateral relationship, based on shared values and interests. Both countries are democracies, with diverse populations and a commitment to multilateralism and the rule of law. They have cooperated in a range of areas, including trade, defence, security, education, and people-to-people ties.
- At the India-Australia Leaders' Virtual Summit in June 2020, the bilateral relationship elevated from the Strategic Partnership to a Comprehensive Strategic Partnership (CSP).
- At the 2nd India-Australia Virtual Summit in



March 2022, several key announcements were made, including a Letter of Intent on Migration and Mobility Partnership Arrangement to foster the exchange of skills, and a Letter of Arrangement for Educational Qualifications Recognition to facilitate the mobility of students and professionals.

- In recent times both countries are feeling the burnt from the aggressive behaviour of China and jointly assessing ways to overcome it.

### Outcomes of the Bilateral Meeting:

- Early wrapping up Comprehensive economic

cooperation agreement (CECA).

- » A comprehensive economic cooperation agreement (CECA) is an elevated version of the ECTA that aims to eliminate barriers to trade and investment between two countries.
- » The Economic Cooperation Trade Agreement (ECTA) entered into force in December 2022 and has resulted in zero duty on 96% of Indian exports to Australia in value and 85% of Australia's exports in value to India.
- » Bilateral trade was US\$ 27.5 billion in 2021; with ECTA, there is potential for it to reach around US\$ 50 billion in five years.
- New Delhi conveyed strong concern to Australia over incidents of vandalism & violence directed against the Indian community & temples in Australia and discussed disturbances caused by the pro-Khalistani group.
- Both countries committed to strengthening defence and security partnerships to address shared challenges and work towards an open and prosperous Indo-Pacific.
- Both countries stressed clean energy, especially solar energy, and green energy too will be an important area of cooperation.
  - » Cooperation in Clean Energy- The countries signed a Letter of Intent on New and Renewable Energy in February 2022 which provides for cooperation towards bringing down the cost of renewable energy technologies, especially ultra low-cost solar and clean hydrogen.

### Way Forward:

The two countries are important partners in the Indo-Pacific and cooperate closely in a wide range of sectors. India's closer engagement with Australia is a crucial building block of its evolving outreach to the bustling India-Pacific region. As India welcomes Australia, "Cricket, Commonwealth, and Curry" should make way for "China, Climate, and Critical Tech."

# 6

## Widening Rift of the Sino-U.S. Ties

### Why in News:

Xi Jinping, reappointed for a third five year-term as President, told a parliamentary delegation on March 6 that China was facing "unprecedented severe challenges to the country's development" because "Western countries, led by the U.S., have implemented all-round containment and suppression of China". Mr. Xi directly naming the U.S. underlines how relations have deteriorated between them in recent years. The US in response said that Mr. Xi's remarks are the most public and direct criticism that is seen in recent years. And, China's Communist Party "represents both the leading and most consequential threat to US national security and leadership

globally".

### Reason for Tensed Relation:

- USA-China trade war and USA allegation on Chinese efforts to steal the intellectual property of US companies.
- Dangers posed by TikTok, the Chinese-owned video-sharing app, related to data security and surveillance.
- China's aggressive policy over Taiwan and repeated calls for Taiwan's integration into mainland China.
- China's militarisation of the South China Sea and violation of International laws in the region.
- China's role in producing precursors to fentanyl, kills tens of thousands of Americans every year.
- China's assertiveness toward its neighbours like India, Japan, and countries adjoining South China Sea.
- China's alleged violation of human rights in Hong Kong, Uighur Muslims, and dissidents.

### Recent Events Fuelling the Tension:

- US military shot down the alleged Chinese spy balloon, which China in response called "hysterical", directed by cold war mentality.
  - » This incident led to cancelling of Secretary of State Antony Blinken's trip to Beijing, meant to build upon the Biden-Xi summit.
- Assessments from the Department of Energy and the FBI that the coronavirus pandemic likely began with a lab leak in Wuhan, China.
- The US sanctioning five Chinese companies for allegedly supplying aerospace parts for Iranian drones.
- The White House endorsed a bipartisan bill that would give the president the ability to force the sale of foreign-owned technologies, which could include ByteDance Ltd.'s TikTok.
- Biden administration announced a budget proposal that included billions of dollars in requests to boost its military presence in Asia and the US plan to sell nuclear-powered submarines to Australia.
- China alleged support to Russia in its Ukraine invasion.
- The USA called the Netherlands to ban semiconductor exports to China and formed Chip 4 alliance to control the global semiconductor supply chain.

### Way Forward:

The US-China relationship is stuck in a negative feedback loop and according to experts is in a volatile situation that can be the precursor of a new Cold War. For India, Beijing's increasingly vocal objections to the Quad, means it has to remain prepared for continued pressure along the land borders.

7

## India-Italy are Now Strategic Partner

### Why in News:

Italian Prime Minister Giorgia Meloni after bilateral talks with Prime Minister Narendra Modi hoped that India with its G20 Presidency could play a central role in “facilitating a negotiating process for the cessation of hostilities” in Ukraine. Ending the chill in the bilateral relationship in the last few years, in what Foreign Secretary Vinay M. Kwatra described as “legacy issues” now behind, India and Italy on Thursday announced the elevation of the bilateral relationship to the level of the strategic partnership while also concluding a Memorandum of Understanding (MoU) on defence cooperation.

### Implications of Agreement and Relationship:

- In terms of sub-sectors within, it is clear that with legacy issues behind us, the door is now open for industries on the two sides to cooperate more strongly in this area, particularly in the field of manufacturing, co-production, co-design, and co-innovation, military exercises to be expanded and deepened to all levels of the armed forces and maritime cooperation.
- Italy had decided to join the Indo-Pacific Ocean Initiative (IPOI). This will enable to identify concrete themes for enhancing our cooperation in the Indo-Pacific.
- The two countries also concluded a Declaration of Intent (DOI) on migration and mobility. once the mutual settlements came into being, it “will usher in the new era of mutual cooperation in many fields, especially education.”

- Ms. Meloni said with its G20 Presidency, India could very much represent the interests of the global south. Talking of the situation in Ukraine, she said, “We hope that India having a G20 Presidency can play a central role in facilitating a negotiating process for the cessation of hostilities for a just peace [in Ukraine]. Keeping the multilateral community united is important and we hope the Indian Presidency can do even more.”

### Strategic Areas of Cooperation:

- Shri Modi invited Italy to participate in ‘Make in India’ and ‘Atmanirbhar Bharat Abhiyan’, both countries can pay special attention to renewable energy, green hydrogen, information technology, telecom, space, and other areas.
- Both countries also talked about the growing bilateral trade which reached an all-time high of \$15 billion last year.

### Way Forward:

The two countries have identified space, cyber, and maritime as specific strategic areas for cooperation, apart from defence, and should now work towards identifying specific proposals for cooperation. Another area is Humanitarian Assistance and Disaster Relief (HADR) and under this joint exercises are being conducted between the two countries to better prepare our systems to respond to such challenges facing the world. The MoU on Defense Cooperation which has been in the works for a few years now, should serve as a framework for carrying out inter-governmental agreements.




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# Environmental Issue



1

## Environment Ministry seeks Report on Kaziranga Rhino Estimation

### Why in News:

The Union ministry of environment forest and climate change recently sought a “factual report” on the Rhino population enumeration conducted in the Kaziranga National park and Tiger Reserve.

### Kaziranga National park:

- It is located in the Golaghat and Nagaon districts of Assam.
- It was declared National Park in 1974
- It is also a UNESCO World Heritage site and home to third of the total world population of Great one-horned rhinos.
- It is the recognized as important bird area in the Brahmaputra valley floodplains.
- It is a mix of eastern wet Alluvial grassland semi-evergreen forest and tropical moist deciduous forest.
- Assam has an estimated 2645 Rhinos: the 434 square kilometers of Kaziranga National Park has the highest number of the animal in the state
- Manas National Park and the Pobitora wildlife sanctuary with around 100 rhinos each while the Aurangabad National Park has around 30 rhinos.
- Despite various security measures, many rhinos fall prey to bullets particularly at Kaziranga every year while most others die in annual floods.

### One-Horned Rhinoceros (The Great One-Horned Rhino):

- The one horn Rhinoceros, also known as the Indian Rhino, is the largest among the rhinoceros species
- Its scientific name is Rhinoceros unicornis.
- There are three species of Rhino found in Asia: the one-horned rhinoceros, the Java and the Sumatra.
- All three of the species are listed under appendix one of CITES.
- Status on the IUCN red list.
- Java and Sumatra rhinos are critically endangered.
- One-horned rhinoceros ( Indian rhinoceros )were vulnerable.
- The one-horned rhinoceros is listed under schedule 1 of the Wildlife Protection Act, 1972

### About Report:

- The information was requested based on the letter that the ministry received on January 27 from environmental activist Rohit Chaudhary regarding the arising anomalies in the estimation of the rhinos in the National Park.
- The activist cited documents received via The

Right to Information to conclude that the number of rhinos in Kaziranga could have been inflated.

- According to the activist, a data-sheet from the Inception process of 84 compartments of the National Park showed that the actual count of rhinos was 2042. But this figure surveys in some randomly selected compartments to show 2613 rhinos- an increase of 200 from the 2413 rhinos estimated in 2018.
- However, the Assam Forest Department and Kaziranga authorities denied doctoring data and said the estimation was consistent with the rhinos’ average annual growth of 2.7% in the National Park.

2

## Report on India’s Iron and Steel Industry by CSE

### Why in News:

Recently, an analysis by Delhi-based non-profit Centre for Science and Environment (CSE) released that India’s iron and steel sector can generate less carbon emissions while increasing its production. This will require switching to cleaner fuels, increasing the use of steel scrap, implementing Carbon Capture Utilization and Storage (CCUS) and managing finance for the switchover to new fuels and technologies.

### Key highlights of the Report:

- The iron and steel sector is a hard-to-abate sector and contributes significantly to the country’s economic development in reducing greenhouse gas (GHG) emissions.
- Globally, this sector accounts for about 7% of total GHG emissions. In India, the share of this sector is around 5% as per the latest biennial report submitted to UNFCCC.
- India’s iron and steel industry emitted 267.48 million tonnes of CO<sub>2</sub> in 2020-21 with a production of 104 million tonnes.
- As per the National Steel Policy, 2017, India’s expected steel production capacity will be 300 million tonnes by the year 2030. India is the largest producer of sponge iron or direct reduced iron with about 82% of its production coming from coal-based small-scale units.
- The iron and steel industry is an emissions-intensive industry. The new analysis shows it is possible to reduce carbon dioxide (CO<sub>2</sub>) emissions from our iron and steel sector by 2030 while doubling India’s steel production.

### Carbon Capture, Utilization and Storage (CCUS):

- This technology is designed to capture CO<sub>2</sub> emissions from fossil fuel combustion which can absorb 85-95% of CO<sub>2</sub> emissions in the atmosphere. The captured CO<sub>2</sub> can also be used as a raw material in other industrial processes

such as bicarbonate.

- The captured CO<sub>2</sub> is converted into fuels (methane and methanol), refrigerants, and building materials using CCU technologies. The captured gas can be used directly in fire extinguishing systems, pharma, and food and beverage industries as well as in the agriculture sector.

#### Way Forward:

India will have to promote the use of cleaner fuels, cap maximum steel scrap, transfer technology with foreign companies, and mobilize funds to achieve its net zero carbon emission target by 2070.

### 3 'Indian States' Energy Transition Report

#### Why in News:

Recently, the Institute of Energy Economics and Financial Analysis (IEEFA) and EMBER released the 'Indian States' Energy Transition Report.

#### About 'Indian States' Energy Transition Report:

- It is released by IEEFA (the Indian Institute of Energy Economics and Financial Analysis) with EMBER.
- For 2023, the report has analysed 16 Indian states which sum up 90% of the country's total energy consumption, and devised a scoring system called States' Electricity Transition (SET) to analyse performance.
- Four dimensions have been tracked under this analysis- the performance of the power system, decarbonization, the readiness of the power ecosystem and policies, and political commitment.
- Based on these dimensions- a state's ability to shift from fossil-fuel based power plants, its capability to incentivise the green market, and its government policy to push for power sector decarbonisation is tracked.

#### About Energy Transition:

- The energy transition is the global shift of the energy sector from fossil fuel-based power plants for production and consumption to renewable energy sources like solar, wind, as well as lithium-ion batteries.

#### The key highlights of the report:

- Karnataka and Gujarat are the states making the most progress in India's transition to clean electricity.
- The only state which performed well in all four dimensions used for tracking is Karnataka. It is doing well mainly because of its conducive policies and political commitments for a smoother transition.
- Karnataka is followed by Gujarat in the dimension of decarbonising the electricity sector.
- Rajasthan came second after Karnataka, with

renewables supplying 29% of the total power mix. It saw a surge in new renewable energy capacity and became the state with the largest installed capacity of renewable energy.

- While Punjab and Haryana have taken major steps in energy transition, Maharashtra, with the highest power demand, faces a very slow renewable energy adoption.

#### IEEFA (Institute for Energy Economics and Financial Analysis):

- IEEFA is a US-based non-profit organisation. It deals with the financial and economical problems related to energy markets, trends, and policies.
- The mission of this organisation is to enhance the transition to a diverse, sustainable, and profitable energy economy.

#### EMBER:

- EMBER (formerly Sandbag) is a UK-based company that was launched back in 2008.
- Presently, it conducts research and campaigns on EU ETS and EU climate policy, including coal power plants, reducing emissions in industry, and reforming the Effort Sharing Regulation and the European Union Emissions Trading System.

#### Way Forward:

Based on its untapped renewable energy potential, Karnataka has a productive opportunity to provide power to neighbouring states through green market mechanisms. The NDC targets have been revised and the centre now needs the cooperation of the states to move faster in their clean electricity transitions. There is a need for advanced green market procedure participation through more favourable policies like green energy open access and banking of power.

### 4 Hippocampus Kelloggi (Great Seahorse) Migration

#### Why in News:

Recently a study published in the Journal of Threatened Taxa shows that extensive fishing off the Coromandel coast could be forcing the great seahorse to migrate laboriously toward Odisha.

#### Great Seahorse:

- Sea horses are tiny fishes that are named for the shape of their head, which looks like the head of a tiny horse. They are classified as fish, in the genus Hippocampus. They are found in shallow tropical and temperate coastal waters in mid-latitudes.

#### Distribution:

- There are 46 species of seahorses reported worldwide. The coastal ecosystems of India house 9 out of 12 species found in the Indo-Pacific. The seahorse population in India is distributed across diverse ecosystems such as Seagrass, Mangroves, Macroalgae, and coral reefs.

- The 9 species found in India are distributed along the coasts of 8 states and 5 union territories from Gujarat to Odisha, apart from Lakshadweep and the Andaman and Nicobar Islands. Unlike their name, great seahorses are poor swimmers but migrate by rafting- clinging to floating substrata such as macroalgae or plastic debris for dispersal by ocean currents- to new habitats for successful maintenance of their population.

#### Unique Reproductive Habitat:

- The male gives birth to offspring as the female uses an ovipositor (egg duct) to place her eggs into a brood pouch located at the base of the male's tail where the eggs are later fertilized.

#### Conservation Status:

- In 2001 all the seahorses species found in India were kept in schedule 1 of WLP, 1972 and from then on fishing and trading activities on seahorses were banned in India.
- They are categorized as Vulnerable species in IUCN's Red list and also listed in Appendix II of CITES.

#### Threats to Seahorses:

- While the great seahorses are migrating towards the less intense fishing region in the Bay of Bengal off the Odisha coastline (from Palk bay to the Gulf of Mannar to Odisha) the shallow waters of this may not be comfortable zones for them.
- Despite the ban on their fishing, the population is declining due to overexploitation for traditional Chinese medicine, ornamental fish, and general destructive fishing.

#### Way Forward:

The great seahorse population has unique habitat so the conservation of mangroves area via schemes like MISHTI can be beneficial. The adequate monitoring of coastal ecosystems is the need of the hour. It would have multidimensional positive consequences on biodiversity conservation measures and coastal tourism activities.

## 5 CO2 Emissions in 2022

#### Why in News:

CO2 Emissions in 2022' report was published by IAE. The report stated that global energy-related carbon dioxide (CO2) emissions rose by less than 1% in 2022.

#### Key points of the report:

- Global energy-related CO2 emissions grew by 0.9% or 321 Mt in 2022, reaching a new high of over 36.8 Gt. However the rise in CO2 emissions in 2022 was far smaller than the exceptional jump of over 6% in 2021.
- Of the 321 Mt CO2 increase, 60 Mt CO2 can be attributed to cooling and heating demand in extreme weather and another 55 Mt CO2 to nuclear power plants being offline.

#### Reasons behind better results in 2022:

- Increased deployment of clean energy technologies such as renewables, electric vehicles, and heat pumps helped prevent an additional 550 Mt in CO2 emissions.
- Industrial production curtailment, particularly in China and Europe, also averted additional emissions.
- Decoupling emissions from economic growth: CO2 growth in 2022 was well below global GDP growth of 3.2%, reverting to a decade-long trend of decoupling emissions and economic growth that was broken by 2021's sharp rebound in emissions.

#### About the 'CO2 Emissions in 2022' Report:

- This report is the first in the IEA (International Energy Agency)'s new series, the Global Energy Transitions Stocktake.
- The report covers CO2 emissions from all energy combustion and industrial processes.
- It also includes information on methane and nitrous oxide emissions, providing a complete picture of energy-related greenhouse gas emissions in 2022.

#### About the International Energy Agency:

- It is a Paris-based autonomous intergovernmental organization which works with countries around the world to shape energy policies for a secure and sustainable future.
- It was established in the wake of the oil crisis of 1973-1974, to help its members respond to major disruptions in oil supply.
- It mainly focuses on its energy policies which include economic development, energy security and environmental protection. These policies are also known as the 3 E's of IEA.
- Important reports: World Energy Outlook Report, World Energy Investment Report, World Energy Statistics and India Energy Outlook Report.

#### Conclusion:

The main reason behind the reduction was a 10% decrease in cement production and a 2% decrease in steel production. The overall price of energy increased, fuel trade was disrupted, and inflation hit peaks. For these reasons, the overall emissions decreased.

## 6 'Antibiotic Drugs' Effect on Climate

#### Why in News:

Researchers at the Centre for Ecological Sciences(CES), Indian Institute of Science (IISc), have found that grazing by livestock leads to lower carbon storage in soil compared to grazing by wild herbivores. The soil in the livestock areas had 19% lower Carbon Use Efficiency as the use of antibiotics in animals such as tetracycline can affect the microbial activity in the soil

and can linger in the soil for a long period of time.

#### About the study:

- A study was conducted to compare the characteristics of livestock such as sheep and cattle with their wild relatives such as the yak and ibex in terms of their respective impact on soil carbon stocks.
- The researchers found that grazing by livestock leads to lower carbon storage in soil compared to grazing by wild herbivores.
- This difference appears to be due to the use of veterinary antibiotics such as tetracycline on livestock.
- The researchers said that when released into the soil through dung and urine, these antibiotics alter the microbial communities in the soil in ways that are detrimental to sequestering carbon.
- As per the latest study, despite the soils from the wild and livestock areas having many similarities, they differ mainly in one key parameter named carbon use Efficiency (CUE).

#### About Carbon Use Efficiency:

- Carbon use efficiency (CUE) is a key measure of carbon (C) transfer from the atmosphere to terrestrial biomass and indirectly reflects how much carbon is released through autotrophic respiration from the vegetation to the atmosphere. Carbon use efficiency (CUE), is defined as the ratio of net carbon gain to gross carbon assimilation over a period.

#### About Antibiotics:

- Antibiotics are remarkable drugs that are capable of killing biological organisms in one's body without harming the body.
- Antibiotic used in food of animals can help treat, control, and prevent bacterial diseases in animals.
- Penicillins, tetracyclines, and macrolides are some common classes of antibiotics. Some are effective against a wide range of bacteria (broad spectrum), while others may target only a small set of bacteria (narrow spectrum).

#### Conclusion:

India is the world's largest consumer of antibiotics. India's excessive antibiotic usage is leading to a mutation within bacteria. Mutation in bacteria leads to many diseases and alter the microbial community activity. This study highlights connections among human land use, antibiotics, microbes, soils and climate change.

## 7

### Compensatory Afforestation

#### About Compensatory Afforestation:

- It seeks to ensure that forest lands when get 'diverted' for non-forest purposes, like industrial or infrastructure development, is mandatorily accompanied by afforestation effort on at least an equal area of land.

#### Legal basis for it:

- Compensatory Afforestation Fund Act of 2016- Under this, Project developers-public or private, are required to provide land and fund the entire afforestation activity on these new lands.
- Also, developers are also asked to pay for the Net Present Value (NPV) of the forests being cleared, based on a calculation decided by an expert committee.
- The money is parked in special funds created for this purpose at the Central and state levels- Compensatory Afforestation Fund.
- The money is first deposited in the Central fund, from where it gets disbursed to states where the projects are located.

#### Need of Compensatory Afforestation:

- In the last 10 years, more than 1,611 square km of forest land, has been cleared for infrastructure or industrial projects. Nearly a third of this — 529 sq km has been cleared in the last three years itself.

#### Problems Related to the compensatory afforestation:

- It has legitimised clearing of forests, and experts see it as an example of 'greenwashing'.
- **Utilisation of funds-** Government records show that Annual plan of operations (APOs) for afforestation made by state governments, have not made full utilisation of the funds at their disposal, and even the money approved for this APOs has not been entirely spent.
- There have also been allegations of misutilisation or diversion of these funds, and in some cases investigations have been ordered.

#### Lack of availability of suitable land:

- The land that is made available for afforestation is often of poor quality and is often extremely unsuitable for growing plantations.
- Rarely is a contiguous stretch of land made available for this purpose as, the total area of land is often distributed over twenty or more different locations.

#### Problem related to plantations:

- They can never be compared to the kind of forests that often get diverted.
- They are monocultures therefore susceptible to disease and pest attacks.
- They often face challenges from nearby human habitations and cattle.

#### Way Forward:

Since, the clearing of forests for one or the other purpose cannot be entirely eliminated, compensatory afforestation is a good mechanism for attempting to make up for these losses to some extent. Therefore, all the deficiencies in the programme should be taken up by appropriate authority to ensure environment protection should go hand in hand with development.



## 1 Cardioprotective Potential of Medicinal Plant - Borthekera

### Why in News:

Garcinia pedunculata, a medicinal plant commonly called 'Borthekera' in the Assamese language, traditionally forbidden for raw consumption, has been found to protect from heart diseases.

### Its Medicinal Qualities:

- Administration of the dried pulp of the ripe fruit of the medicinal plant reduced cardiac hypertrophy indicators and oxidative stress and heart inflammation brought on by ISO.
- The sun-dried slices of the ripe fruit are used for culinary and medicinal purposes and are known to have therapeutic properties like anti-inflammatory, anthelmintic, antibacterial, antifungal, antidiabetic, hypolipidemic, nephroprotective, and even neuroprotective activity. With scientific interventions seeking proof of these claims, multiple studies have reported that G. pedunculata is a rich source of antioxidants. However, the cardioprotective potential has yet to be explored.

### Research:

- Scientists of the Institute of Advanced Study in Science and Technology (IASST), an autonomous institute of the Department of Science and Technology (DST), explored this medicinal plant's potential to prevent heart diseases. A double dosage of bioactive chloroform fraction (GC) of the herb was fed to Wistar rats at 24-hour intervals (85mg/kg body weight (BW) for 28 days.
- To assess the therapeutic effect, this was followed by injection of isoproterenol following the isoproterenol-induced myocardial infarction model. All the animals were analyzed, revealing that the disease group had significant ST wave (ST is the segment representing the interval between depolarization and repolarization of the heart's ventricles) elevation, indicating myocardial infarction, which was normalized with Atenolol and GC treatment. Cardiac hypertrophy, cardiac troponin I, tissue lipid peroxidation, and serum inflammatory markers were all significantly elevated in the disease group, which were maintained at near-normal levels in the GC pretreated groups. The endogenous antioxidants were also revamped in the GC-treated groups.
- Ms. Swarnali Bhattacharjee, SRF, under the supervision of Dr. Rajlakshmi Devi, has attributed these improvements to the excellent

antioxidant and anti-inflammatory potential of GC that helped protect the heart against isoproterenol-induced injury.

### Way Forward:

- The chemical characterization of the chloroform fraction revealed the presence of active phytochemicals like hydroxy citric acid, hydroxy citric acid lactone, and parvifoliquinone along with compounds like GB-1a, Garcinone A, 9-Hydroxycalabaxanthone, Chlorogenic acid, and Garcinol as well. The therapeutic effects reported in this study are likely due to the presence of all these compounds. All these results strongly infer the good cardioprotective potential of G. pedunculata fruit abundantly available in Northeast India.
- Knowledge of traditional medicinal plants will contribute greatly to India's effort to promote traditional forms of healthcare through AYUSH. Traditional medicinal systems not only work for immediate relief rather they work towards completely ousting the illness. Their potential can be further explored through initiatives like these.

## 2 New Delivery Mechanisms of Genetic Medicines

### Why in News:

- A privately held biotech company called Aera Therapeutics came out of stealth recently to debut a type of protein nanoparticle that it believes can be used to ferry all sorts of genetic medicines around the body.
- For years, we've known that genetic diseases could one day be cured by technologies like CRISPR. But there has always been a catch: These technologies can only fix the genome in reachable parts of the body, and right now, reach is very limited. Any form of genetic therapy—CRISPR, mRNA, siRNA, or DNA—all have the same delivery problem. The liver, eyes, and blood—are the main places where cures might be possible. But after 20 years of incremental progress, there's a chance of something entirely new.

### Main challenge:

- The fundamental issue with genetic medicines is that our bodies have evolved to keep bad things out of our cells. That's great for staving off viruses or other pathogens, but also makes it incredibly hard to sneak medicine in.
- So hard, that scientists have been stuck using the same kinds of packaging for technologies like mRNA or CRISPR, or DNA. They largely rely on

viral vectors, which are hollowed-out shells of a virus, and lipid nanoparticles, which can be thought of as fatty bubbles that encase genetic material. But they can only efficiently deliver to certain Zip codes—with a few exceptions, lipid nanoparticles' routes are largely limited to the liver and eyes, for example.

- In addition to where they can travel, those packages have other limitations, for example, how much cargo they can hold. Some genes that scientists would like to fix are too big to fit inside a virus, and similarly, it can be tough to squeeze the instructions for making Crispr tools into a usable lipid nanoparticle.

#### Other Methods:

- Some methods avoid the delivery problem altogether by taking cells out of the body, editing them in a lab, and giving them back to the patient. But that strategy is lengthy, expensive, and tough on patients.

#### Conclusion:

An entirely new delivery system, even though it is still in a rather early phase of development, is so welcome. Researchers found one of these proteins assembled into a capsid, or little protective shell, that stored the RNA needed for making more copies of itself.

## 3 DNA Vaccine Against Dengue

#### Why in News:

India's first and only DNA vaccine candidate for dengue has shown promising results. In preliminary trials on mice, the organisms generated a robust immune response and improved survival rates after exposure to the disease.

#### What is a DNA vaccine?

- A DNA vaccine is a type of vaccine that uses genetic material, specifically a small piece of DNA, to stimulate an immune response.
- The DNA enters the cell nucleus and is copied to create messenger RNA (mRNA), which then travels to the cytoplasm of the cell. The mRNA is then copied to create the proteins which elicit an immune response

#### Advantages of DNA vaccine:

- It is stable, cost-effective, and safer than whole-virus vaccines.
- In whole virus vaccines, some regions in the virus may cause adverse effects i.e. vaccine-induced infection.
- However, a DNA platform allows researchers to pick certain regions that can provoke an effective response and eliminate those likely to cause harm.
- Further, this vaccine can be modified to target

other viruses.

#### DNA Vaccines around the world:

- The world's first DNA vaccine—ZyCoV-D, developed by Zydus Cadila—was approved in 2021 for emergency use against COVID-19.
- Globally, DNA vaccines are being developed for diseases like tuberculosis and chikungunya.
- Some 19 DNA dengue vaccines are being evaluated, but are yet to reach final clinical trials.

#### About Dengue:

- Dengue is a mosquito-borne tropical disease caused by the dengue virus (Genus Flavivirus), transmitted by the Aedes aegypti mosquito.
- This mosquito also transmits chikungunya and Zika infection.
- Dengue is a major public health burden in India. In 2021, India reported 110,473 dengue cases, ranking fourth among the worst-affected nations.
- Developing an effective vaccine against dengue is tricky because it is caused by four closely related viruses—DEN-1, DEN-2, DEN-3, and DEN-4—called serotypes.
- Each one interacts differently with antibodies in human blood. A person infected with DEN-1 is then protected against it for life, but not against the other three serotypes.
- Therefore, an ideal vaccine must target all serotypes.
- Also, another concern with dengue viruses is Antibody-dependent enhancement (ADE) i.e. antibodies produced by vaccines help the virus replicate and cause severe disease.

#### DNA Vaccine against Dengue:

- The research team at India's National Centre for Biological Sciences, in collaboration with nine other institutions in India, Africa, and the US, have developed India's first and only DNA vaccine candidate for dengue fever.
- To design the vaccine, the researchers targeted two DNAs: one is a part of the genetic material of all four serotypes, and the other is from DEN-2.

#### Other vaccines Against Dengue:

- Dengvaxia, the first and only approved dengue vaccine, which contains a live attenuated (weakened) virus, was developed by Sanofi Pasteur.
- The US Food and Drug Administration recommends Dengvaxia for children above nine years and those with prior infection. However, India has not approved it.

#### Way Forward:

- The studies related to DNA vaccine candidate has shown that one of the proteins already part of the design may eliminate ADE in mice.
- Therefore, transparent clinical trials needed to be done to know its real efficacy.

## 4 Inaccessible Proton Beam Therapy

### Why in News:

Recently a viable alternative for radiation therapy, that is Proton Beam Therapy has made to news headlines due to its low accessibility and prohibitively expensive features in India. There is not a single government facility in India which can provide this effective cancer treatment therapy.

### About Proton Beam Therapy:

- This is a type of cancer treatment that uses high-energy proton beams to destroy cancerous cells. It is considered a safer alternative than traditional radiotherapy which is based on X-rays for treating solid tumors, especially for head and neck cancers. It is safer because standard radiation therapy uses X-rays (photons) which deliver radiation not only to the targeted tumor but even to healthy tissues beyond.
- A proton is a positively charged elementary particle that is the fundamental constituent of all nuclei.
- Proton Beam Therapy is delivered via a large, complex machine called a cyclotron which accelerates protons to high speeds and delivers them to the tumor site.

### Comparison between X-ray therapy & Proton Beam Therapy:

- The X-ray radiation targeting the tumor is high while entering the target area and reduces as it goes through the brain. This however can affect healthy cells before and after the tumor.
- On the other hand, in PBT protons are accelerated to 70% of the speed of light. They slow down as they enter the target area and release their energy into the tumor, but do not go beyond the tumor

### Challenges Associated with Proton Beam Therapy (PBT):

- The establishment of PBT is quite an expensive and herculean task as it requires vast nature of infrastructure and regulatory inputs. There is currently a significant demand-supply gap in proton beam therapy machines in India, with only a few machines available in the country.
- Further, regulatory challenges emerge in terms of safety concerns from the Department of Atomic Energy. There are concerns regarding safety since hydrogen is a highly volatile element, and daily checks are required to prevent leaks. The demand for PBT machines is increasing, as more and more patients are being diagnosed with cancer.
- Another major hurdle is the high cost involved in setting up PBT as the machine is highly complex,

up to three stories tall, and costs nearly Rs.500 crore. In addition to this, there is also a shortage of trained personnel for its maintenance and operation, which further limits its availability.

### Way Forward:

Apollo Hospitals in Chennai is the only center in South and West Asia that offers PBT. Hence, there is a huge unmet need for access to PBT treatment in India. As this treatment has promising results for treating tumors in sensitive areas the Government of India should focus on setting up PBT centers. They can be set up on PPP and BOT-based investment approaches with private assistance.

## 5 Plastic Waste in Urban Drains Can Lead to an Explosion of Mosquitoes

### Why in News:

A study conducted in Thiruvananthapuram, Kerala, suggests Bisphenol A or BPA can indirectly aid in the spread of vector-borne diseases in humans and animals.

### Key Findings:

- The study establishes that the human-made chemical can significantly shorten the breeding time of Southern house mosquitoes( culex, quinquefasciatus), a major carrier of the West Nile virus, Rift Valley fever virus, and avian pox in tropical and subtropical countries, and thereby aids in its quick multiplication.
- This is a matter of concern as most urban wastewater canals, which serve as breeding sites for mosquitoes, are choked with BPA-laden plastic waste. Southern house mosquitoes in contrast thrive in the presence of the compound. The larva of the mosquito can tolerate BPA without causing lethal effects up to a concentration of 5 mg/l, a level much higher than what is normally found in the environment
- The study findings are expected to have far reaching consequences as BPA is manufactured in high qualities globally and its industrial discharge is a known surface fresh water contaminant.

### BISPENOL A(BPA):

- Bisphenol (BPA) is a chemical compound and one of the simplest and best - known Bisphenol.
- It is produced by the condensation of phenol and acetone with an estimated 4 million tonnes of production worldwide in 2015.
- It is a colorless solid which is soluble in organic solvent but poorly soluble in water (0.344wt% at 83c).
- Bisphenol (BPA) is chemical produced in large quantities for using it primarily in the production of polycarbonate plastic.

- It is found in various products including shatterproof windows, eyewear, water bottles, and epoxy resins that coat some metal food cans, bottle tops, and water supply pipes.
- Bisphenol A can leach into food from the protective internal epoxy resin coating off canned foods and from consumer products such as polycarbonate tableware food storage containers, water bottles, and baby bottles.
- BPA can also be found in breast milk. It is a known endocrine disruptor.

#### Plastic Waste Management Rules 2016:

- It aims to increase the minimum thickness of plastic carry bags from 40 to 50 microns.
- To expand the Jurisdiction of applicability from the municipal area to a rural area because plastic has reached rural areas also.
- To bring in the responsibility of producers and generators both in plastic waste management system and to introduce collect back system of plastic waste by the product brand owners as per extended producer responsibility
- It introduced a collection of plastic-washed management fees through pre-registration of the producers, importers of plastic carry bags/multi-layered packaging, and vendors selling the same for establishing the waste management system.
- It seeks to promote the use of plastic waste for road construction as per Indian Road Congress guidelines or energy recovery or waste to oil etc. for gainful utilization of the waste and also address the waste disposal issue.

#### Conclusion:

Recycling is a vital process that benefits the environment. It conserves resources, lowers our need to collect raw materials, and, keeps usable materials out of landfills.

## 6 Scrub Typhus

#### Why in News:

A team of researchers from Christian Medical College in Vellore, Tamil Nadu, and PGIMER Chandigarh found that an antibiotic combo is best for severe scrub typhus.

#### What is Scrub Typhus?

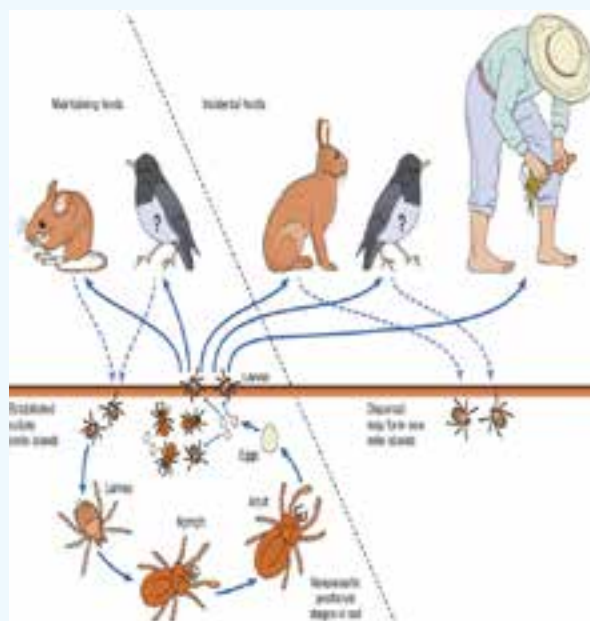
- Scrub Typhus, also known as bush typhus, is a disease caused by a bacteria called *Orientia tsutsugamushi*.
- Transmission: Scrub typhus is spread to people through bites of infected chiggers (larval mites).
- Symptoms: The most common symptoms of scrub typhus include fever, headache, body

aches, and sometimes rash.

- Cases of Scrub typhus: It is a major public health threat in South and Southeast Asia. As per estimates, nearly one million cases are reported from South and Southeast Asia with 10% mortality. India is one of the hotspots with at least 25% of the disease burden.
- Treatment: Scrub typhus should be treated with antibiotics. No vaccine is available to prevent scrub typhus.

#### Causes:

- Scrub typhus is transmitted by some species of trombiculid mites ("chiggers", particularly *Leptotrombidium deliense* which are found in areas of heavy scrub vegetation). The mites feed on infected rodent hosts and subsequently transmit the parasite to other rodents and humans. The bite of this mite leaves a characteristic black eschar that is useful to the doctor for making the diagnosis.



#### Vaccine:

- No licensed vaccines are available.
- An early attempt to create a scrub typhus vaccine occurred in the United Kingdom in 1937 (with the Wellcome Foundation infecting around 300,000 cotton rats in a classified project called "Operation Tyburn"), but the vaccine was not used.
- The first known batch of scrub typhus vaccine actually used to inoculate human subjects was dispatched to India for use by Allied Land Forces, South-East Asia Command in June

1945. By December 1945, 268,000 cc had been dispatched.

- The vaccine was produced at Wellcome's laboratory at Ely Grange, Frant, Sussex. An attempt to verify the efficacy of the vaccine by using a placebo group for comparison was vetoed by the military commanders, who objected to the experiment.

#### What did the researchers find about the treatment against Scrub Typhus?

- Researchers found that a combination of antibiotic treatment (with intravenous doxycycline and azithromycin) is more effective for treating Severe Scrub Typhus than single-drug therapies.

## 7 Concerns Regarding Gene Editing Technology

### Why in News:

A new study published in the journal Nature Communications has warned of the potential consequences of gene editing technology, which is still not fully understood.

#### Key findings of the study:

- Using Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) to delete harmful disease-causing mutations could create more problems
- CRISPR could lead to extensive gene copying from one parent to another, potentially increasing the risk of diseases
- The extent of the DNA damage induced by CRISPR and how cells respond to it is still not fully known
- The technology used to test gene-edited embryos could reduce the accuracy of genetic testing, leading to the misdiagnosis of embryos.
- The researchers concluded that such limitations must be addressed before gene editing technology can be used.

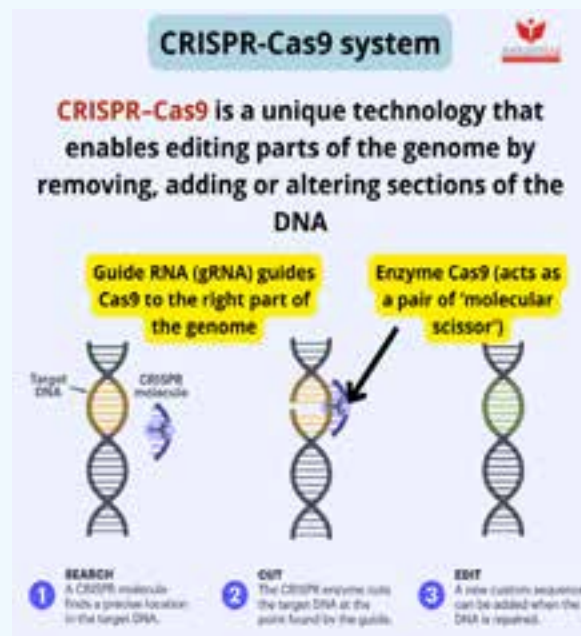
#### About Gene Editing Technology:

- Genome editing (also called gene editing) is a group of technologies that allow genetic material to be added, removed, or altered at particular locations in the genome.
- Three technology mostly used for gene-editing are CRISPR-associated protein 9 (Cas9), transcription activator-like effector nucleases (TALENs), and zinc-finger nucleases (ZFNs).

#### About CRISPR-Cas9 technology:

- CRISPR/Cas9 edits genes by precisely cutting DNA and then letting natural DNA repair

processes take over. The system consists of two parts: the Cas9 enzyme and a guide RNA. The CRISPR-Cas9 system has generated a lot of excitement in the scientific community because it is faster, cheaper, more accurate, and more efficient than other genome editing methods.



#### About TALENs:

- Transcription activator-like effector nucleases are restriction enzymes that can be engineered to cut specific sequences of DNA. They are made by fusing a TAL effector DNA-binding domain to a DNA cleavage domain.

#### Zinc-finger nuclease (ZFNs) technology:

- Zinc-finger nucleases (ZFNs) are targetable DNA cleavage reagents that have been adopted as gene-targeting tools. ZFN-induced double-strand breaks are subject to cellular DNA repair processes that lead to both targeted mutagenesis and targeted gene replacement at remarkably high frequencies.

#### Conclusion:

Although gene editing technology has gained much fame recently due to its many uses like target medicine, biofuel, and virus resistance crops. Chinese scientists who announced the birth of gene-edited twins in 2018 used CRISPR to make the embryos resistant to the human immunodeficiency virus (HIV). However, before adopting this technology on a wider basis, several concerns such as safety concerns, ethical concerns, and regulatory concerns should be resolved.



# Economic Issues



## 1 Nifty India Municipal Bond Index

### Why in News:

Recently the NSE Indices Ltd, an arm of the National Stock Exchange of India (NSE), introduced the country's first Municipal bond Index. This new Nifty India Municipal Bond Index will track the performance of municipal bonds that are issued by Indian municipal corporations across maturities and have an investment credit rating.

### About Municipal Bonds:

- A municipal bond or muni bond is a security issued by local governments in India, or their associate bodies, to raise money to finance projects. The projects aim to achieve socio-economic development such as Bridges, Schools, Hospitals, and the provision of basic amenities.
- Municipal Bonds were first issued in India in 1997 following the 74th Constitutional amendment which decentralized the urban local bodies. Muni Bond are basically of two types-
  - » General Obligation Bonds
  - » Revenue Bond

### New Municipal Bond Index:

- The Nifty India Municipal Bond Index which was launched by NSE Indices Ltd. was aimed at tracking the performance of all municipal bonds issued in the country.
- The index comprised 28 municipal bonds from 10 different issuers, all of which were in the AA credit rating category. The index constituents were assigned weights based on their outstanding amount.

### Benefits and Concerns Associated with Municipal Bonds:

- The raising of money from capital markets incentivizes municipal corporations to fund new projects and improve civic infrastructure.
- The proceeds from muni bonds can be used to fund the expansion of municipal services through growth-driven infrastructure projects and thereby contribute to bridging India's urban infrastructure financing gap. They are also meant to generate public confidence and transparency about invested funds as muni bonds are rated by credit rating agencies.
- This model of funding has allowed local bodies to become financially independent and disciplined while also being governance oriented.
- But there are some risks also associated with Municipal Bonds such as the low ability to beat inflation as they are generally low-yielding and State guarantees are required for the bonds which can be complicated due to political or administrative reasons.

- Thereby consistent tracking of municipal bonds performance would enhance the transparency for investors and reduce the associated risks with bonds.

### Way Forward:

The Atal Misson for Rejuvenation and Urbanisation Transformation (AMRUT) and the Smart Cities Mission are two projects which have been funded by Muni bonds. Alike these several critical infrastructure development projects related to basic facilities and technology upgradation in urban areas can also be financed with the Muni bonds proceeds. The new index will make them more attractive to investors.

## 2 Hindu Rate of Growth

### Why in News:

Raghuram Rajan, former governor of the Reserve Bank, recently stated that due to poor private sector investment, high interest rates, and slower global development, India is "dangerously near" to the Hindu rate of growth.

### Key Points:

- Mr. Rajan said that sequential slowdown in the quarterly growth, as revealed by the latest estimate of national income released by the National Statistical Office (NSO) last month, was worrying.
- While the growth in the December quarter of 2022 was 4.4 per cent, there was a marked deceleration from a growth of 6.3 per cent in the September quarter and 13.5 per cent in the March quarter.

### About Hindu Rate of Growth:

- Hindu rate of growth is a term describing low Indian economic growth rates from the 1950s to the 1980s, which averaged around 4%.
- If the rate of growth is persistently slow and accompanied by low capita GDP, then it will be known as the Hindu rate of growth but it has to factor in the population growth as well.
- The term was coined by Raj Krishna, an Indian economist, in 1978 to describe the slow growth and he attributed this low growth situation to be a consequence of a socialist policy of state control and import substitution.
- Raj Krishna was trying to link the Hindu philosophy of being minimalistic, non-competitive, and content, with the growth rate.

### Criticism:

- State Bank of India's report regarded such an argument as ill-conceived, biased, and premature at its best when weighing the recent GDP numbers against the available data on savings and investments.
- Economists are saying that quarterly GDP growth numbers tend to be volatile and cannot be used

to label growth. The third quarter of 2022-23 recorded lower growth due to an upward revision in the numbers for the corresponding quarter in the previous year.

- Also, Rajan was commenting on quarterly GDP growth numbers while using this phrase, whereas Hindu growth rate referred to annual growth.

### Conclusion:

The phrase Hindu rate of growth represents a certain philosophy of existing in a blissful non-competitive state, in perfect harmony with other countries which does not reflect the conditions existing now. The country is making rapid progress in all fields and is willing to compete with the best in almost all spheres. In a world where each country is taking care of its own, India too has learned to do the same. Hence, quoting such a term is rather inappropriate.

## 3 India's Health Sector

### Why in News:

World Bank to lend \$1 billion to support India's health sector and to help India with preparedness for future pandemics as well as to strengthen its health infrastructure. The lending will be divided into two complementary loans of \$500 million each and as per the World Bank the loans will support India's efforts to improve public healthcare infrastructure across the country.

### About the loans:

- Through this, the bank will support India's flagship PM- Ayushman Bharat Health Infrastructure Mission (PM-ABHIM), launched in October 2021, to improve the public healthcare infrastructure across the country.
- In addition to the national-level interventions, one of the loans will prioritise health service delivery in seven States including Andhra Pradesh, Kerala, Meghalaya, Odisha, Punjab, Tamil Nadu, and Uttar Pradesh.

### Components of the Loans:

#### Public Health Systems for Pandemic Preparedness Program (PHSPP)-

- The loan of \$500 million, will support the government's efforts to prepare India's surveillance system to detect and report epidemics of potential international concern.

#### Enhanced Health Service Delivery Program (EHSDP)-

- Another \$500 million, will support the government's efforts to strengthen service delivery through a redesigned primary healthcare model.

### Uniqueness of the Loans:

- Both the PHSPP and the EHSDP utilise the Program-for-Results financing instrument that focuses on the achievement of results rather

than inputs.

- They both are from the International Bank for Reconstruction and Development (IBRD) and have a final maturity of 18.5 years including a grace period of five years.

### India Health Sector Scenario-

India's performance in health has improved over time. According to World Bank estimates:

- India's life expectancy has increased from 58 in 1990 to 69.8 in 2020. This is higher than average for the country's income level.
- The under-five mortality rate (36 per 1,000 live births)
- Infant mortality rate (30 per 1,000 live births)
- Maternal mortality ratio (103 per 100,000 live births)
- They are all close to the average for India's income level, reflecting significant achievements in access to skilled birth attendance, immunisations, and other priority services.

### Issues Related to India's Health Sector:

- Inadequate Medical Infrastructure- According to the National Health Profile, India has only 0.9 beds per 1000 population and out of which only 30% are in rural areas.
- The gap in Doctor-Patient Ratio- According to the Indian Journal of Public Health, India needs 20 lakh doctors by 2030.

### Way Forward:

These issues were further aggravated during COVID-19, therefore there is a need to develop capacity for core public health functions, as well as improve the quality of health service delivery. In this scenario, both programmes will be key in strengthening health systems, providing attention to strong disease response, and will improve preparedness and response to future disease outbreaks.

## 4 Cost of Reverting to Old Pension Scheme

### Why in News:

The decision of some States to restart the Old Pension Scheme will be decidedly a regressive move and will provide more privilege to government servants at the cost of a larger public, the majority of which has no social safety net, former RBI governor D. Subbarao has said.

### Old Pension Scheme (OPS):

- Under Old Pension Scheme (OPS), employees get a defined pension. An employee is entitled to a 50% amount of the last drawn salary as a pension. OPS was discontinued by the NDA government in 2003 with effect from April 1, 2004.

### Concerns Arising out of implementing the Old Pension Scheme:

- “That will be a decidedly regressive move both for our commitment to fiscal responsibility, and more broadly for the credibility of our reforms,” Mr. Subbarao told PTI. Under the new pension scheme (NPS), employees contribute 10% of their basic salary towards pension while the government contributes 14%.
- “In a country where the large majority of the people have no social safety net, government servants with an assured pension are a privileged lot. “Privileging them even further at the cost of the larger public will be morally wrong and fiscally detrimental.”
- if State governments revert to a ‘pay as you go’ pension scheme, the burden of pensions will fall on current revenues which in turn means foregoing schools, hospitals, roads, and irrigation.

#### Other state's views:

- The governments of Rajasthan, Chhattisgarh, and Jharkhand have informed the Central government/Pension Fund Regulatory and Development Authority (PFRDA) about their decision to restart OPS for their employees.
- The government of Punjab on November 18, 2022, issued a notification regarding the implementation of OPS for the State government employees who are being covered under NPS. Jharkhand too has decided to revert to OPS.

#### Way Forward :

“We have learned from experience that maintaining the CAD within safe limits has been critical to our macroeconomic stability. For this reason, we should avoid giving an additional burden on our revenue, however, for solution to this demand, some arrangements should be made to put an end to this issue.

5

### 5th ASEAN-India Business Summit

#### Why in News:

Recently, the Minister of State for Electronics & Information Technology addressed the 5th ASEAN-India Business Summit.

#### About ASEAN-India Business Summit:

- The 5th ASEAN-India Business Summit was held in Kuala Lumpur on 6 March 2023 as part of the ASEAN-India Year of Friendship to commemorate over three decades of a long association between India and the 10-member bloc. The aim of the summit is to enhance trade ties, connectivity, and supply chain resilience through deeper ASEAN-India cooperation.

#### About the Association of South-East Asian Nations:

- It is a regional grouping that promotes economic, political, and security cooperation.
- It was established in August 1967 in Bangkok,

Thailand with the signing of the ASEAN Declaration (Bangkok Declaration) by the ASEAN founders, namely Indonesia, Malaysia, Philippines, Singapore, and Thailand.

- ASEAN countries have a total population of 664 million and a combined gross domestic product (GDP) of US\$3.3 trillion.

#### Member:

- ASEAN is made up of ten Southeast Asian countries - Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

#### Areas of Cooperation between India and ASEAN:

- India and ASEAN countries have recently given new energy to their relations by establishing a comprehensive strategic partnership at the 19th ASEAN-India Summit held in Cambodia.
- India is implementing several connectivity projects in the region such as the India-Myanmar-Thailand Trilateral (IMT) Highway and the Kaladan Multimodal Project.
- ASEAN is India's fourth-largest trading partner. India signed a Free Trade Agreement (FTA) with ASEAN in 2009 on goods and in 2014 on services and investment.
- Both sides reaffirm the importance of maintaining and promoting peace, stability, maritime security, and freedom of overflight in the Indo-Pacific region.
- India provides financial assistance to ASEAN countries through various mechanisms such as the ASEAN-India Cooperation Fund and the ASEAN-India Green Fund.

#### Conclusion:

Digital technologies have been a key driver of economic growth between India and ASEAN, particularly in areas such as e-commerce, online media, and financial services. Indian IT companies have played an integral role in the digital transformation journey of Malaysia and other ASEAN countries. After the recent announcement of a real-time payment linkage system between India and Singapore, India is working with Malaysia and other ASEAN countries to make it operational for more countries.

6

### Volatility Risk of Internationalisation of the Rupee

#### Why in News:

The deputy governor at the Reserve Bank of India said India needs to gear up to manage the inevitable volatility that will emerge in the foreign exchange market as the country progresses further towards the internationalisation of the rupee.

#### About Internationalisation of Rupee:

- An international currency is one that is freely available to non-residents, essentially to settle cross-border transactions, and in the case of

the rupee, this will be achieved by promoting the currency for import and export, without any limits. But, that will make the rupee more reactive to global events and that would increase outflows, increasing volatility.

### Challenges in the Internationalisation of the Rupee:

- India lacks sufficient capital, hence foreign investment is required to finance its economic expansion. If a sizable amount of its trade is conducted in rupees, non-residents would have rupee balances in India that they could use to buy assets there. Large holdings of these financial assets may make a country more vulnerable to foreign shocks, and addressing that susceptibility would require more efficient policy measures.
- The reduced role of convertible currencies in external transactions can lead to a reduction in foreign exchange reserves. However, the requirement of reserves will also reduce to the extent that the trade deficit is financed in rupees.
- The country's ability to develop a monetary strategy in line with the needs of its regional economy will be hampered by the internationalization of the rupee. This results in the trilemma of an open economy, which states that no country can pursue the objectives of unrestricted capital flows, stable exchange rates, and independence from external financial influence at the same time.
- The volatility of the exchange rate (value) of the rupee may increase as a result of global inflation exceeding local inflation or uncontrolled capital inflows

### Conclusion:

The dollar accounts for 88.3% of global foreign exchange market turnover, followed by the euro, the Japanese yen, and the pound sterling; Since the share of the rupee is only 1.7%, it is clear that more attention is needed in this direction to promote the currency at the international level. Along with this, it also has many benefits like using the rupee in international deals will reduce the currency risk for Indian enterprises. The need to maintain foreign exchange reserves will decrease. By reducing its dependence on foreign money, India will become less vulnerable to external shocks. Better rupee acceptability and commerce will open up more opportunities for Indian companies, which will enhance India's status and prestige around the world. This will increase the demand for the rupee in global trade.



## Crypto Trade Under Money Laundering Act

### Why in News:

In a bid to further regulate the sector, the Finance

Ministry has brought trade in Virtual Digital Assets (VDAs) and cryptocurrencies under the ambit of the Prevention of Money Laundering Act, 2002 (PMLA).

### The Notification:

- The gazette notification stated that the exchange between virtual digital assets and fiat currencies, the exchange between one or more forms of virtual digital assets, the transfer of virtual digital assets, safekeeping or administration of virtual digital assets, and even participation in financial services related to VDAs will be covered under PMLA.
- The anti-money laundering legislation was passed in 2002 and came into force in 2005, fulfilling India's commitment to the Vienna Convention on combating money laundering; drug trafficking, and countering the financing of terror. This act empowered the Enforcement Directorate (ED) to combat money laundering, confiscate illegal properties and prosecute offences.

### How will it affect crypto trade?

- Following this notification, all the crypto exchanges, wallet providers, custodians, and other intermediaries dealing with the VDAs will now have to perform KYC norms on their users. Moreover, they have to report any suspicious activities regarding trade in VDAs and cryptocurrency to the Financial Intelligence Unit – India (FIU-IND).
- FIU-IND is a central agency responsible for receiving, processing, analysing, and disseminating information related to suspicious financial transactions to law enforcement agencies and overseas FIUs.
- The notification has deemed entities dealing in VDAs as “reporting entities” under PMLA. These are banks and financial institutions, firms that are involved in sectors such as real estate and jewellery including casinos. Under this, every reporting entity is required to maintain a record of all transactions, including the record of all cash transactions above Rs.10 lakh, for at least 5 years.
- This will not only bring transparency but also help in curbing illegal activities and misuse of cryptocurrencies. Along with this, it places the government in a better position to track crypto transfers outside of India. Thus, it will enhance the legitimacy of the sector.

### Way Forward:

This move is in line with global crypto regulations like Japan, Switzerland, Malaysia, and Singapore having regulatory frameworks for cryptocurrencies. While promoting innovation, it will ensure a safe and sound financial system.



# Miscellaneous Issues

## 1 Right to be Forgotten

### Why in News:

Recently the question on the constitutionality of the 'Right to be Forgotten' has again resurfaced, as a Delhi-based doctor filed a petition for the enforcement of his right, which includes the removal of news stories and other offensive content related to his "wrongful arrest".

### About Right to be Forgotten:

- This right allows a person to seek deletion/removal of his/her private information from the public record published on the internet, such as social media platforms, search engines, and other websites. The concept has found recognition in European Union, Argentina, and other countries.
- This right is seen as a way for individuals to protect their privacy and secure their data from unwanted access. It also provides people with a way to control how much of their personal data is accessible on the internet.

### The difference between the Right to Privacy and the Right to be forgotten:

- After the Supreme Court decided on the "K.S.Puttaswamy vs. Union of India" case(2017) the right has consistently been declared to be inherent to an individual's Right to privacy under Article 21. The right to privacy protects information that is not in the public domain, however, the right to be forgotten protects information that is in the public domain and prevents third parties from obtaining it.

### The legal status of the Right in India:

- While the right is not recognized by a law or a statute in India but it falls under the purview of an individual's right to privacy (Article 21), which is governed by the Personal Data Protection Bill that is yet to be passed by the Parliament.

### Significance of the Right:

- The right has become increasingly important in recent years due to the vast amount of data being published online and the potential for it to be misused or abused by those with malicious intent. It helps in promoting Digital Privacy overall as it encourages companies and organizations to take more responsibility for how they handle personal information.
- However Free speech organizations and supporters warn that the Right to be forgotten online is in danger of being transformed into a tool of global censorship.
- Google has also argued that it can be misused by public authorities for their own intent. It is

also assumed that enforcement of this right can curtail the public's right to information which is under the freedom of expression.

### Way Forward:

The internet today is so influential that it can shape lives and opinions in such a way that a person becomes a prisoner of his or her past. But the enforcement of this right with a balanced approach coinciding with the Right to freedom of expression is the need of the hour. It can provide the opportunity for Self-determination of one's online presence. And as the Justice Sri Krishna committee rightly reiterates, the balancing test should be conducted by the adjudicators and not by the search engines.

## 2 Sisupalgarh Suffered Devastation

### Why in News:

The spectacular archaeological legacy of Sisupalgarh, a fortified ancient city that has endured for more than 2,600 years, on the outskirts of Bhubaneswar, has suffered devastation from land sharks using heavy earth-moving machinery.

### Key points about the news:

- The act of destruction occurred just as the Archaeological Survey of India (ASI) and Odisha's Revenue Administration were working in tandem to acquire the land and safeguard the invaluable heritage
- The rampart on the western part of the ancient fortified city has been damaged. Miscreants have carried out destruction at three places over two days

### About Fort of Sisupalgarh:

- The excavation of the Sisupalgarh site was first taken up in 1948, when it was declared a Centrally Protected Monument under the provisions of the Ancient Monuments Preservation Act, of 1904.
- It involved an area measuring 562.681 acres and covered five villages, including Sisupalgarh, Badadhanpu Lingipur, Raghunathpur, and Mahabhoisan, in 1950.
- The 2600-year-old heritage, Sisupalgarh is the only fortified site in India having eight gateways.
- Sisupalgarh fort is believed to have been built around the 7th to 6th century BCE. It served as the capital of the Kalinga kingdom and was an important centre of trade and commerce during ancient times
- The urban centre in the fort of Sisupalgarh had an area of 1.2 km by 1 km, and it was surrounded by a moat. Further, the city had an unique water management system.

- The fortification was carried out in the 4th to 3rd century BCE when King Kharavela took up the repair of the city 2,100 years ago.

#### About ASI:

- The Archaeological Survey of India (ASI) is the premier organization for the archaeological research and protection of the cultural heritage of the nation. It works under the ministry of culture.
- It was founded in 1861 by Alexander Cunningham- the first Director-General of ASI. Alexander Cunningham is also known as the "Father of Indian Archaeology".
- Its activities include carrying out surveys of antiquarian remains, exploration and excavation of archaeological sites, conservation, and maintenance of protected monuments, etc.

### 3 One Nation-One Challan Initiative

#### Why in News:

The Gujarat Government informed the state High Court that it is setting up virtual traffic courts under 'One Nation One Challan' initiative while a PIL (Public Interest Litigant) hearing on the matter.

#### One Nation One Challan (ONOC) Initiative:

- It is an initiative of the Ministry of Road Transport and Highways. It aims to bring all related agencies, such as the traffic police and the Regional Transport Office (RTO), on one platform, to enable the seamless collection of challans, i.e. traffic fines as well as data transfer. The integrated system uses the CCTV network to detect traffic violations and retrieve the registration number of the offending vehicle from the applications like VAHAN and SARATHI.
- An e-Challan is then generated with the relevant penalty amount and sent to the mobile number linked with the vehicle. It also seeks to create virtual traffic courts that eliminate the presence of litigants in court.
- The VAHAN App was created under the National Transport Project to aid RTO in vehicle registration, taxation, permit, and enforcement. The SARATHI app was created under Digital India. This app helps people to complete the work related to licenses digitally.

#### The significance of the initiative:

- The integration of all states' RTO data and traffic police data with the support of NIC servers will assist the penalization process in accessing vehicle registration and related data for violators from different states. Challans will be sent directly to the mobile number registered with the vehicle. NIC is set to launch its application for e-challan delivery.

- The Gujarat government's initiative for setting up virtual courts aimed at eliminating the presence of litigants in the court. An accused can search their case on the virtual court's website. Upon successful payment of the fine, the case will be shown as disposed off.

#### Way Forward:

This move would not merely smoothen the process of challan filing but also eliminate the corrupt practices involved in the traffic violation penalizing process. The other state governments should also follow the Gujarat government's move actively. These measures also have contributing impact on Digital India Mission.

### 4 NCM Conducted Rescue Operation

#### Why in News:

Recently the National Commission for Minorities (NCM) rescued 12 Indians stranded in Libya. This rescue operation was conducted by the coordinated efforts of NCM, the Ministry of External Affairs, and the Indian Embassy in Tunisia.

#### What is the Issue?

- These stranded Indians were lured by an agent for employment opportunities and thereby got raveled in a fake job racket. Many alike instances are being recorded in recent times. In September 2022 Ministry of External Affairs issued an advisory over fake IT job rackets targeting skilled youth.

#### Major Challenges Ahead:

- Prima facie appears to be the usual fraud case but there are some major issues underlined to this issue. Because India has a vast pool of human capital, skilled and semi-skilled both but there are sparse employment opportunities available in the domestic market. Along with this the wide and complex reach of social media networks among youths also made them more vulnerable to fake job rackets.

#### The National Commission for Minorities:

- The main agency involved in this rescue operation is the National Commission for Minorities. It was set up under the National Commission for Minorities Act, of 1992. It monitors the working of the safeguard for minorities provided in the Constitution and the laws enacted by Parliament and the state legislatures.
- NCM consists of a Chairperson, a Vice Chairperson, and five members, and all of them shall be from amongst the minority communities.

#### Geographical Location of Libya:

- Libya is a country in the Maghreb region in North Africa. It is bordered by the Mediterranean

Sea to the north, Egypt to the east, Sudan to the southeast, Chad to the South, Algeria to the west, and Tunisia to the Northwest. The rich earnings from oil revenues and small population have given Libya one of the highest nominal per capita GDP in Africa.

### Way Forward:

Although the Ministry of external affairs is conducting various operations for the rescue of stranded Indians overseas in fake job rackets, precautionary measures needed to be taken as well by the government and local authorities. The appropriate surveillance through cyber cell agencies and sting operations can prevent such types of offences.

## 5 Ancient Monuments, Archaeological Sites and Remains (AMASR) (Amendment) Bill

### Why in News:

The Ancient Monuments, Archaeological Sites and Remains Act (AMASR) was passed by the Parliament in 1958 with the objective of preserving archaeological and historical monuments and sites, regulating excavations, and safeguarding sculptures and carvings. The bill was passed by the Lok Sabha in 2017 to amend this act. The Government of India is now considering introducing the bill again in Parliament.

### Key Points of the Act:

- Construction in 'Prohibited Areas': It defines an area of 100 meters around a protected monument as a 'Prohibited Area'. The central government can extend the restricted area beyond 100 metres. It also prohibits construction in 'restricted areas' even if it is for public purposes.
- Definition of 'public works': It introduces a definition of 'public works', which includes the construction of any infrastructure financed by the central government for public purposes. This infrastructure must be necessary for public safety and security and must be based on a specific instance of a threat to public safety.
- Procedure for seeking permission for public works: As per the Act, the concerned central government department (which intends to build for public purposes in a prohibited area) should make an application to the competent authority. If there is any question as to whether a construction project qualifies as 'public works', it will be referred to the National Monuments Authority. This Authority shall make its recommendations to the Central Government for reasons to be written in which the decision of the Central Government shall be final.

### Need of Amendment:

- The Act needs to be amended because it prohibits new construction inside the monument. This is affecting the development work in national monuments. Its main objective is to amend section 20(a) of the Act that hinders development activities.

### Archaeological Survey of India (ASI):

- The Archaeological Survey of India (ASI), under the Ministry of Culture, is the premier organization for archaeological research and conservation of the country's cultural heritage. It is also governed by the Antiquities and Art Treasures Act, 1972.

### Way Forward:

It is well known that India is hosting the G-20 countries this year; therefore some of the meetings will also be held at important sites of ASI. So it becomes imperative to look at the areas around some of those sites and add the necessary infrastructure for those high-profile meetings.

## 6 'Har Payment' Digital Mission

### Why in News:

The Reserve Bank of India (RBI) has launched a mission called Har Payment Digital as part of its efforts to make every Indian a digital payment user. The initiative was launched during Digital Payments Awareness Week and aims to reinforce the ease and convenience of digital payments while engaging new users. Also, the central bank has launched an initiative to adopt 75 villages and convert them into digital payment-enabled villages. These villages are to be adopted by the payment system operators.



### The promoter of Mission Har Payment Digital:

- Banks and payment system operators will promote the 'Har Payment Digital Campaign' and highlight the various payment channels

available. Regional offices of RBI will also promote the acceptance and use of digital payments through public participation activities as part of this initiative.

### The Need of Mission Har Payment Digital:

- According to a survey conducted by the Reserve Bank of India, only 42% of Indians are using digital payments. 35% are aware of digital payments but are not using them. 23% of Indian citizens are not even aware of the digital payment system. If they are taught through campaigns, illiteracy, and insecurities become barriers. Through this mission, the insecurity issues will be resolved by explaining to them the benefits of using digital payments and showing them examples of people who have benefited from it so that they too can use digital payments.

### Conclusion:

The Reserve Bank of India (RBI) 'Payment Vision 2025' document was released, which aims to triple the e- payments. The central bank will encourage the use of debit cards and reduce the circulation of cash. The main theme of the vision document – e-payments for everyone, everywhere, every time. Its overall objective is to provide a secure, fast, convenient, accessible, and affordable e-payment option to every user. RBI's Har Payment Digital Mission will help India achieve this goal.

## 7

## H3N2 Virus

### Why in News:

India has recorded many cases of the H3N2 virus. 2 deaths were also reported in India. The Indian Council of Medical Research (ICMR) has said that the Influenza A subtype H3N2 is the major cause of current respiratory illness in the country.

### About seasonal influenza:

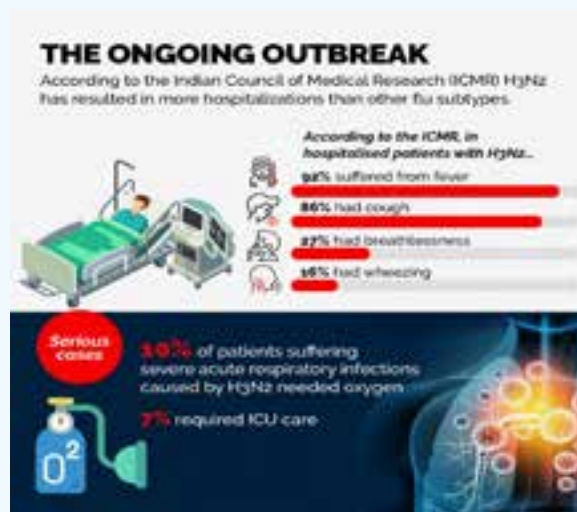
- According to WHO, seasonal influenza is an acute respiratory infection caused by influenza viruses. There are 4 types of seasonal influenza viruses, types A, B, C, and D.
- Influenza A is further classified into different subtypes and one of them is H3N2.
- H3N2 virus is a non-human influenza virus that normally circulates in pigs and that has infected humans - known as 'swine influenza viruses'. When these viruses infect humans, they are termed 'variant' viruses. The specific H3N2 variant virus was detected in 2011 in humans with genes from avian, swine, and human viruses and the 2009 H1N1 pandemic virus M gene.

### Symptoms of the H3N2 virus:

- People are mostly showing symptoms of fever, body ache, sore throat, cough, runny/blocked nose, and a few shortness of breath.

### Who is more at risk?

- This virus usually preys on individuals below the age of 15 years or above 50 years of age.
- Children and those with co-morbidities like asthma, diabetes, heart disease, weakened immune systems, and neurological or neurodevelopmental conditions are at a higher risk.



### Transmission:

- H3N2 influenza is highly contagious and can spread from person to person through droplets generated when an infected person talks, coughs, or sneezes.
- It can also spread by touching a surface contaminated with the virus and then touching one's mouth or nose. People who are at high risk of complications from the flu include pregnant women, young children, older adults, and people with underlying medical conditions.

### Conclusion:

- Taking proper rest, drinking lots of fluids, and using over-the-counter painkillers like acetaminophen or ibuprofen to lower fever are all part of the H3N2 influenza treatment regimen. If a patient has severe symptoms or is at a high risk of problems, a doctor may also recommend antiviral drugs such as oseltamivir and zanamivir.
- WHO further says that in suspected and confirmed cases, neuraminidase inhibitors should be prescribed as soon as possible (ideally, within 48 hours following symptom onset) to maximize therapeutic benefits.

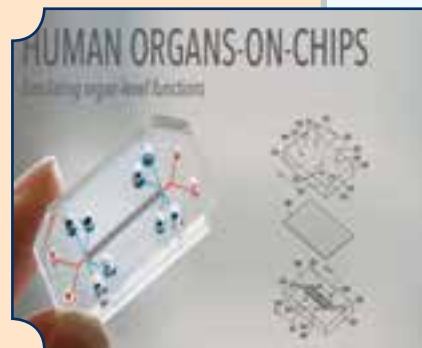
# News Of National and International Importance

## 1. Bisphenol A (BPA)

A recent study conducted in Thiruvananthapuram (Kerala) suggests that Bisphenol A may indirectly contribute to the spread of vector-borne diseases in humans and animals. This mosquito is a major vector of West Nile virus, Rift Valley fever virus and avian pox in tropical and subtropical countries. Which store things like food, water bottles and beverages. The chemical is widely used to soften plastics, paints and other products. When ingested, it disrupts the endocrine system by interfering with hormones and affects the brain and prostate gland of fetuses, infants and children.

## 2. Organ on a Chip

The recent U.S. Food and Drug Administration Modernization Act 2.0 brought green-lit computer-based and experimental alternatives to animals to test new drugs. The move is expected to boost research and development of organ chips. Organ chips are tiny devices that contain human cells. These are used to mimic the environment in human organs, including the movement of blood flow and breathing, which serves as a synthetic environment in which to test new drugs. This can promote the research and development of organ chips. This can reduce the cost of research and development of drugs. It is being used to reduce the possibility of contamination and spread of disease from animals. Organ chips can be used to develop personalized medicine for individual patients.



## 3. Augmented Reality (AR)

MIT researchers have created an augmented reality headset that enables users to identify objects hidden inside a box or at the bottom of a pile. The headset, called the X-AR, combines computer vision and wireless perception to automatically detect a specific object that is not visible.

**AR and VR:** Augmented Reality (AR) augments your surroundings by adding digital elements to the live view, often using the camera on a smartphone. Virtual Reality (VR) is a fully immersive experience that replaces a real-life environment with a simulated environment.

## 4. Raisina Dialogue

Italian PM Giorgia Meloni will be the chief guest at the 8th Raisina Dialogue. The Raisina Dialogue is India's premier conference on geopolitics and geo-economics committed to addressing the most challenging issues facing the global community. Every year, the event is organized to discuss the state of the world and collaborate on a wide range of contemporary matters. Leaders from politics, business, media and civil society converge in New Delhi to explore opportunities. The dialogue is structured as a multi-stakeholder, cross-sectoral discussion, involving heads of state, cabinet ministers and local government officials.



## 5. Adi Ganga Project

Recently the National Mission for Clean Ganga announced plans to revive the Adi Ganga project. About Rs 650 crore has been allocated for this project. The project aims to restore the river and provide a permanent solution to the problem of pollution. The project is being implemented in collaboration with the World Bank and aims to improve the water quality and ecosystems of the Ganga, Brahmaputra and Meghna river basins.

## 6. Mission Shakti

The Supreme Court has sought more details from the government on Mission Shakti, a comprehensive scheme for the safety, security and empowerment of women. 'Mission Shakti' is a scheme aimed at strengthening interventions for women safety, security and empowerment. 'Mission Shakti' has two sub-schemes - 'Sambal' and 'Samarthya'. The "Sambal" sub-scheme is for the safety and security of women, while the "Samarthya" sub-scheme is for the empowerment of women. The scheme seeks to empower women economically, exercising the option of leading an independent life in an environment free from violence and danger.



## 7. Whip

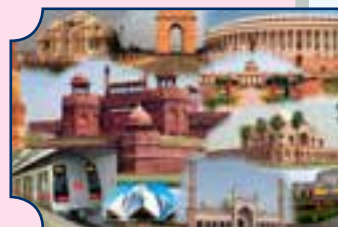
Recently, the Supreme Court held that members of a House are bound by the 'whip', and if a section of legislators of a political party that is part of the ruling coalition says it does not want to go along with the coalition, So the MLA can be disqualified. In parliamentary parlance, whip can refer to a written order to members of a party in the House to follow a certain order and to a designated official of the party who is authorized to issue such an order. The term is derived from the old British practice of "whipping" MPs to make them follow the party line.

## 8. Right Against self-Incrimination

Recently, the Supreme Court refused to hear the plea seeking bail in the excise policy case after Delhi Deputy Chief Minister was sent to CBI custody till March 4, 2023. The Supreme Court disallowed the Deputy CM to approach him directly under Article 32 of the Constitution, as the remedy available to him was to approach the High Court under Section 482 of the CrPC. The court rejected his arguments that he had a right against self-incrimination. Article 20(3) in Part III (Fundamental Rights) of the Indian Constitution states, "No person accused of any offense shall be compelled to be a witness against himself."

## 9. Adopt A Heritage Scheme

Recently an archaeologist from USA criticized India's "Adopt a Heritage Scheme". The 'Adopt a Heritage Scheme - Apni Dharohar, Apni Pehchan' scheme is an initiative launched by the Ministry of Tourism in collaboration with the Ministry of Culture and the Archaeological Survey of India. It was launched on World Tourism Day in September 2017. The Government hereby invites institutions including public sector companies, private sector firms and individuals to develop selected monuments and heritage and tourism sites across India.



## 10. 1,300 Year Old Buddhist Stupa

The Archaeological Survey of India (ASI) found a 1,300-year-old stupa at a mining site in Odisha's Jajpur district. This is the place from where Khondalite stones were supplied for the beautification project of the 12th century Shri Jagannath Temple at Puri. This archaeological property was found at Parbhadi which is located near Lalitagiri, a major Buddhist complex with a large number of stupas and monasteries. The stupa may be 4.5 meters high and preliminary assessments suggest that it may date back to the 7th or 8th century.



## 11. BIMSTEC

Recently India hosted the first meeting of the Governing Board of BIMSTEC Energy Center (BEC). Keeping in view the current energy scenario in the BIMSTEC region, the meeting recommended addition of additional sectors under special branches of BEC. These are (1) cyber security, (2) green hydrogen and (3) energy conversion. BIMSTEC is an economic bloc that came into existence on 6 June 1997 through the Bangkok Declaration. BIMSTEC is an international organization of seven South Asian and South East Asian countries. It is home to 1.73 billion people and has a combined GDP of \$3.8 trillion. Under this, the two leaders agreed to set up a joint task force for mutual recognition of qualifications.



## 12. World Wildlife Day (WWD)

March 3 known as World Wildlife Day (WWD) is observed annually to draw attention to the issues of conservation of flora and fauna. The theme for World Wildlife Day 2023 is "Partnerships for Wildlife Conservation". In 2013, the United Nations General Assembly (UNGA) declared 3 March as United Nations World Wildlife Day to raise awareness about protecting the world's wild animals and plants and to adopt the Convention on International Trade in Endangered Species.

## 13. Hubble Space Telescope

Recently the Hubble Space Telescope (known for recording awe-inspiring images of the universe while making advances in the field of astronomy) is in danger. A study shows that there is an increase in the number of images recorded by Hubble that are degraded by passing satellites.

### Hubble Space Telescope:

- The Hubble Space Telescope is a large telescope in space.
- It was launched into its orbit on April 24, 1990 with the help of Discovery.
- Hubble orbits approximately 535 kilometers (332 mi) above Earth.
- The successor to Hubble is the James Webb Space Telescope (JWST).
- Hubble takes clear images of objects in the sky such as planets, stars and galaxies. Hubble has made more than one million observations so far.



## 14. Judicial Custody

Recently Delhi's Rouse Avenue Court sent former Deputy Chief Minister of Delhi to judicial custody till March 20 in a corruption case related to alleged irregularities in the scrapped excise policy.

**Section 57 of the Code of Criminal Procedure (CrPC):** It states that no person arrested without warrant can be detained for more than 24 hours unless a special order of the Magistrate is made under section 167. It states that if the investigation cannot be completed within 24 hours, the person detained can be kept in custody even after a special order of the Magistrate, if there are well-established grounds to believe the charges against him.

**Section 436A of CrPC:** A person in judicial custody, who has served half of the maximum sentence that can be awarded for an offence, can apply for default bail if his trial is pending.

### 15. Yellowstone National Park (YNP)

Yellowstone National Park is celebrating its 151st anniversary. Yellowstone National Park is widely considered to be the world's first national park. Located in the border region between Montana and Idaho in the United States. It was established by the 42nd United States Congress with the Yellowstone National Park Protection Act. It covers an area of more than 9,000 km<sup>2</sup>, including lakes, valleys, rivers, iconic geothermal features such as Old Faithful Geyser, and mountain ranges.

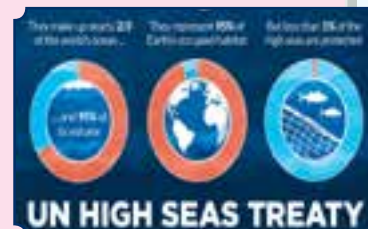


### 16. United Nations High Seas Treaty Draft Agreement

Recently the members of the United Nations agreed to the Treaty on the High Seas to ensure the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction.

Also known as the 'Paris Agreement for the Ocean', this treaty deals with Biodiversity Beyond National Jurisdiction (BBNJ) and has been under discussion for many years.

The treaty was to be negotiated under the United Nations Convention on the Law of the Sea (UNCLOS) which regulates the rights of countries with respect to marine resources.

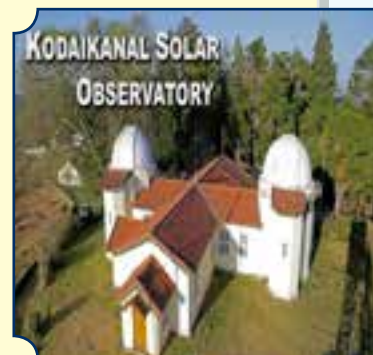


### 17. Kodaikanal Solar Observatory (KoSO)

Solar physicists from the Indian Institute of Astrophysics (IIA), Bengaluru and the Aryabhata Research Institute of Observational Sciences (ARIES), Nainital (both under the Department of Science and Technology) have digitized 1.48 lakh solar images captured since 1904. For more than a century, the Kodaikanal Solar Observatory (KoSO) has been observing the Sun, capturing images of sunspots, and recording changes in its behavior.

#### About Kodaikanal Solar Observatory:

- KoSO, which is owned and operated by IIA, is one of the oldest observatories in the world studying the Sun.
- The Solar Physics Observatory opened on 1 April 1899 and was later named the Kodaikanal Solar Observatory (KoSO).



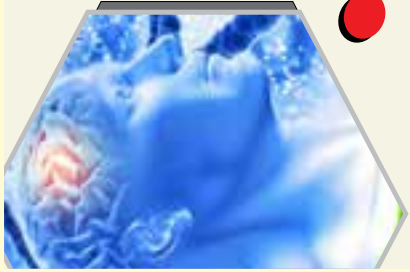
### 18. Hypersonic Missiles

Russia used powerful weapons, including rare hypersonic missiles, in the Ukraine attack that killed at least nine people. A hypersonic missile is a weapon system that can fly at a speed of Mach 5 or more i.e. moving five times the speed of sound. The manoeuvrability of a hypersonic missile is what differentiates it from a ballistic missile as the latter follows a ballistic trajectory. Thus unlike ballistic missiles, hypersonic missiles do not follow a ballistic trajectory and can be guided to the intended target.



## Current Affairs at a Glance

1. Zero Discrimination Day was held on 1 march. The theme for Zero Discrimination Day for this year is "Save lives: Decriminalize".
2. World Wildlife Day was celebrated on 3rd march with theme 'Partnerships for Wildlife Conservation'.
3. International Women's Day was observed on 8th March. Theme of 2023 is – 'DigitALL: Innovation and technology for gender equality'.
4. Mansukh Mandaviya released the book titled 'India's Vaccine Growth Story' authored by Sajjan Singh Yadav.
5. A book India's Struggle for Independence - Gandhian Era authored by Jyotimani and G Balan was released.
6. INS Trikanth participated in Sea Phase-I of the International Maritime Exercise/Cutlass Express 2023 (IMX/CE-23) held in the Gulf from 05 to 09 March 2023.
7. India-France joint military exercise FRINJEX-23 was held in Thiruvananthapuram. This exercise is focused on Humanitarian Assistance and Disaster Relief.
8. Mirabai Chanu won BBC Indian Sportswoman of The Year for 2022.
9. Bola Tinubu elected as the new President of Nigeria.
10. Vietnam parliament elects Vo Van Thuong as new President.
11. India ranks 108th in the Electoral Democracy Index of the V-dem Democracy report 2023.
12. Australia's Deakin University has become the first ever foreign university to establish an international branch campus (IBC) in the smart business district of GIFT City.
13. President Murmu launched 'Catch the Rain-2023' campaign. The campaign's central idea is the sustainability of drinking water sources.
14. 'World's first' bamboo crash barrier installed on Maharashtra highway.
15. SC formed five-member expert committee to look into Hindenburg report; headed by Former SC judge Abhay Manohar Sapre.
16. Maunaganj became the 53rd district of Madhya Pradesh.
17. Madhya Pradesh government launched Ladli Bahna scheme for women. It aims to increase the economic independence of women, improve their health and nutritional status, and increase their influence on family decisions.
18. A two-day Millet Mahotsav was organised by the Ministry of Food Processing Industries at Agra, Uttar Pradesh, from 3-4 March, 2023.
19. The President of India, Smt Droupadi Murmu inaugurated the 7th International Dharma Dhamma Conference, organised by the India Foundation in collaboration with the Sanchi University of Buddhist-Indic Studies, Bhopal.
20. The Central government has announced that the gold jewelry and other gold artifacts will be prohibited from sale without the mandatory Hallmark Unique Identification Number (HUID) from April 1, 2023.
21. Union Minister Ashwini Vaishnaw is flag off PM Jan Aushadhi Train. The medicine train will become a medium of awareness about this scheme among the people.
22. PM Narendra Modi inaugurates 3rd Session of National Platform for Disaster Risk Reduction. NPDRR aimed at making India disaster resilient by 2030.
23. Ashwini Vaishnaw released 'Go Green, Go Organic' cover for Sikkim.
24. Delhi's Indira Gandhi International Airport (IGIA) has been declared one of the best airports in the Asia Pacific by Airports Council International (ACI). It has also been adjudged as one of the cleanest airports in the region.



- ◆ Finance Minister Nirmala Sitharaman, presenting the Union Budget back in 2019, had proposed to initiate steps for creating a stock exchange under the market regulator's ambit. The proposal was cleared in September 2021.
- ◆ On February 22, the National Stock Exchange of India received the final approval from the markets regulator Securities and Exchange Board of India (SEBI) to set up a Social Stock Exchange (SSE).

- ◆ The SSE would function as a separate segment within the existing stock exchange and help social enterprises raise funds from the public through its mechanism.
- ◆ It would serve as a medium for enterprises to seek finance for their social initiatives, acquire visibility and provide increased transparency about fund mobilisation and utilisation.
- ◆ Retail investors can only invest in securities offered by for-profit social enterprises (SEs) under the Main Board.
- ◆ In all other cases, only institutional investors and non-institutional investors can invest in securities issued by SEs.

### About Social Stock Exchange

### Why in Broadcast

### Disclosures Required

- ◆ SEBI's regulations state that a social enterprise should submit an annual impact report in a prescribed format.
- ◆ The report must be audited by a social audit firm and has to be submitted within 90 days from the end of the financial year.
- ◆ Listed NPOs, on a quarterly basis, are specifically required to furnish details about the money they have raised category-wise, how they have been utilised and the unutilised balance amount. The latter needs to be furnished until the proceeds are fully utilised or the purpose has been achieved.

# Social Stock Exchange

### Recognizing as Social Enterprise

- ◆ Any non-profit organisation (NPO) or for-profit social enterprise (FPSEs) that establishes the primacy of social intent would be recognised as a social enterprise (SE), which will make it eligible to be registered or listed on the SSE.
- ◆ The 17 plausible criteria as listed under Regulations 292E of SEBI's ICDR (Issue of Capital and Disclosure Requirements) Regulations, 2018 form a basis of eligibility for organizations to be recognized as SEs.
- ◆ Corporate foundations, political or religious organisations or activities, professional or trade associations, infrastructure and housing companies (except affordable housing) would not be identified as an SE.

### Raising Money From Social Enterprise

- ◆ It is mandatory that the NPO is registered with the SSE for facilitating the issuance.
- ◆ The instrument must have a specific tenure and can only be issued for a specific project or activity that is to be completed within a specified duration as mentioned in the fund-raising document (to be submitted to the SSE).
- ◆ For-Profit Enterprises (FPEs) however, need not register with social stock exchanges before it raises funds through SSE.
- ◆ FPEs must comply with all provisions of the ICDR Regulations when raising through the SSE.
- ◆ NPO may choose to register on the SSE and not raise funds through it but via other means. However, they would have to make necessary disclosures about the same.



- ◆ To honour the announcement of the discovery of the "Raman Effect," the Indian government under PM Rajiv Gandhi designated February 28 as National Science Day in 1986.
- ◆ This year's celebration of national science day will focus on "Global Science for Global Wellness" in light of the G20 presidency of India.

### Why in Broadcast

### Significance of the Raman Effect

- ◆ The Raman effect forms the basis for Raman spectroscopy which is used by chemists and physicists to gain information about materials.
- ◆ With the invention of lasers and the capabilities to concentrate much stronger beams of light, the uses of Raman spectroscopy have only increased over time.
- ◆ It is used to monitor manufacturing processes in the petrochemical and pharmaceutical industries.
- ◆ Illegal drugs captured at a crime scene can be analysed rapidly with its help without breaking the evidence seal on the plastic bag.
- ◆ Using a fibre-optic probe, one can analyse nuclear waste material from a safe distance.
- ◆ It can provide specific biochemical information that may foreshadow the onset of cancer and other life-threatening illnesses.

## National Science Day

### About CV Raman

- ◆ Raman was born to a family of Sanskrit scholars in Trichy (present-day Tiruchirappalli) in the Madras Presidency in 1888.
- ◆ He received a BA degree from Presidency College in Madras, and while studying for his MA degree, at the age of 18, he got published in the Philosophical Magazine: this was the first research paper ever published by Presidency College.
- ◆ A full-time civil servant, Raman began after-hours research at the Indian Association for the Cultivation of Science (IACS).
- ◆ At the age of 29, he resigned from his civil services job and took up a professorship in Presidency College, Calcutta.

### Discovering the Raman Effect

- ◆ Through his journey to England, while passing through the Mediterranean Sea, Raman was most fascinated by the sea's deep blue colour
- ◆ In the first report to Nature, titled "A New Type of Secondary Radiation," CV Raman and co-author KS Krishnan studied about 60 different liquids, and the scattering of light by their constituent molecules.
- ◆ The Raman Effect was the discovery that won physicist Sir CV Raman his Nobel Prize in 1930.

### About Raman Effect

- ◆ The Raman Effect refers to the phenomenon in which when a stream of light passes through a liquid, a fraction of the light scattered by the liquid is of a different colour.
- ◆ This happens due to the change in the wavelength of light that occurs when a light beam is deflected by molecules.
- ◆ When light interacts with an object, it can either be reflected, refracted, or transmitted. One of the things that scientists look at when light is scattered is the particle it interacts with can change its energy.
- ◆ The Raman Effect is when the change in the energy of the light is affected by the vibrations of the molecule or material under observation, leading to a change in its wavelength.



India's score in a World Bank index dropped to 74.4 points out of a possible 100, as the laws that affect the wages and pension of Indian working women do not guarantee them equality with Indian men.

### Why in Broadcast

### About the Report

### Global Findings of the Report

- ◆ Women, Business & The Law 2023, is the ninth in a series of annual studies measuring the laws and regulations that affect women's economic opportunity in 190 economies.
- ◆ This index measures the life cycle of a working woman.
- ◆ It is based on eight indicators—structured around women's interactions with the law as they begin, progress through, and end their careers—aligning with the economic decisions women make at various stages of their lives.
- ◆ The indicators include: Mobility, Workplace, Pay, Marriage, Parenthood, Entrepreneurship, Assets, and Pension.

### Recommendations

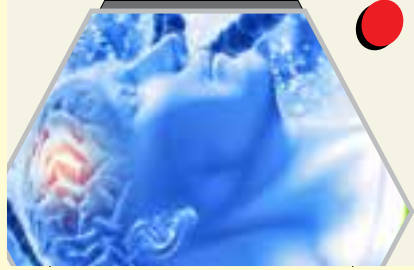
- ◆ India should consider reforms to improve legal equality for women, the report noted that one of the lowest scores for India comes from the indicator assessing laws affecting women's pay.
- ◆ To improve on the Pay indicator, India may consider mandating equal remuneration for work of equal value, allowing women to work at night in the same way as men, and allowing women to work in an industrial job in the same way as men.

## Women Business & The Law 2023

### Key Findings About India

- ◆ India scored higher than the 63.7 average for the South Asian region, though lower than Nepal which had the region's highest score of 80.6.
- ◆ For India, the Index used data on the laws and regulations applicable in Mumbai, viewed as the country's main business city.
- ◆ India gets a perfect score when it comes to constraints on freedom of movement, laws affecting women's decisions to work, and constraints related to marriage. However, India lags behind when it comes to:
  - Laws affecting women's pay,
  - Laws affecting women's work after having children,
  - Constraints on women starting and running a business,
  - Gender differences in property and inheritance,
  - Laws affecting the size of a woman's pension.

- ◆ According to the report, a score of 100 on the Index means that women are on equal standing with men on all the eight indicators being measured.
- ◆ Globally, on average, women enjoy only 77 percent of the legal rights that men do; and nearly 2.4 billion women of working age around the world live in economies that do not grant them the same rights as men.
- ◆ In 2022, the global pace of reforms toward equal treatment of women under the law has slumped to a 20-year low.
- ◆ At the current pace of reform, it would take at least 50 years to approach legal gender equality everywhere.
- ◆ Out of the 190 economies covered in the Index, only 14 scored a perfect 100.
- ◆ The 14 countries include Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Latvia, Luxembourg, The Netherlands, Portugal, Spain, and Sweden.



The Special Window for Affordable and Mid-Income Housing Investment Fund I (SWAMIH) has so far raised Rs 15,530 crore to provide priority debt financing for the completion of stressed, brownfield, and Real Estate Regulation Authority (RERA) registered residential projects that are in the affordable, mid-income housing category.

### Context

### About SWAMIH

- ◆ The Special Window for Affordable and Mid-Income Housing (SWAMIH) Investment Fund I is a social impact fund specifically formed for completing stressed and stalled residential projects.
- ◆ It is a government-backed fund, set up as a Category-II AIF (Alternate Investment Fund) debt fund registered with SEBI, launched in 2019.
- ◆ This fund is a crucial part of the measures taken up by the government to infuse liquidity in stressed projects to help homebuyers across the country get delivery of their stuck apartments.
- ◆ The Fund is sponsored by the Ministry of Finance, Government of India, and is managed by SBICAP Ventures Ltd., a State Bank Group company.

### Who can be benefitted from SWAMIH?

- According to the Finance Ministry, SWAMIH Fund has one of the largest domestic real estate private equity teams focused only on funding and monitoring the completion of stressed housing projects. The Fund considers the following:
  - First-time developers,
  - Established developers with troubled projects,
  - Developers with a poor track record of stalled projects,
  - Customer complaints,
  - NPA accounts,
  - Projects where there are litigation issues
- It is considered the lender of last resort for distressed projects.

### Achievements

- ◆ The Fund has completed 20,557 homes and aims to complete over 81,000 homes in the next three years across 30 tier 1 and 2 cities.
- ◆ It has so far provided final approval to about 130 projects with sanctions worth over Rs 12,000 crore.
- ◆ The Fund has aided in the complete construction of 26 projects and generated returns for its investors.
- ◆ It had a crucial role in the growth of many ancillary industries in the real estate and infrastructure sector having successfully unlocked liquidity of more than Rs. 35,000 crores.

## SWAMIH Investment Fund

### About Alternative Investment Fund

- ◆ An AIF is a particular kind of investment vehicle that collects funds from several participants to invest in assets other than conventional stocks, bonds, and cash.
- ◆ These resources could consist of commodities, real estate, private equity, hedge funds, or other unconventional ventures.
- ◆ AIFs are often sold to high-net-worth individuals and institutional investors who have the expertise and resources to invest in more complicated and illiquid assets.
- ◆ In India, AIFs are defined under Regulation 2(1)(b) of the Securities and Exchange Board of India (SEBI) Regulations (AIFs), 2012.
- ◆ They do not include funds covered under the SEBI (Mutual Funds) Regulations, 1996, SEBI (Collective Investment Schemes) Regulations, 1999, or any other regulations of the Board to regulate fund management activities.



**Day-** World Water Day is held every year on “22 March” to increase awareness on crucial importance of water to all living things.

**Theme-** Theme of the Year 2023 is “Accelerating Change to solve the water and sanitation crisis”

### Context

### Origin

### Facts About Water Resources in India

# World Water Day 2023

### Organisations Involved and Related Activities

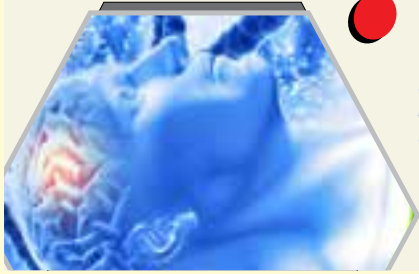
### Sustainable Development Goals

- ◆ This day was first formally proposed in Agenda 21 of the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, Brazil.
- ◆ In December 1992, the United Nations General Assembly adopted a resolution by which 22 March of each year was declared World Water Day.

- ◆ UN Water is the convener of the World Water Day and selects the theme for each year in consultation with UN organizations that share an interest in that year's focus.
- ◆ UN-Water also releases the The United Nations World Water Development Report (WWDR) produced annually by the World Water Assessment Programme on World Water Day.
- ◆ UN 2023 Water Conference will also open on World Water Day, 22 March 2023 in which Water Action Agenda will be launched.

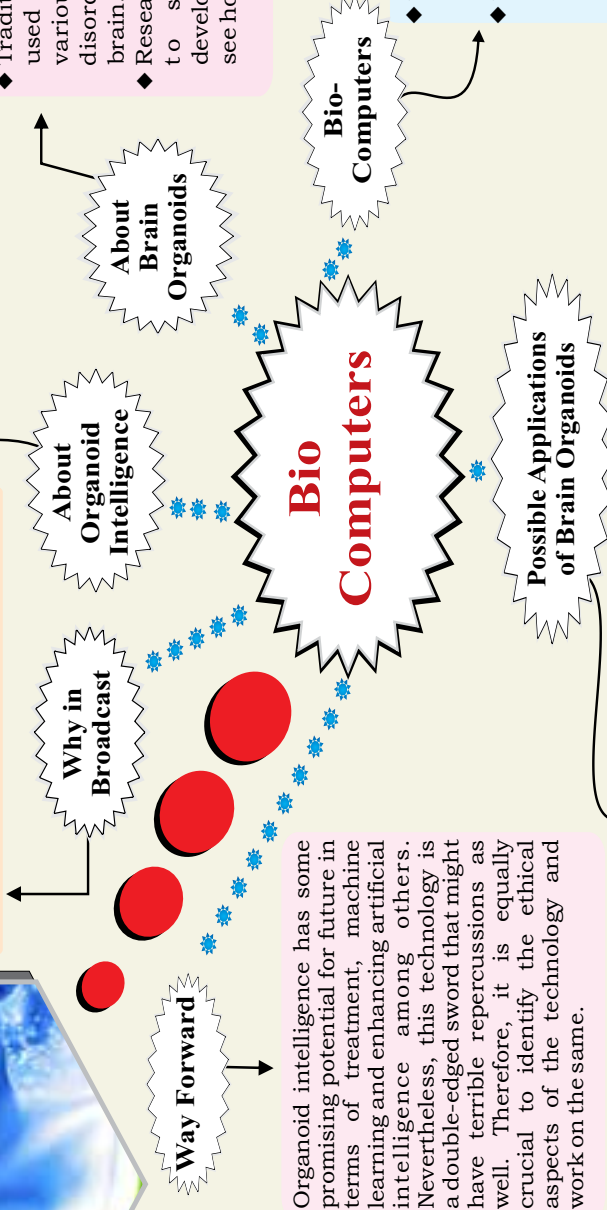
- ◆ Demand for water in India is projected to double from 23.2 trillion litres to 47 trillion litres between 2015- 2025.
- ◆ During the same period, domestic demand is expected to grow by 40 percent to 55 trillion litres.
- ◆ The irrigation sector is the major consumer of groundwater, accounting for 92 percent annually. It will require 14 percent more—592 trillion litres up.
- ◆ The annual groundwater resource of India has been estimated at 433 billion cubic meter, of which 399 bcm is considered to be available for various uses.
- ◆ According to the NITI Aayog in 2019, 75 percent of households do not have drinking water on premise and about 84 percent of rural households do not even have piped water access.
- ◆ There is a need to focus more on the judicious use of ground water along with hygiene and sanitation.

- Sustainable Development Goal- 6 is related to the issue of Clean Drinking Water, Sanitation and Hygiene. Target under SDG-6 to be achieved by 2030 are as follows:
- ◆ Achieve universal and equitable access to safe and affordable drinking water for all.
  - ◆ Achieve access to adequate and equitable sanitation and hygiene for all.
  - ◆ End open defecation, with special attention to the needs of women and girls.



The researchers at Johns Hopkins University (JHU) recently have outlined a plan for a potentially ground-breaking new field of study called "organoid intelligence" which aims to develop "bio computers", where brain cultures grown in the lab coupled with actual sensors and input/output devices.

- ◆ Organoid Intelligence' (OI) describes an emerging multidisciplinary field working to develop biological computing using 3D cultures of human brain cells (brain organoids) and brain-machine interface technologies.
- ◆ While AI aims to make computers more brain-like, OI research will explore how a 3D brain cell culture can be made more computer-like.

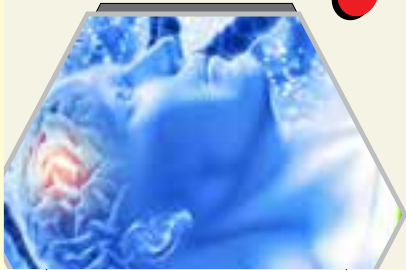


- ◆ Traditionally, researchers have used rat brains to investigate various human neurological disorders. developing human brain.
- ◆ Researchers are now using them to study human brain development and test drugs to see how they respond.

Organoid intelligence has some promising potential for future in terms of treatment, machine learning and enhancing artificial intelligence among others. Nevertheless, this technology is a double-edged sword that might have terrible repercussions as well. Therefore, it is equally crucial to identify the ethical aspects of the technology and work on the same.

- ◆ The JHU researchers plan to combine brain organoids with modern computing methods to create "bio-computers".
- ◆ They have announced plans to couple the organoids with machine learning by growing the organoids inside flexible structures affixed with multiple electrodes.
- ◆ These structures will be able to record the firing patterns of the neurons and also deliver electrical stimuli, to mimic sensory stimuli.
- ◆ The response pattern of the neurons and their effect on human behaviour or biology will then be analysed by machine-learning techniques.

- ◆ Although human brain is slower than the traditional computer, they have acute ability to process complex information which shows the huge potential OI possesses.
- ◆ The scientists expect the technology to harness the processing power of the brain and understand the biological basis of human cognition, learning, and various neurological disorders.
- ◆ They can help in identifying biological underpinnings of human cognition, learning, and memory by comparing the information on brain anatomy, connections, and signalling between "healthy" and "patient-derived" organoids.
- ◆ They could also help decode the pathology of and drug development for devastating neurodevelopmental and degenerative diseases such as Parkinson's disease and microcephaly.



As a part of government's initiative to implement manhole-to-machine-hole scheme for complete removal of manual scavenging, the government is planning to make upcoming housing societies and commercial complexes in the country to mandatorily ensure net zero waste and have their liquid discharge treated.

- ◆ The Ministry of Housing and Urban Affairs will be sending a directive, likely by the end of March, to all State governments to make this part of the building by-laws and ensure implementation
- ◆ The Ministry is also looking at integrating septic tank design into the building by-laws and adherence to standard specifications.
- ◆ Further it is planning on geo-tagging all septic tanks and manholes for proper tracking, and reducing GST on mechanised cleaning vehicles.

**NAMASTE Scheme for Manual Scavengers**

**Context**

**More About The News**

**About Active Net-Zero Waste**

## Manhole to Machine Hole

**Sewage Treatment in India**

**Manhole-to-Machine-Hole Scheme**

- ◆ The NAMASTE (National Action Plan for Mechanised Sanitation Ecosystem) scheme was launched last year, subsuming the already existing Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS)
- ◆ The scheme provides for capital subsidies to sewer cleaners on the purchase of sanitation machinery, training of workers with a stipend amount, and loan subsidies with capped interest rates on sanitation equipment.
- ◆ Undertaken jointly by the Social Justice Ministry and the Ministry of Housing and Urban Development, the government is expected to spend ₹360 crore over the next four years on the scheme

- ◆ As per the Ministry of Social Justice and Empowerment estimates 400 people have died while cleaning sewers and septic tanks since 2017
- ◆ Finance Minister as part of her budget speech for 2023-24 recently announced that all cities and towns will be enabled for 100% transition of sewers and septic tanks from manhole to machine-hole mode.

- ◆ Achieving net zero waste means reducing, reusing, and recovering waste streams (sludge) to convert them to valuable resources so that zero solid waste is sent to landfills.
- ◆ According to a Ministry of Housing and Urban Affairs' 2021 report titled 'Circular Economy in Municipal Solid and Liquid Waste', the country's economy could also be boosted (₹3,285 crore annually) if the sale of treated sewage is institutionalised.

- ◆ India currently generates 72,368 million litres per day of urban wastewater of which only 28% is treated, implying that 72% of untreated wastewater may be entering rivers, lakes, or groundwater.
- ◆ Experts believe a mechanised sewage system coupled with the mandatory zero net waste clause for housing and commercial complexes was important for achieving the Sustainable Development Goals (SDGs) as well.
- ◆ The United Nations SDG 6.3 aims at "halving the proportion of untreated wastewater and substantially increase recycling and safe reuse globally"
- ◆ The government is planning to review the Indian standards for mechanised cleaning equipment and consider differential tariffs rates for residential and commercial de-sludging.
- ◆ A Make in India start-up for promoting low-cost technological solutions like mechanical spades as well as sensor sticks for gas detection is also being considered.

## Government Initiative for Economic Development

- A Special Food Processing Fund of Rs. 2,000 crore (US\$ 242.72 million) was set up with National Bank for Agriculture and Rural Development (NABARD) to provide affordable credit for investments in setting up Mega Food Parks (MFP) as well as processing units in the MFPs.
- Deendayal Port Authority (DPA) announced plans to develop two Mega Cargo Handling Terminals on a Build-Operate-Transfer (BOT) basis under Public-Private Partnership (PPP) Mode at an estimated cost of Rs. 5,963 crore (US\$ 747.64 million).
- The Reserve Bank of India (RBI) approved international trade settlements in Indian rupees (INR) in order to promote the growth of global trade with emphasis on exports from India and to support the increasing interest of the global trading community.
- National Bank for Financing Infrastructure and Development (NaBFID) is a bank that will provide non-recourse infrastructure financing and is expected to support projects from the first quarter of FY2022-23; it is expected to raise Rs. 4 lakh crore (US\$ 53.58 billion) in the next three years.
- The Ministry of Labour and Employment has taken a number of steps to streamline labour laws to make conducting business easier. By condensing, combining, and rationalising the pertinent provisions of 29 Central Labour Laws, the Government has notified four labour codes: the Code on Wages, 2019, the Industrial Relations Code, 2020, the Code on Social Security, 2020, and the Code on Occupational Safety, Health, and Working Conditions, 2020.
- In order to incentivise new domestic companies to set up their manufacturing units in India, the government has extended the concessional tax rate of 15% to March 31, 2024.
- The government introduced the India Industrial Land Bank (IILB), which is a GIS-based portal - a one-stop repository of all industrial infrastructure-related information - connectivity, infrastructure, natural resources, terrain, plot-level information on vacant plots, line of activity, and contact details.
- Government of India increased FDI in the defence sector by increasing it to 74% through the automatic route and 100% through the government route.
- The government has amended rules of the Foreign Exchange Management Act (FEMA), allowing up to 20% FDI in insurance company LIC through the automatic route.
- The Union Cabinet announced that to boost the telecom sector, it will allow 100% FDI via the automatic route, up from the previous 49%.

## India's Economic Prospective

- Lower-middle income Developing/ Emerging economy
- Population:**
  - 1,417,173,173 (2nd; 2022 est.)
- GDP:**
  - \$3.469 trillion (nominal; 2022 estimated)
  - \$11.665 trillion (PPP; 2022 estimated)
- GDP Rank:**
  - 5th (nominal; 2022)
  - 3rd (PPP; 2022)
- GDP Growth:**
  - 6.8% (2022)
  - 6.1% (2023f)
  - 6.8% (2024f)
- GDP per capita:**
  - \$2,466 (nominal; 2022 est.)
  - \$8,293 (PPP; 2022 est.)
- GDP per capita rank:**
  - 142nd (nominal; 2022)
  - 125th (PPP; 2022)
- GDP by sector:**
  - Agriculture: 18.8%
  - Industry: 28.2%
  - Services: 53%
- GDP by component:**
  - Private final consumption: 60.1%
  - Government final consumption: 10.7%
  - Gross fixed capital formation: 29.2%
  - Exports of goods and services: 22.7%
  - Imports of goods and services: 27.4%
  - Other source: 4.7%
- (FY 2022-23)**
  - **Inflation (CPI)-** 6.44% (February 2023)
  - **Base borrowing rate-** 4.50% (11 November 2022)
- Population below poverty line:**
  - 3% in extreme poverty (2022 est.)
  - 10.01% on less than \$2.15/day (2019)
- Human Development Index:**
  - India ranks 132 out of 191 countries
- Corruption Perceptions Index:**
  - India rank 85 Out of 180 countries
- Labour force:**
  - 48.7% employment rate (2020)
- Labour force by occupation:**

- The government amended the Foreign Exchange Management (non-debt instruments) Rules, 2019, to allow the 74% increase in FDI limit in the insurance sector.
- The Government of India increased FDI in the defence sector by increasing it to 74% through the automatic route and 100% through the government route.
- The government allowed 100% FDI in the telecom sector.
- The Securities and Exchange Board of India (SEBI) introduced the idea of 'accredited' investors in the Indian securities market to explore a new channel for raising funds.
- In the Union Budget 2021-22, the finance bill proposed amendments to allow FPIs to participate in the debt financing of emerging investment vehicles such as REITs and InvITs. This move is aimed at enhancing funding for infrastructure and real estate.
- The international branch of the National Payments Corporation of India (NPCI), NPCI International Payments (NIPL), has teamed with Liquid Group, a cross-border digital payments provider, to enable QR-based UPI payments to be accepted in 10 countries in north and southeast Asia.
- Prime Minister Mr. Narendra Modi launched e-RUPI, a person and purpose-specific digital payment solution. e-RUPI is a QR code or SMS string-based e-voucher that is sent to the beneficiary's cell phone. Users of this one-time payment mechanism will be able to redeem the voucher at the service provider without the usage of a card, digital payments app, or internet banking access.
- The Parliament passed the General Insurance Business (Nationalisation) Amendment Bill. The bill aims to allow privatisation of state-run general insurance companies.
- The Asian Development Bank (ADB) has approved a US\$ 250-million loan to support development of the National Industrial Corridor Development Programme (NICDP). This is a part of the US\$ 500-million loan to build 11 industrial corridors bridging 17 states.
- India, the US, Israel and the UAE established a new quadrilateral economic forum to focus on infrastructure development projects in the region and strengthen bilateral co-operation.
- Mega Investment Textiles Parks (MITRA) scheme was launched to establish world-class infrastructure in the textile sector and establish seven textile parks over three years.

## Summary of Budget and Economic Survey

**Saptarishi-** Union budget 2023-24 has listed seven priorities which will complement each other and act as the 'Saptarishi' guiding us through the Amrit Kaal. They are as follows:

- Inclusive Development
- Reaching the Last Mile
- Infrastructure and Investment
- Unleashing the Potential

- Agriculture: 42.60% [22]
- Industry: 25.12% [23]
- Services: 32.28% [24]
- (2019)
- **Unemployment:-** 7.14% (January 2023)
- **Gross savings-** 29.345% of GDP (2022)

### Purchasing Managers Index:

- 55.3 Manufacturing (Feb 2023)
- 59.4 Services (Feb 2023)

### Exports- \$421.894 billion (FY2021-22)

#### Export goods:

- Manufacturers 70.8%
- Fuels and mining products 17.3%
- Agricultural products 11.5%
- Others 0.4%

#### Main export partners:

- United States
- United Arab Emirates
- China
- Bangladesh
- Netherlands

### Imports- \$612.608 billion (FY2021-22)

#### Import goods:

- Agricultural products 5.7%
- Fuels and mining products 36.5%
- Manufacturers 49.4%
- Other 8.3 % (2019)

#### Main import partners:

- China
- United Arab Emirates
- Saudi Arabia
- United States
- Iraq

#### Gross external debt:

- \$617.1 billion (2022)[37]

#### Foreign reserves:

- \$571.948 billion (5th)
- (as of 17 February 2023)

- Green Growth
- Youth Power
- Financial Sector

### Schemes and Initiatives Related to Agriculture and Allied Activities

#### 1. Digital Public Infrastructure for Agriculture -

- It will be built as an open source, open standard and interoperable public good.
- This will enable inclusive, farmer-centric

solutions through relevant information services for crop planning and health, improved access to farm inputs, credit, and insurance, help for crop estimation, market intelligence, and support for growth of agri-tech industry and start-ups.

## 2. Atmanirbhar Horticulture Clean Plant Program -

- It will be launched to boost availability of disease-free, quality planting material for high value horticultural crops at an outlay of Rs 2,200 crore.
- Currently, India is the second largest producer of horticulture crops in the world and more than 10% of the world's fruit production is produced in India.
- The horticulture sector in India produces around 320 million tons of products and contributes about 33% of the Gross Value Addition (GVA).

## 3. Agriculture Accelerator Fund -

- It will be set-up to encourage agri-startups by young entrepreneurs in rural areas, which will aim at bringing innovative and affordable solutions for challenges faced by farmers.
- It will also bring in modern technologies to transform agricultural practices, increase productivity and profitability.

## 4. Shree Anna -

- Budget 2023-24 has provisioned to make India a global hub for "Shree Anna" (millets).
- India is the largest producer and second largest exporter of 'Shree Anna' in the world as it grows several types of 'Shree Anna' such as jowar, ragi, bajra, kuttu, ramdana, kangni, kutki, kodo, cheena, and sama.
- Millets have high nutritional benefits and can be grown in dry climatic conditions with low input cost.

## 5. Provisions related to agriculture credit and cooperative societies-

- Agriculture credit target will be increased to Rs 20 lakh crore with focus on animal husbandry, dairy and fisheries.
- Also, the government will launch a new sub-scheme of PM Matsya Sampada Yojana with targeted investment of Rs 6,000 crore to further enable activities of fishermen, fish vendors, and micro & small enterprises, improve value chain efficiencies, and expand the market.
- Computerization of 63,000 Primary Agricultural Credit Societies (PACS) and formulation of model bye-laws for PACS to enable them to become multipurpose PACS.
- A national cooperative database is being prepared for country-wide mapping of cooperative societies.

## Initiatives Related to Health and Education Sector

### 1. Expenditure-

- Expenditure on the health and education sector has been raised to 2.1% and 2.9% of GDP respectively.

### 2. Elimination of Sickle Cell Anemia -

- A mission to eliminate Sickle Cell Anaemia by 2047 will be launched.
- It will entail awareness creation, universal screening of 7 crore people in the age group of 0-40 years in affected tribal areas, and counseling through collaborative efforts of central ministries and state governments.
- It is a chronic single gene disorder in which the red blood cells (RBCs) become sickle/crescent shape due to abnormal coding of hemoglobin.
- This causes the RBCs to die prematurely leading to shortage of RBCs or anemia.

### 3. Nursing colleges -

- 157 new nursing colleges will be established in co-location with the existing 157 medical colleges established since 2014.

### 4. Teacher's training -

- It will be re-envisioned through innovative pedagogy, curriculum transaction, continuous professional development, dipstick surveys, and ICT implementation.
- District Institutes of Education and Training will be developed as vibrant institutes of excellence for this purpose.

### 5. National Digital Library -

- It will be set-up for facilitating availability of quality books across geographies, languages, genres and levels, and device agnostic accessibility for children and adolescents.
- Moreover, the states will be encouraged to set up physical libraries for them at panchayat and ward levels and provide infrastructure for accessing the National Digital Library resources.
- The National Book Trust, Children's Book Trust and other sources will be encouraged to provide and replenish non-curricular titles in regional languages and English to these physical libraries.

### 6. Bharat SHRI-

- 'Bharat Shared Repository of Inscriptions' will be set up in a digital epigraphy museum, which will provide digitization of one lakh ancient inscriptions in the first stage.

## Schemes and Initiatives Related to Green Growth

### 1. PM-PRANAM:

- PM Programme for Restoration, Awareness,

Nourishment and Amelioration of Mother Earth (PM-PRANAM) will be launched to incentivize states and union territories to promote alternative fertilizers and balanced use of chemical fertilizers.

## 2. MISHTI scheme :

- Building on India's success in afforestation, 'Mangrove Initiative for Shoreline Habitats & Tangible Incomes' also known as MISHTI will be taken up for mangrove plantation along the coastline and on salt pan lands.
- It will be implemented through convergence between MNREGA and CAMPA funds, as well as other sources.
- South Asia houses some of the most extensive areas of mangroves globally, while Indonesia hosts one-fifth of the overall amount.
- India holds around 3% of South Asia's mangrove population.
- West Bengal has largest area under mangroves in India, with Sundarbans as the largest mangrove forest in the world.

## 3. GOBARdhan scheme:

- It was announced that 500 new 'waste to wealth' plants under GOBARdhan (Galvanizing Organic Bio-Agro Resources Dhan) scheme will be established for promoting circular economy.
- These will include 200 compressed biogas (CBG) plants, including 75 plants in urban areas, and 300 community or cluster-based plants.
- Moreover, in due course, a 5% CBG mandate will be introduced for all organizations marketing natural and bio gas and for collection of bio-mass and distribution of bio-manure, appropriate fiscal support will be provided.

## 4. Amrit Dharohar:

- It is a Central Government scheme that will be implemented over the next three years to encourage optimal use of wetlands, and enhance bio-diversity, carbon stock, eco-tourism opportunities and income generation for local communities.

## 5. Bhartiya Prakritik Kheti Bio-Input Resource Centres:

- It will incentivise farmers to adopt natural farming over the next 3 years.
- 10,000 Bio-Input Resource Centres will be set-up, creating a national-level distributed micro-fertilizer and pesticide manufacturing network.

## 6. National Green Hydrogen Mission:

- It is a program to incentivise the commercial production of green hydrogen and make India a net exporter of the fuel.
- It aims to develop green hydrogen production capacity of at least 5 MMT (Million Metric Tonne) per annum, alongside adding renewable energy

capacity of about 125 GW (gigawatt) in India by 2030.

## 7. Other provisions:

- A vision for "LiFE", or Lifestyle for Environment, to spur a movement of environmentally conscious lifestyle.
- Battery Energy Storage Systems with capacity of 4,000 MWH will be supported with Viability Gap Funding.
- Inter-state transmission system for evacuation and grid integration of 13 GW renewable energy from Ladakh will be constructed.
- Additional funds are allocated to scrap old vehicles of the Central Government and States will also be supported in replacing old vehicles and ambulances.

## Initiatives for Reaching the Last Mile

### 1. PVTG Development Mission:

- It will be launched to improve socio-economic conditions of the particularly vulnerable tribal groups (PVTGs).
- It will provide PVTG families and habitations with basic facilities such as safe housing, clean drinking water and sanitation, improved access to education, health and nutrition, road and telecom connectivity, and sustainable livelihood opportunities.
- An amount of Rs 15,000 crore will be made available to implement the Mission in the next three years under the Development Action Plan for the Scheduled Tribes.

### 2. Eklavya Model Residential Schools:

- In the next three years, centre will recruit 38,800 teachers and support staff for the 740 Eklavya Model Residential Schools, serving 3.5 lakh tribal students.
- Eklavya Residential Model Schools (ERMS) were setup in 1997-98 at par with Navodaya and Kendriya Vidyalayas to impart quality education to tribal students across the country.

### 3. Aspirational Blocks Programme:

- On the success of Aspirational Districts Programme, the Government has launched Aspirational Blocks Programme which will initially cover 500 blocks across 31 states and Union Territories.
- It is a development initiative which aims at improving the performance of areas that are lagging on various development parameters such as health, nutrition, education, agriculture, water resources, financial inclusion, skill development, and basic infrastructure.

### 4. PM Awas Yojana:

- The outlay for PM Awas Yojana is being enhanced

by 66 per cent to over Rs 79,000 crore in the budget 2023-24.

- It is a centrally sponsored scheme which aims to provide affordable houses to the urban poor keeping a target of building 2 crore (20 million) houses by 31 March 2022.
- The two basic components of the scheme are Pradhan Mantri Awas Yojana -Urban (PMAY-U) which is implemented by the Ministry of Housing and Urban Affairs, and Pradhan Mantri Awas Yojana -Gramin (PMAY-G) which is implemented by the Ministry of Rural Development.

#### 5. Upper Bhadra Project:

- A central assistance of Rs5,300 crore will be given to Upper Bhadra Project to provide sustainable micro irrigation and filling up of surface tanks for drinking water.
- It is a major lift irrigation project under implementation in the central region of Karnataka built on Tungbhadra River.

### Initiatives related to Infrastructure and Investment

#### 1. Capital Expenditure-

- Increase in capital investment outlay by 33.4% to Rs10 lakh crore, which is 3.3% of GDP.

#### 2. Urban Infrastructure Development Fund (UIDF)-

- It will be established on the lines of Rural Infrastructure Development Fund (RDIF) through the use of shortfall in priority sector lending.
- This fund will be used by public agencies to create infrastructure in Tier 2 and Tier 3 cities.
- It will be managed by National Housing Bank (NHB).

#### 3. Transportation-

- A capital outlay of Rs2.40 lakh crore has been provided for the Railways, which is the highest ever outlay.
- Creation of one hundred critical transport infrastructure projects, for last and first mile connectivity for ports, coal, steel, fertilizer, and food grains sectors.
- Fifty additional airports, heliports, water aerodromes and advance landing grounds will be revived for improving regional air connectivity.

#### 4. Support to State Governments-

- Continuation of 50-year interest free loan to state governments for one more year to spur investment in infrastructure and to incentivize them for complementary policy actions, with a significantly enhanced outlay of Rs 1.3 lakh crore.
- Fiscal Deficit of 3.5% of GSDP is allowed for states.

#### 5. Unity Malls-

- It will be set-up for promotion and sale of ODOPs (One District, One Product), GI products and handicrafts from all the states of India.

### Unleashing the potential and Youth Power

#### 1. Ease of doing business-

- More than 39,000 compliances have been reduced and more than 3,400 legal provisions have been decriminalized.
- For promoting trust based governance, the Government has introduced the Jan Vishwas Bill to amend 42 Central Acts.

#### 2. Centres of Excellence for Artificial Intelligence-

- To realize the vision of "Make A-I in India and Make A-I work for India", three centers of excellence for Artificial Intelligence will be set-up in top educational institutions.
- Leading industry players will partner in conducting interdisciplinary research, develop cutting-edge applications and scalable problem solutions in the areas of agriculture, health, sustainable cities, traffic management, disaster management, etc.

#### 3. 5G Labs-

- One hundred labs for developing applications using 5G services will be set up in engineering institutions to realize a new range of opportunities, business models, and employment potential.
- The labs will cover applications such as smart classrooms, precision farming, intelligent transport systems, and health care applications.

#### 4. National Data Governance Policy and Entity DigiLocker-

- A Data Governance Policy will enable access to anonymized data to facilitate innovation and research by start-ups and academia.
- Entity DigiLocker will be setup for use by MSMEs, large business and charitable trusts for storing and sharing documents online securely, whenever needed, with various authorities, regulators, banks and other business entities.

#### 5. PM Kaushal Vikas Yojana 4.0-

- It will be launched to skill lakhs of youth within the next three years along with on-job training, industry partnership, and alignment of courses with needs of industry.
- The scheme will also cover new age courses for Industry 4.0 like coding, AI, robotics, mechatronics, IOT, 3D printing, drones, and soft skills.
- To skill youth for international opportunities, 30 Skill India International Centres will be set up across different States.

#### 6. National Apprenticeship Promotion Scheme-

- It will provide stipend support to 47 lakh youth through DBT over the next three years.

### Initiatives related to financial sector

#### 1. National Financial Information Registry-

- It will be set up to serve as the central repository of financial and ancillary information.
- This will facilitate efficient flow of credit, promote financial inclusion, and foster financial stability.

#### 2. Central Processing Centre-

- It will be setup for faster response to companies through centralized handling of various forms filed under the Companies Act.

#### 3 Mahila Samman Savings Certificate-

- It will be made available as a one-time small savings scheme for a two-year period up to March 2025.
- This will offer deposit facility upto Rs 2 lakh in the name of women or girls for a tenor of 2 years at fixed interest rate of 7.5 per cent with partial withdrawal option.

#### 4. Other provisions-

- The maximum deposit limit for Senior Citizen Savings Scheme will be enhanced from Rs 15 lakh to Rs 30 lakh.
- Also, the maximum deposit limit for Monthly Income Account Scheme will be enhanced from Rs 4.5 lakh to Rs 9 lakh for single account and from Rs 9 lakh to Rs 15 lakh for joint account.

### Proposals for Direct and Indirect Taxes

#### 1. Personal Income Tax-

- No Income tax for persons with income up to 7 lakh in the new tax regime.
- Reduction in number of slabs to five and increase in tax exemption limit to Rs3 lakh.
- Standard deduction of Rs 50,000 to salaried individual and Rs 15,000 for pensioners.
- Reduction of highest surcharge rate from 37% to 25% for income above 2 crore.

#### 2. Indirect Tax-

- To exempt excise duty on GST-paid compressed biogas.
- Reduction in basic customs duty on parts of open cells of TV panels, chimney heat coils, certain parts of mobile phones, acid grade fluorspar, crude glycerine, inputs for domestic manufacture of shrimp feed and seeds used in the manufacturing of lab-grown diamonds.
- Increase in custom duty on articles made from gold and platinum, electric kitchen chimney and compounded rubber.
- Increase in National Calamity Contingent Duty (NCCD) on specified cigarettes.

### Macro-Economic Framework at a Glance

- India to witness GDP growth of 6.0 per cent to 6.8 per cent in 2023-24, depending on the trajectory of economic and political developments globally.
- A baseline GDP growth of 6.5% in real terms in FY24.
- Economy is expected to grow at 7% in real terms in the year 2022-23.
- Headline inflation at 6.8% while WPI is at 11.5% in FY23.
- Credit growth to the Micro, Small, and Medium Enterprises (MSME) sector has been remarkably high, over 30.6 per cent, on average during Jan-Nov 2022.
- Gross Non-Performing Ratio (GNPA) at a seven year low of 5%.
- Robust growth in service sector (9.1% of GVA at Basic Prices) in FY23.
- Exports of goods and services as a share of GDP have been highest since FY16.
- India is 7th largest service exporter in the world.
- India is better placed in terms of comfortable forex reserve and low external debt ratio with its forex reserve at \$563 billion as of December 2022.
- Modest growth in debt to GDP ratio and sustained revenue buoyancy over last 2 years.



### Budget Estimates 2023-24

- Total Receipts (Other than borrowings) = Rs 27.2 lakh crore
- Total Expenditure = Rs 45 lakh crore
- Net Tax Receipts = Rs 23.3 lakh crore

- Fiscal Deficit = 5.9% of GDP
- Revenue Deficit = 2.9% of GDP
- Primary Deficit = 2.3% of GDP
- Effective Revenue Deficit = 1.7% of GDP

### Nostro & Vostro Account

- The Reserve Bank of India had approved the opening of nine special Vostro accounts in two Indian Banks (UCO Bank and IndusInd Bank) to facilitate overseas trade in rupee. Sberbank and VTB Bank- the top largest banks of Russia are the first foreign lenders to receive the approval from the RBI.
- A Nostro Account is said to be a record of deposits held by a bank with a foreign bank in the currency of the country holding the funds. A Vostro Account is one that is managed by a correspondent bank on another bank's behalf. The account opened by the Indian bank in the US will be a Nostro account for the Indian bank, while for the US bank, the account will be considered a Vostro account.
- Difference: The difference between the two is that it is described from the point of view of the two different banks i.e., depositor and holder.

### FCRA

- Ministry of Home Affairs, Government of India has cancelled the licenses of some domestic and foreign Non-Governmental Organizations operating independently in the country.

#### The main provision of FCRA:

- It requires every person or NGO wishing to receive foreign donations to be registered under the Act, to open a bank account for the receipt of the foreign funds and to utilise those funds only for the purpose for which they have been received and as stipulated in the Act.
- The Act prohibits receipt of foreign funds by candidates for elections, journalists or newspaper and media broadcast companies, judges and government servants, members of legislature and political parties or their office-bearers, and organisations of a political nature.

#### What are the grounds for obtaining a license?

- NGOs who wish to receive foreign funds have to apply online in a prescribed format along with necessary documents.
- Registration is granted to individuals or organizations that have certain Cultural, Economic, Educational, Religious and Social programs.
- After the submission of application by NGOs, Intelligence Bureau do the necessary inquiry.

- Applicant should not be fictitious or anonymous.
- The applicant should not be guilty of indulging in activities related to religious faith.
- The applicant should not have been prosecuted for causing communal tension or disharmony.
- The applicant should not be guilty of misappropriation of funds.
- The applicant should not indulge in propaganda of sedition.

#### Cancellation of FCRA licence:

- The government reserves the right to cancel the FCRA registration of any NGO if it finds it to be in violation of the Act. Registration can be cancelled for a range of reasons including, if in the opinion of the Central Government, it is necessary in the public interest to cancel the certificate. Once the registration of an NGO is cancelled, it is not eligible for re-registration for three years. All orders of the government can be challenged in the High Court.

### e-Invoicing

- Businesses with an annual turnover of more than 10 crore will soon be required to issue e-invoice.
- E-invoicing or electronic invoicing includes a specific category of GST registered businesses that submit their business-to-business (B2B) invoices and credit-debit notes to the government for verification.
- Businesses have to follow a pre-defined e-invoicing format.
- E-invoice contains details of a unique Invoice Reference Number (IRN) and QR code signed by GST Network (GSTN).

### Trade Deficit

- India's trade deficit spiked to an all-time high of \$31 billion in July as exports shrank while imports continued to surge, triggering concerns about current account deficit and currency.
- The cumulative trade deficit in the first four months of the fiscal more than doubled to over \$100 billion from \$42.1 billion a year ago and three-time increase from July last year.
- Trade deficit or negative balance of trade (BOT) is the gap between exports and imports. When money spent on imports exceeds that earned from exports in a country, trade deficit occurs.

#### Economic Terms

##### Balance of Payments (BoP):

- BoP of a country can be defined as a systematic statement of all economic transactions of a country with the rest of the world during a specific period, usually one year.

- For preparing BoP accounts, economic transactions between a country and the rest of the world are grouped under - Current account, Capital account and Errors and Omissions. It also shows changes in Foreign Exchange Reserves.

#### Current Account:

- It shows export and import of visible (merchandise or goods) and invisibles (services, transfers and income).

#### Capital Account:

- It shows a capital expenditure and income for a country. It gives a summary of the net flow of both private and public investment into an economy. External Commercial Borrowing (ECB), Foreign Direct Investment, Foreign Portfolio Investment, etc. form a part of capital account.

#### Foreign Exchange Reserves:

- The four components of forex reserves are foreign currency assets, gold, special drawing rights and the reserve position in the International Monetary Fund.
- Overall the BoP account can be a surplus or a deficit. If there is a deficit then it can be bridged by taking money from the Foreign Exchange (Forex) Account. If the reserves in the forex account are falling short then this scenario is referred to as BoP crisis.

#### Twin Deficit Problem:

- Current Account Deficit and Fiscal Deficit (also known as “budget deficit” is a situation when a nation’s expenditure exceeds its revenues) are together known as twin deficits and both often reinforce each other, i.e., a high fiscal deficit leads to higher CAD and vice versa.

#### Stagflation:

- It is described as a situation in the economy where the growth rate slows down, the level of unemployment remains steadily high and yet the inflation or price level remains high at the same time.

### Instruments of Monetary Policy

- **Repo Rate:** The interest rate at which the Reserve Bank provides liquidity under the liquidity adjustment facility (LAF) to all LAF participants against the collateral of government and other approved securities.
- **Standing Deposit Facility (SDF) Rate:** The rate at which the Reserve Bank accepts uncollateralised deposits, on an overnight basis, from all LAF participants. The SDF is also a financial stability tool in addition to its role in liquidity management. The SDF rate is placed at 25 basis points below the policy repo rate. With introduction of SDF in April 2022, the SDF rate replaced the fixed

reverse repo rate as the floor of the LAF corridor.

- **Marginal Standing Facility (MSF) Rate:** The penal rate at which banks can borrow, on an overnight basis, from the Reserve Bank by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a predefined limit (2 per cent). This provides a safety valve against unanticipated liquidity shocks to the banking system. The MSF rate is placed at 25 basis points above the policy repo rate.

- **Liquidity Adjustment Facility (LAF):** The LAF refers to the Reserve Bank’s operations through which it injects/absorbs liquidity into/from the banking system. It consists of overnight as well as term repo/reverse repos (fixed as well as variable rates), SDF and MSF. Apart from LAF, instruments of liquidity management include outright open market operations (OMOs), forex swaps and market stabilisation scheme (MSS).

- **LAF Corridor:** The LAF corridor has the marginal standing facility (MSF) rate as its upper bound (ceiling) and the standing deposit facility (SDF) rate as the lower bound (floor), with the policy repo rate in the middle of the corridor.

- **Main Liquidity Management Tool:** A 14-day term repo/reverse repo auction operation at a variable rate conducted to coincide with the cash reserve ratio (CRR) maintenance cycle is the main liquidity management tool for managing frictional liquidity requirements.

- **Fine Tuning Operations:** The main liquidity operation is supported by fine-tuning operations, overnight and/or longer tenor, to tide over any unanticipated liquidity changes during the reserve maintenance period. In addition, the Reserve Bank conducts, if needed, longer-term variable rate repo/reverse repo auctions of more than 14 days.

- **Reverse Repo Rate:** The interest rate at which the Reserve Bank absorbs liquidity from banks against the collateral of eligible government securities under the LAF. Following the introduction of SDF, the fixed rate reverse repo operations will be at the discretion of the RBI for purposes specified from time to time.

- **Bank Rate:** The rate at which the Reserve Bank is ready to buy or rediscount bills of exchange or other commercial papers. The Bank Rate acts as the penal rate charged on banks for shortfalls in meeting their reserve requirements (cash reserve ratio and statutory liquidity ratio). The Bank Rate is published under Section 49 of the RBI Act, 1934. This rate has been aligned with the MSF rate and, changes automatically as and

when the MSF rate changes alongside policy repo rate changes.

- **Cash Reserve Ratio (CRR):** The average daily balance that a bank is required to maintain with the Reserve Bank as a per cent of its net demand and time liabilities (NDTL) as on the last Friday of the second preceding fortnight that the Reserve Bank may notify from time to time in the Official Gazette.
- **Statutory Liquidity Ratio (SLR):** Every bank shall maintain in India assets, the value of which shall not be less than such percentage of the total of its demand and time liabilities in India as on the last Friday of the second preceding fortnight, as the Reserve Bank may, by notification in the Official Gazette, specify from time to time and such assets shall be maintained as may be specified in such notification (typically in unencumbered government securities, cash and gold).
- **Open Market Operations (OMOs):** These include outright purchase/sale of government securities by the Reserve Bank for injection/absorption of durable liquidity in the banking system.

### Central Bank Digital Currency (CBDC)

- The Reserve Bank of India (RBI) had launched digital rupee in the market. Under the Reserve Bank of India Act, 1934, the RBI launched a digital rupee.

#### About Central Bank Digital Currency (CBDC):

- CBDC is a digital form of paper currency that is legal tender issued and backed by a central bank. It is similar to fiat currency and is exchangeable with fiat currency. Digital fiat currency or CBDC can be transacted using wallets backed by the block chain.
- Although the concept of a CBDC was directly inspired by bitcoin, it differs from de-centralized virtual currencies and crypto assets, which are not state-issued, and lack legal tender.

#### Global landscape:

- The Bahamas is the first country to launch its nationwide CBDC Sand Dollar.
- China became the first major economy in the world to operate the digital currency e-CNY in April 2020.

### Windfall Tax

- Wind fall tax imposed by finance ministry.
- Windfall taxes are designed to tax the profits a company derives from external, sometimes unprecedented events. For instance, the energy price hike during the Russia-Ukraine conflict.
- The United States Congressional Research Service (CRS) defines a Windfall as an unearned,

unanticipated gain in income through no additional effort or expense.

- Governments typically levy a one-off tax retrospectively over and above the normal rates of tax on such profits, called windfall tax.

#### Windfall tax on Individuals:

- Windfall taxes can be imposed on individuals who suddenly become prosperous by receiving a significant sum of money through a gift, inheritance, or through game shows, gambling or lottery winnings.

### Electronic Bank Guarantee (e- BG)

- HDFC Bank, India's largest private sector bank, became the first bank in the country to issue an Electronic Bank Guarantee (e-BG) in partnership with National E-Governance Services Limited (NeSL).
- E-BG eliminates the need for the paper-based time consuming process, which often takes 3 to 5 days for completion due to the need for physical pick up from the bank, delivery of courier to the beneficiary, stamping and verification.
- E-BG boosts efficiency and security while enabling the beneficiary to instantly view a bank guarantee on the NeSL portal.
- The e-BG would be issued on the NeSL portal through an API-based digital workflow.
- Digitisation of the overall bank guarantee process ensures ease of doing business for MSMEs, who are the major applicants for bank guarantees.
- The e-BG was developed in consultation with the NeSL, CVC-CBI committee and Indian Banks Association (IBA).

#### Meaning of Bank Guarantee:

- Bank Guarantee is a promise made by the bank to any third person to undertake the payment risk on behalf of its customers.
- A Bank guarantee is given on a contractual obligation between the bank and its customers. Such guarantees are widely used in business and personal transactions to protect the third party from financial losses.
- This guarantee helps a company to purchase things that it ordinarily could not, thus helping businesses grow and promoting entrepreneurial activity.

#### Uses of Bank Guarantee:

- When large companies purchase from small vendors, they generally require the vendors to provide a guarantee certificate from banks before providing such business opportunities.
- Predominantly used for the purchase and sale of goods on a credit basis, where the seller is

assured of payment from the bank in case of default by the buyer.

- Helps in certifying the credibility of individuals, which in turn, enables them in obtaining loans and also aids in business activities.

#### **Line of credit (LOC):**

- LOC is a financial document which imposes an obligation on the bank to make payment to the beneficiary on completion of certain services as required by the applicant. LOC is issued by the bank when the buyer requests his bank to make payment to the seller on the receipt of certain goods or services.

#### **National e-Governance Services Limited (NeSL):**

- NeSL is India's first information utility and is registered with the Insolvency and Bankruptcy Board of India (IBBI) under the aegis of the Insolvency and Bankruptcy Code, 2016 (IBC). The company has been set up by major banks and public institutions. The primary role of NeSL is to act as a repository of legal evidence containing information relating to any loan/claim.

### **National Logistics Policy**

- Prime Minister, Shri Narendra Modi launched the National Logistics Policy in New Delhi. Under the policy Unified Logistics Interface Platform (ULIP) will be prepared as an integrated portal in which information about the location of goods can be obtained on a real-time basis with considerable ease.

#### **Vision of the policy:**

- The vision of the policy is to develop a technologically enabled, integrated, cost-efficient, resilient, sustainable and trusted logistics ecosystem in the country for accelerated and inclusive growth.
- The policy aspires to reduce cost of logistics in India to be comparable to global benchmarks by 2030, endeavour to be among top 25 countries by 2030 in the Logistics Performance Index ranking, and create data driven decision support mechanism for an efficient logistics ecosystem.
- The Policy will be implemented through a Comprehensive Logistics Action Plan (CLAP). The interventions proposed under the CLAP are divided into eight key action areas-
  - Integrated Digital Logistics Systems
  - Standardisation of physical assets and benchmarking service quality standards
  - Logistics Human Resources Development and Capacity Building
  - State Engagement
  - EXIM (Export-Import) Logistics
  - Service Improvement framework

- Sectoral Plan for Efficient Logistics
- Facilitation of Development of Logistics Parks.

#### **Initiatives by government to reduce logistic cost:**

- **Krishi UDAN-** launched in 27 October 2021, aims to ensure seamless, cost-effective, time-bound air transportation and associated logistics for all Agri-produce originating especially from North East, hilly and tribal regions of the country.
- **Bharatmaala-** a flagship project launched in 2015 that aims to transform India's logistics infrastructure.
- **Sagarmala-** launched in March 2015, project is to promote port-led direct and indirect development and to provide infrastructure to transport goods to and from ports quickly, efficiently and cost-effectively.
- **National Infrastructure Pipeline-** launched with projected infrastructure investment of around 111 lakh crore (US\$ 1.5 Trillion) during 2020-2025 to provide world- class infrastructure across the country.
- **PM GatiShakti National Master Plan-** launched on 13th October 2021 for providing multimodal connectivity infrastructure to various economic zones.
- **e-sanchit-** makes the entire consignment clearance process paperless and faceless.
- **e-way bills system-** launched in 1st April 2018, provides the industry with a range of benefits, like as Faster and more seamless movement of goods, both intra- and inter-state.
- **FASTag-** enables automatic deduction of toll fees and allows you to pass through without you having to wait for any kind of cash transaction.
- **GST-** launched in 1 July, 2017, lower the cost of goods and services give a boost to the economy and make the products and services globally competitive.

### **India Ranks First in Sugar Production in the World**

- India has overtaken Brazil to become the first in the world in sugar production.
- India is currently the largest consumer of sugar as well as the second largest exporter in the world.
- India is also the largest producer of sugarcane in the world.

#### **Sugar Industry:**

- Sugar industry is an important agro-based industry affecting the rural livelihood of about 50 million sugarcane farmers and 5 lakh workers directly employed in sugar mills.
- 521 mills operated in the session 2021-22 as against 506 mills operated in the previous

season.

#### **Top sugarcane producing states in India:**

- Uttar Pradesh 2. Maharashtra 3. Karnataka.

#### **Top sugar producing states in India:**

- Maharashtra , Uttar Pradesh

#### **Sugarcane Pricing in India:**

- Payment of Fair and Remunerative Price (FRP) in India is governed by the Sugarcane Control Order 1966 issued under the Essential Commodities Act, 1955.
- The Fair and Remunerative Price (FRP) is determined by the Central Government while the State Advisory Price (SAP) is determined by the State Governments.
- The State Advisory Price fixed by the State Governments is higher than the Fair and Remunerative Price of the Central Government.
- Fair and remunerative price of sugarcane was recommended by the Rangarajan Committee on the basis of the report submitted on October 05, 2012.
- At present, the determination of fair and remunerative price of sugarcane is announced by the Cabinet Committee on Economic Affairs on the recommendation of the Commission for Agricultural Costs and Prices.

### **Nobel Prize in Economics**

- The Nobel Memorial Prize in Economic Sciences was awarded to former US Federal Reserve Chairman Ben S. Bernanke and two other academics Douglas W. Diamond and Philip H. Dybvig for their research on banks and financial crises.

#### **About the research:**

- Ben Bernanke, Douglas Diamond and Philip Dybvig have been awarded the Nobel Prize for their research in topics such as banks, bank regulation, banking crises and how financial crises should be managed.

#### **Contribution of Ben Bernanke:**

- He analyzed the Great Depression of the 1930s, the worst economic crisis in modern history.
- He proved how the economic downturn caused by the bank run crisis was prolonged.
- Using historical sources and statistical methods, Bernanke's analysis revealed which factors were important in the decline in GDP. They found factors that were directly linked to failing banks were most likely responsible for the recession.

#### **Contributions of Douglas W. Diamond and Philip H. Dybvig:**

- He developed theoretical models that explain why banks exist, their role in society making them vulnerable to rumors about their imminent

collapse and how rumors can be worked out in society.

- He presented a solution to the bank's vulnerability, in the form of deposit insurance on behalf of the government. When depositors learn that the state has guaranteed their money, they don't feel the need to go to the bank as soon as rumors start about running the bank because they trust the government.

### **Card Tokenisation in India**

- The new rules for credit and debit cards by Reserve Bank of India (RBI) have come into effect from October 1. These include tokenization of card, written permission to increase credit limit and more clarity on interest calculation.
- The RBI has directed all merchants to delete customers debit and credit card data by September 30 and replace it with tokens for online transactions. Failure to comply with the direction may invite penal action, including business restrictions.

#### **About tokenisation of card:**

- Debit and credit card details like 16-digit card number, name, expiry date and CVV are required during an online transaction. The online platforms used by customers also provide an option to save card data for easy completion of transactions in future. This data is known as card on file. However, this puts sensitive details at risk of being compromised by cyber-attack. To counter this challenge RBI has come with card tokenisation.
- Tokenisation refers to replacement of actual card details with an alternate code called the token. The card holder can get the card tokenised by initiating a request on the app provided by the token requestor. The token requestor will forward the request to the card network which, with the consent of the card issuer, will issue a token corresponding to the combination of the card, the token requestor, and the device.

#### **Feature of tokenisation:**

- The customer need not pay any charges for availing this service.
- Tokenisation has been allowed through mobile phone and tablets for all use cases like as contactless card transactions, payment through QR code and app.
- Tokenisation of card is not mandatory for consumers.
- Customers have the option to register / de-register their card for a particular use case, i.e., contactless, QR code based, in-app payments, etc.

- The registration for a tokenisation request is done only with explicit customer consent through Additional Factor of Authentication (AFA).

### **Increase in Direct Tax Revenue**

- Gross direct tax collections including corporate and personal income tax rose nearly 24 per cent so far in the current financial year to Rs 8.98 lakh crore.
- This includes a 32.3 per cent growth in personal income tax (including Securities Transaction Tax) mop up and 16.73 per cent increase in corporate tax revenues over the same period last year.

#### **Direct Tax:**

- Direct tax is paid by a person or organization which is directly responsible for paying the tax to the entity which levied it.
- An individual taxpayer, for example, pays direct taxes to the government for a variety of purposes, including income tax, real wealth tax, personal wealth tax, or tax on property.
- Direct taxes are based on an economic principle that states that those who have more resources or earn more income should bear a higher tax burden.

#### **Tax Buoyancy:**

- The tax buoyancy explains this relationship between changes in government tax revenue growth and changes in GDP.
- It reflects the response of tax revenue growth to changes in GDP.
- When a tax is buoyant, its revenue increases without raising the tax rate.
- There is a strong correlation between government tax revenue income and economic growth.
- The simple fact is that as the economy attains rapid growth, the tax revenue of the government also increases.

#### **Tax elasticity:**

- A similar looking concept is tax elasticity.
- It refers to change in tax revenue in response to change in tax rate.
- For example, if the government cuts corporate income tax from 30 percent to 25 percent, how tax revenue changes reflects tax elasticity.
- Factors responsible for increase in tax collection.

### **India's Merchandise Exports**

- India's merchandise export in April -September 2022-23 was USD 229.05 billion with an increase of 15.54% over USD 198.25 billion in April -September 2021-22.
- The export of non-petroleum and non-gems and jewellery in April -September 2022-23 was USD 158.68 billion, an increase of 5.53% over April

-September 2021-22 .

- Trade deficit in September 2022 was USD 26.72 billion which is an improvement over trade deficit of USD 28.68 Billion in August 2022.
- Exports of Top 10 Major goods in term of rupee (September 2021- September 2022):
  1. Engineering goods
  2. Petroleum products
  3. Gems and jewellery
  4. Organic and inorganic chemicals
  5. Drug and Pharmaceuticals
  6. Electronic goods
  7. RMG of all textiles
  8. Cotton yarn, fab, medeuys, handloom products
  9. Rice
  10. Plastic and Linoleum

#### **Measures taken by Government for promotion of exports:**

- Schemes such as the Advance Authorization Scheme and the Export Promotion Capital Goods (EPCG) Scheme are being implemented to enable duty free import of raw materials and capital goods for export production.
- Remission of Duties and Taxes on Exported Products (RoDTEP) scheme has been operationalized for exports with effect from 01.01.2021.
- It has been decided to extend the Rebate of State and Central Levies and Taxes (RoSCTL) Scheme for apparel and made-up exports till March 2024.
- Transport and Marketing Assistance (TMA) scheme for specified agriculture products provides assistance for the international component of freight and marketing of agricultural produce and to promote brand recognition for Indian agricultural products in the specified overseas markets.
- A common digital platform for Certificate of Origin (CoO) has been launched to increase Free Trade Agreement (FTA) utilization by exporters.
- In April 2022, India and the EU agreed to launch the EU-India Trade and Technology Council and planned to sign a free trade agreement by 2023.
- As of April 2022, India has signed 13 Free Trade Agreements (FTAs) with its trading partners including major trade agreements like the India-UAE Comprehensive Partnership Agreement (CEPA) and the India-Australia Economic Cooperation and Trade Agreement (IndAus ECTA).

### **SIDBI-D&B SPeX, India's 1st Sustainability Index**

- Small Industries Development Bank of India

(SIDBI) and Dun & Bradstreet have launched SIDBI -D&B Sustainability Perception Index (SIDBI – D&B SPeX). The index will be presented as a quantitative measurement for policy makers and enablers to nudge businesses towards adopting an Environmental, Social and Governance (ESG) framework in their business strategy over the coming years.

#### Key feature of Index:

- It captures the sentiments of businesses on various business parameters, which will be analyzed broadly to provide valuable insights on the adoption of ESG framework.
- The index will later be expanded to include the sectoral and sub sectoral perceptions or aspirations as well as preparedness of businesses to improve their ESG.
- The survey will encompass views about the previous quarter as well as the outlook for the upcoming quarter. This enables assessment of changing sentiments over a 6-month period.
- The survey will cover sentiments and awareness of over 250 MSMEs each quarter from the D&B/ SIDBI database of MSMEs.
- It will help assess the role and consequences of regulations and government policies on environmental practices of MSMEs and how such practices are hindering the environmental sustainability of the sector.
- It will also cover the role and impact of social aspects like community, diversity, equal opportunity and competition.
- It will also capture data on critical events that have impact on the MSME sector.
- It will analyze the implementation of sustainability practices across the value chain and assess the impact of internal drivers in various organizations.
- The index will improve the experience of investors, create benchmark for sustainable businesses and business practices providing value for all stakeholders.
- Its ultimate aim is to make the Indian economy and markets more attractive for sustainable capital and investment.

#### Asian Infrastructure Investment Bank (AIIB)

- The seventh Annual Meeting of AIIB was hosted by AIIB virtually on Oct 26-27, 2022. The Board of Governors of the Asian Infrastructure Investment Bank (AIIB) announced that its eighth Annual Meeting will be held in Sharm el-Sheikh, Egypt, on Sept 25-26, 2023.

#### Theme:

- The theme of the 2022 AIIB Annual Meeting was “Sustainable Infrastructure Toward a Connected World”, which aims to reaffirm infrastructure’s crucial role in supporting recovery, growth, and connectivity. The theme also reiterates with AIIB’s commitment toward sustainable and resilient infrastructure investments in a crisis- and climate-challenged world.

#### About AIIB:

- The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank established in January 2016, that aims to improve economic and social outcomes in Asia. The bank currently has 105 members, including 14 prospective members from around the world. The bank started operation after the agreement entered into force on 25 December 2015, and ratifications were received from 10 member states holding a total number of 50% of the initial subscriptions of the Authorized Capital Stock. Headquarter of the bank is Beijing in china.

#### Governance Body:

- The bank’s governance structure is composed of the Board of Governors as the top-level and highest decision-making body. The board comprises 1 governor for each member state of the bank and in principle meets once a year. The board of directors, composed of 12 governors, each representing one or more member is responsible for daily operations and tasks delegated to it by the board of governors. Nine of those members are from within the Asia-Pacific region and three representing members outside the region.

#### Increase in Forex Reserve

- The Reserve Bank of India Act and the Foreign Exchange Management Act, 1999 set the legal provisions for governing foreign exchange reserves. Reserve Bank of India accumulates foreign currency reserves by purchasing them from authorized dealers in open market operations. Foreign exchange reserves of India act as a cushion against rupee volatility once global interest rates start rising.
- The Foreign Exchange Reserves of India consist of below four categories:
  - » Foreign Currency Assets ( this is a major component of Forex reserve)
  - » Gold
  - » Special Drawing Rights (SDRs)
  - » Reserve Tranche Position
- The change in FCA is mainly due to changes in the purchase and sale of foreign exchange by

the RBI, proceeds from deployment of foreign exchange reserves, external aid receipts from the central government, and revaluation of assets.

### India's First Sovereign Green Bond Framework

- Recently the Union Minister of Finance approved the final sovereign green bonds framework that will be mobilized to fund environmentally sustainable projects.

#### Green Bond:

- Green bonds are financial instruments that generate funds for investment in environmentally sustainable and climate-suitable projects such as renewable energy, clean transportation, and green buildings among others.
- These can be issued by companies, countries, and multilateral organisations. Sovereign Green Bond is issued by a Government.
- Green bonds command a relatively lower cost of capital compared to regular bonds.
- In India, the first Green Bond was issued by Yes Bank in 2015.

### India's Growing Credit Ecosystem

- As per RBI data, non-food bank credit registered a growth of 16.9% in September 2022. At the end of FY22, the total credit market in India stood at Rs 174.3 lakh crore, registering a growth of 11.1% YoY. Retail loans and increasing use of credit cards in the economy are the main factors driving this growth.

#### Different Type of Credit System:

##### Credit Card:

- India has traditionally always been a debit card market. Over the past ten years, the growth in credit card issuance has changed this, and credit cards are now widely used.
- Innovations such as simplified on boarding processes, unique card products, personalized offers and rewards, and improved mobile apps have proved highly beneficial to existing customers and attracted many new ones.
- Credit card issuance has grown significantly over the past 5 years, growing at a CAGR of 19.8% between FY17 and FY22.
- Even during the Covid-19 restricted years of FY21 and FY22, credit card issuance grew at the rate of 7.46% and 18.66% respectively.

##### Buy Now, Pay Later (BNPL):

- Buy Now Pay Later (BNPL) is a fast-growing lending technology sector in India, owing to the emergence of e-commerce and digital payments and the rapid growth of fintech companies.
- Over the years, BNPL has become much more

than just a direct payment method; By providing free EMI, it essentially eases the financial stress of the borrowers.

- BNPL has been especially popular among GenZ consumers, young millennials, and first-time borrowers, who are usually ignored or undervalued by traditional banks.

#### Some of the features of BNPL are:

- The average transaction range is between Rs 1,500-25,000.
- The repayment cycle ranges between 15-45 days.
- Unlike regular credit cards, BNPL is the only form of low-cost, short-term financing available to people who have never had credit before.

#### Consumer Durable Loan:

- Due to the growing urban population, increasing consumption income, and availability of low-interest loans, credit EMI, also known as consumer durable loan, is another category of formal loan which is growing at a rapid pace.
- The value of consumer durable loans is expected to grow at a CAGR of 21%. 84 billion in 2020-21 is expected to be 205 billion in 2026-27.

#### Key Features of Consumer Durable Loan:

- Most players offer instant approval and minimal documentation requirements, while mobile numbers can be used to quickly complete KYC processes.
- Low processing cost, reasonable interest rates, and no-cost EMI are available in some cases.
- Most players do not require a down payment or security deposit.
- The loan tenure ranges from 3-60 months.

### GST Compensation

- The Central Government released an amount of Rs 17,000 crore to the States/UTs for the balance GST compensation for the period April to June, 2022 from compensation cess fund..

#### About Compensation Cess:

- States are guaranteed compensation for any revenue shortfall below 14% growth (base year 2015-16) for the first five years ending 2022. GST compensation is paid out of Compensation Cess every two months by the Centre to states. The compensation cess was specified by the GST (Compensation to States) Act, 2017.
- All the taxpayers, except those who export specific notified goods and those who have opted for GST composition scheme, are liable to collect and remit the GST compensation cess to the central government.

#### Goods and Services Tax:

- GST was introduced through the 101st

Constitution Amendment Act, 2016.

- It is one of the biggest indirect tax reforms in the country.
- The GST has subsumed indirect taxes like excise duty, Value Added Tax (VAT), service tax, luxury tax etc.
- It is essentially a consumption tax and is levied at the final consumption point.
- This has helped mitigate the double taxation, cascading effect of taxes, multiplicity of taxes, classification issues etc., and has led to a common national market.
- The GST that a merchant pays to procure goods or services (i.e. on inputs) can be set off later against the tax applicable on supply of final goods and services.
- The GST avoids the cascading effect or tax on tax which increases the tax burden on the end consumer.

### Combined Index of Eight Core Industries

- The combined Index of Eight Core Industries increased by 0.1 percent (provisional) in October 2022 as compared to the Index of October 2021.

#### What is Index of Eight Core Industries (ICI)?

- It measures the combined and individual performance of production in selected eight core industries viz. Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity.
- Refinery products sector has the highest weightage followed by Electricity sector. Fertilizer sector has the lowest weightage.
- The Eight core industries comprise 40.27 percent of the weight of items included in the Index of Industrial Production (IIP).

#### Index of Industrial Production (IIP):

- IIP is an indicator that measures the changes in the volume of production of industrial products during a given period.
- It is released by National Statistics Organization (NSO) under Ministry of Statistics.
- Base year: 2011-12.
- Eight Core Industries
  1. Coal- (Weightage: 10.33).
  2. Crude Oil- (Weightage: 8.98 percent)
  3. Natural Gas- (Weightage: 6.88 percent)
  4. Petroleum Refinery Products- (Weightage: 28.04 percent)
  5. Fertilizers- (Weightage: 2.63 percent)
  6. Steel- (Weightage: 17.92 percent)
  7. Cement- (Weightage: 5.3 percent)
  8. Electricity- (Weightage: 19.85 percent)

### Regional Rural Banks (RRBS)

- Government has reviewed the financial and operational reforms for RRBs. Reform is aimed at making RRBs financially sustainable, more digitized and increasing their credit base esp. to MSME sectors (for increased profitability)

#### About RRBs:

- It was formed under RRB Act 1976 (recommended by Narasimha Working Group (1975)), for providing credit in rural areas.
- **Ownership:** Central Government (50%), Concerned State Govt. (15%), Sponsor Bank (35%)
- It was to follow priority sector lending (75%) on the same level as commercial Bank
- RRBs are to maintain CRAR (Capital-to risk-weighted asset ratio) of a minimum of 9% (at par with commercial banks)

### Start-Up India Seed Fund Scheme (SISFS)

- Commerce and Industry ministry launched this scheme in 2021 to provide financial assistance to eligible startups (DPIIT chosen) through incubators for proof of concept, prototype development, product trials and commercialization.
- **Eligibility:** A startup, recognized by DPIIT, incorporated not more than 2 years ago at the time of application and should not have received more than Rs. 10 lakhs of monetary support under any other Central or State Government scheme.

### Blue Bonds

- SEBI has proposed the 'blue bonds' for sustainable finance

#### About Blue bond:

- It will be a debt instrument to support investments in healthy oceans and blue economies (i.e. use of ocean resources for economic growth) -sustainable exploitation of ocean resources, fishing, and extracting renewable energy

#### Equalization Levy:

- Equalization Levy is a direct tax (of 6%), introduced in India in 2016 to tax foreign firms (such as Google, and Facebook) with now permanent establishments in India but profits from it. It was reaffirmed in Finance Act 2020 and expanded to include non-resident e-commerce operators (such as Amazon), by a new levy of 2% (digital service tax)

### Unemployment

- The unemployment rate is the percentage of the total labour force that is unemployed but actively

seeking employment and willing to work.

- **LFPR:** The labour force participation rate is the number of persons in the labour force as a percentage of the working-age population.
- The labour force is the sum of the number of persons employed and the number of persons unemployed.

### **Scheme of Special Assistance to States for Capital Investment**

- The Government of India has launched a Scheme of Special Assistance to States for Capital Investment for 2022-23.
- Under this Scheme, financial assistance is provided to the States Governments in the form of a 50-year interest-free loan for capital investment projects. Capital investment is the money spent on acquiring assets while revenue expenditure indicates daily operations expenses like salaries and pensions.

### **Committee for Promotion of PE/VC Investments**

- The Finance Ministry constituted an expert committee headed by former SEBI chief M. Damodaran to examine and suggest appropriate measures to address regulatory issues to scale up investments by venture capital (VC) and private equity (PE).
- Private equity and venture capital invested more than Rs 5.5 lakh crore last year facilitating one of the largest start-up and growth ecosystems.
- Private equity is an alternative investment class that invests in or acquires private companies that are not listed on a public stock exchange.
- Venture capital (VC) is a form of private equity and a type of financing that investors provide to startup companies and small businesses that are believed to have long-term growth potential.

### **One Nation One Ombudsman**

- It was launched in 2021 as an integrated consumer grievance redressal mechanism for addressing service deficiencies in banking, NBFCs and digital payment systems. It will make the alternate dispute redressal mechanism simpler and more responsive to the customers of regulated entities.

### **Ease Next Reforms**

- Public Sector Bank's performance (PSB) has been reviewed under EASENext reforms (currently Ease 5.0) (launched in June 2022) by the Finance Ministry.

- **Nodal Agency:** Indian Bank's Association (IBA)

### **About Ease Reforms:**

- EASE (Enhanced Access and Service Excellence) is a reform agenda for PSBs for CLEAN and SMART Banking.
- Launched in January 2018 jointly by the government and PSBs
- **Ease 1.0:** the resolution of NPA
- **Ease 2.0:** Responsible banking, financial inclusion and digitalization
- **Ease 3.0:** Dial-a-loan, Credit@click, PSBloansin59 minutes.com
- **Ease 4.0:** 24X7 banking, focus on north-east, bad banks

### **MAHARATNA COMPANY STATUS**

- Power sector-focussed non-banking finance company (NBFC) REC Ltd. has been accorded the status of a 'Maharatna' Central Public Sector Enterprise.
- Eligibility Criteria & Benefits of the Maharatna Status
- PSUs in India are also categorised based on their special non-financial objectives and are registered under Section 8 of Companies Act, 2013 (erstwhile Section 25 of Companies Act, 1956).

### **Eligibility Criteria:**

- Must have a Navratna status
- Must be listed on Indian stock exchange with minimum prescribed public shareholding under Securities and Exchange Board of India (SEBI) regulations
- An average annual net profit after tax of more than Rs. 5,000 crore during the last 3 years
- Average annual Turnover of Rs. 25,000 crore for 3 years, or
- The average annual Net worth of Rs. 15,000 crore for 3 years
- Must bear global presence/international operations

### **Benefits for Investment:**

- Maharatna Company can invest Rs. 1,000 crore – Rs. 5,000 crore. It is also free to decide on investments up to 15% of their net worth in a project.

# MCQs based on Preliminary Exam

1. With reference to 'Mission Amrit Sarovar', consider the following statements:
  1. There is plan to make 80 water bodies in each district of India.
  2. 1 lakh water bodies have been approved under this mission.
  3. The technical partner of this mission is Bhaskaracharya National Institute for Space Applications and Geo-Informatics.
  4. This mission was started by Home Minister.
  5. This mission will be completed by 15th August, 2023.
 Which of the above statement/s is/are correct?
  - (a) 1, 2, 3 and 5
  - (b) 3 and 5
  - (c) 3, 4 and 5
  - (d) 1, 4 and 5
2. With reference to the 'Nobel Prize For Food and Agriculture', consider the following statements:
  1. This prize was instituted in the year 1985 by General Foods Corporation.
  2. Its eligibility is based on race, religion and nationality.
 Which of the above statement/s is/are correct?
  - (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
3. With reference to 'Atal Innovation Mission', consider the following pairs:
 

| <b>Initiative</b>            | <b>Objective</b>                          |
|------------------------------|-------------------------------------------|
| 1. Atal Incubation Centre    | : Promoting startups                      |
| 2. Atal Community Innovation | : Promoting Community Centered Innovation |
| 3. Atal New India Challenge  | : Promoting Product Innovations           |

 Which of the above pairs is/are correctly matched?
  - (a) 1 and 2 only
  - (b) 2 only
  - (c) 3 only
  - (d) 1, 2 and 3
4. With reference to the *Arctic Region*, consider the following statements:
  1. Impact of climatic changes in the Arctic Region, falls on the whole world.
  2. India is an observer member country of the Arctic council since 2015.
  3. Based on various scientific researches, by the year 2050, the Arctic ice will completely melt.
 Which of the above statement/s is/are correct?
  - (a) 1 and 2 only
  - (b) 1 and 3 only
  - (c) 2 only
  - (d) 1, 2 and 3
5. With reference to *Hypersonic Technology*, consider the following statements:
  1. It is the fifth generation missile technology.
  2. Making hypersonic missiles is India's priority.
 Which of the above statement/s is/are **incorrect**?
  - (a) 1 only
  - (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
6. What is 'Sagittarius A'?
  - (a) A new nuclear reactor
  - (b) A new galaxy
  - (c) A new black hole
  - (d) A new robotic machine
7. With reference to the *use of Anabolic Steroids*, consider the following statements:
  1. In the treatment of osteoarthritis
  2. In the treatment of anemia
  3. In boosting natural testosterone
 Which of the above statement/s are correct?
  - (a) 1 and 2 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2 and 3
8. With reference to *Thalassemia disease*, consider the following statements:
  1. There is a decrease in the concentration of red blood cells.
  2. There is decrease in hemoglobin.
  3. More mutations occur in the gene.
 Which of the above statement/s is/are correct?
  - (a) 1 only
  - (b) 1 and 2 only
  - (c) 2 and 3 only
  - (d) 1, 2 and 3
9. With reference to *Hyperloop System*, consider the following statements:
  1. Indian Railways Ministry will set up a centre of excellence for Hyperloop technology at IIT Kanpur.
  2. Hyperloop is a transportation technology.
  3. 'Avishkar hyperloop' is a team from IIT Delhi.
 Which of the above statement/s is/are **incorrect**?
  - (a) 1 and 2 only
  - (b) 1 and 3 only
  - (c) 2 and 3 only
  - (d) 1, 2 and 3
10. Consider the following statements about *Monkeypox*:
  1. It is a bacterial zoonotic disease.

2. It has lower state of mutation compared to SARS-Cov-2.
3. There is no effective vaccine against it.
4. Human to human transmission through sexual contact is possible.

Which of the above statement/s is/are correct?

- (a) 1 and 2 only                      (b) 2 and 3 only  
(c) 2 and 4 only                      (d) 1, 2 and 3

11. Consider the following pairs:

**Type of hydrogen                      Source by product**

1. Green hydrogen : Produced using renewable energy and electrolysis of water. No CO<sub>2</sub> emission.
2. Turquoise hydrogen : Produced using the thermal splitting of methane. CO<sub>2</sub> removal in solid form
3. Blue hydrogen : Produced using fossil fuels and CO<sub>2</sub> is released in atmosphere.
4. Black hydrogen : Produced using fossil fuel and CO<sub>2</sub> is captured & stored.

How many pairs given above are correctly matched?

- (a) Only one pair                      (b) Only two pairs  
(c) Only three pairs                      (d) All four pairs

12. With reference to “Dark Web” sometimes mentioned in the news, consider the following statements:

1. Dark web is a part of deep web where high degree of anonymity is provided.
2. This can be accessed only through specialised sites like TOR and I2P.
3. Accessing Dark web is illegal in India.

Which of the above statement/s is/are correct?

- (a) 1 only                      (b) 1 and 2 only  
(c) 2 and 3 only                      (d) 1, 2 and 3

13. With reference to “Artemis Accords”, consider the following statements:

1. These are set of guidelines to create a safe and transparent environment which facilitates exploration, science and commercial activities for benefit of humanity.
2. It is based on outer space treaty of 1967.
3. India and New Zealand became signatory to it recently.
4. It is legally binding instrument of international law.

Which of the above statement/s is/are **incorrect**?

- (a) 1 and 2 only                      (b) 2 only  
(c) 2 and 4 only                      (d) 3 and 4 only

14. With reference to *Electric Vertical Take off and Landing (eVTOL)*, consider the following statements:

1. It is beneficial for long range urban transportation.
2. They can take off and land anywhere.
3. They have zero carbon print and are noise free, unlike helicopters.

Which of the above statement/s is/are correct?

- (a) 1 and 2 only                      (b) 2 and 3 only  
(c) 1, 2 and 3                      (d) 1 and 3 only

15. Consider the following statements in respect of “*Azooxanthellate corals*”:

1. These are group of corals that contain zooxanthellae - unicellular, brown-algae.
2. Their main source of nourishment is energy from sun.
3. They are only found in shallow waters.

Which of the above statement/s is/are **incorrect**?

- (a) 1 only                      (b) 1 and 2 only  
(c) 2 and 3 only                      (d) 1, 2 and 3

16. With reference to “*state of inequality report in India*” which of the following statement/s is/are correct?

1. This report is released by Niti Aayog.
2. It measures inequality across health, income distribution, labour market dynamics, education and household characteristics only.
3. It is based on socio-economic caste census data.
4. As per this report gross enrollment ratio has decreased between 2018-19 to 2019-20 at all levels.

Select the correct answer from the code given below:

- (a) 1 and 2 only                      (b) 2 only  
(c) 1 and 3 only                      (d) 3 and 4 only

17. With reference to *World Press Freedom Index 2022*, consider the following statements:

1. It is published bi-annually by reporters without borders.
2. Nordic countries are among best performers in the index.
3. India’s position has been consistently falling since 2016.
4. India’s rank in 2022 is 150<sup>th</sup>.

Which of the above statement/s is/are correct?

- (a) 1 and 2 only                      (b) 1 and 3 only

- (c) 1, 2 and 3 only      (d) 2, 3 and 4 only

**18.** Consider the following statements regarding “National Initiative for Promotion of upskilling of Nirman Workers”:

1. This initiative is started by Ministry of Skill Development and Entrepreneurship.
2. National Skill Development Corporation is nodal agency for its implementation.
3. It provides construction workers with work opportunities in India and foreign countries also.
4. Trainees are also provided “Kaushal Bima” under this scheme.

Which of the above statement/s is/are correct?

- (a) 1 and 3 only      (b) 1 and 4 only  
 (c) 2 and 3 only      (d) 2, 3 and 4 only

**19.** With reference to *Leadership for Industry Transition (LeadIT)*, consider the following statements:

1. It was launched by U.S and India at the UN Climate Action Summit in September 2019.
2. It supports governments and industries to co-produce stakeholder-led pathways to low carbon industry transformation.
3. It is aiming to achieve net zero carbon emission by 2050.

Which of the above statement/s is/are correct?

- (a) 1 and 2 only      (b) 1 and 3 only  
 (c) 2 and 3 only      (d) 1, 2 and 3

**20.** Regarding the *concepts of National Income*, consider the following statements:

1. Gross National Product does not include interest payable on foreign debt.
2. The principle of green GDP reflects the national accounting system by use of non-renewable natural resources of a country.
3. GDP deflator is a limited measurement system of price behavior in an economy because it includes goods produced in the country but not services.

Select the correct answer from the code given below:

- (a) Only one statement is true  
 (b) Only two statements are true  
 (c) All three statements are true  
 (d) None of the statements is true.

**21.** Regarding the *Fiscal Policy of India*, consider the following statements:

1. Fiscal policy includes public finance and taxation.
2. The main reason for the continuation of the

fiscal deficit in India is that India provides more agricultural subsidies than western countries.

Which of the above statement/s is/are correct?

- (a) 1 only      (b) 2 only  
 (c) Both 1 and 2      (d) Neither 1 nor 2

**22.** Regarding the *GST Council*, consider the following statements:

1. It is a constitutional body headed by the Union Minister of State for Finance.
2. The recommendations made by the GST Council are binding on the states and the center.
3. Decisions in the council are based on a majority of three-fourth of the number of all the members.

Which of the above statement/s is/are **incorrect**?

- (a) 1 and 2 only      (b) 2 and 3 only  
 (c) 1 and 3 only      (d) 1, 2 and 3

**23.** Regarding the ‘*Reskilling Revolution Initiative*’, which is often in news, consider the following statements:

1. This initiative has been started by the Ministry of Skill Development and Entrepreneurship, Government of India.
2. The objective of this initiative is to help economies by providing innovative skills for the Fourth Industrial Revolution by saving the future of workers from technological change.
3. This initiative will do skill development among workers between the age group of 40-59 only.

Which of the above statement/s is/are correct?

- (a) 1 and 2 only      (b) 1 only  
 (c) 2 only      (d) 2 and 3 only

**24.** What do you understand by ‘*Open Market Operation*’, which is often discussed?

- (a) When any country opens its closed economy for foreign trade.  
 (b) Buying and selling of government securities by the central bank of the country.  
 (c) When the economy is freed from the government control and opened for private sector.  
 (d) Those economic sectors, in which FDI up to 100% is allowed.

**25.** The word ‘*Salami Slicing*’ which is often in the news means:

- (a) To gradually capture a large area by conducting small military operations

- against neighbouring countries.  
 (b) Promise of not going with nuclear war.  
 (c) A sudden attack by one country and the capture of a large part of another country.  
 (d) Sanctions imposed on any country to stop the war.

**26.** Recently there are some changes have been made to the *Forest Conservation Rules 1980*. Regarding these changes, consider the following statements:

1. According to the new change, private parties can plant trees and sell this land to companies.
2. For a change of use of forest land in the village area, written consent of the governing body of Gram Sabha has been made mandatory.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2

**27.** Regarding the *United Nations Ocean Conference 2022*, consider the following statements:

1. This conference has been organized in Lisbon, Portugal.
2. The convention has set a target of protecting at least 30% of the national maritime territories by 2030.
3. The title of this conference is "Our Ocean, Our Future : Call for Action".

Select the correct option by using the code

- (a) Only one statement is false  
 (b) Only two statements are false  
 (c) All three statements are true  
 (d) All three statements are false

**28.** Recently *RBI has allowed international trade settlement in Indian Rupee*. Consider the following statements in this context:

1. Indian exports and India's global trade will increase.
2. India will soon be able to overtake China in terms of foreign trade.
3. It will prevent the dollarization of the economy.

Which of the above can be the possible effects of this move? Select the correct option by using the code:

- (a) 1 and 2 only (b) 2 and 3 only  
 (c) 1 and 3 only (d) 1, 2 and 3

**29.** *Singalila National Park*, which has been recently in the news due to the *rehabilitation of Red Panda*, is located in:

- (a) Assam (b) West Bengal

- (c) Arunachal Pradesh (d) Sikkim

**30.** With reference to the *Advance Pricing Agreement (APA)*, consider the following statements:

1. It is an agreement between the taxpayer and the tax authority which determines the method of pricing of the international transaction of the taxpayer for future years.
2. This procedure is implemented for a certain period of time.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2

**31.** What *changes were felt in the Economy after the Five Year Plans (FYPs)*?

1. Between 1901-1947, while the national income of India was growing at the rate of 1.2 percent per year, it increased to 11.6 percent in 2016-17.
2. These plans were successful in establishing an exploitation free society on the basis of equality.
3. A major challenge of these plans was that they could not increase the rate of capital formation.

Which of the above statement(s) is/are correct?

- (a) 1 only (b) 2 only  
 (c) 3 only (d) 1, 2 and 3

**32.** Consider the following statements:

1. Sanskrit has had a profound impact on the languages and literature of India.
2. Hindi, India's most spoken language is a 'Sanskritised form' of the khariboli dialect.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2

**33.** Consider the following festivals:-

1. Onam
2. Holi
3. Lohri
4. Ugadi

Which of the above is/ are the *harvest festival of India*?

- (a) 1 and 3 only (b) 4 only  
 (c) 1, 3 and 4 only (d) 1, 2, 3 and 4

**34.** Consider the following statements regarding *material life of the Rig Vedic Aryans*:

1. Horses, chariots and arms made of iron were the main reasons for the success of Aryans in India.
2. Rig Vedic Aryans were acquainted with sowing, harvesting and threshing.
3. Rig Vedic Aryans knew about the different

seasons.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 only  
 (c) 2 and 3 only (d) 1, 2 and 3

**35.** Consider the following statements regarding the King Kharavela:

1. Kalinga became more powerful during the rule of King Kharavela.
2. Kharavela was a dogmatic Jain.
3. Kharavela did not believe in military operations.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 1 and 2 only  
 (c) 2 and 3 only (d) 1, 2 and 3

**36.** Consider the following statements in regard with *Northern Black Polished Ware*:

1. These potteries were rough and very shining type.
2. These potteries were served as the tableware of rich people.
3. Generally in association with these potteries, iron implements are also found.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 1 and 2 only  
 (c) 2 and 3 only (d) 1, 2 and 3

**37.** Consider the following statements :

1. In later Vedic period a small 'Samiti', named 'Parishad' replaced 'Sabhas'.
2. 'Parishads' were consisting of brahmanas and kshatriya only.
3. Parishads flourished in smaller republican states of the Shakyas, Lichchavis etc., even for later age.

Which of the above statement/s is/are correct?

- (a) 2 only (b) 2 and 3 only  
 (c) 1 and 3 only (d) 1, 2 and 3

**38.** Consider the following statements in regard with *Satavahana dynasty*:

1. The Satavahana rulers were brahmanas.
2. They worshipped a large number of Vaishnava gods such as Krishna, Vasudeva and others.
3. The Satavahana rulers promoted Buddhism by granting land to the monks.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 1 and 2 only  
 (c) 3 only (d) 1, 2 and 3

**39.** Consider the following events:

1. Settlements of large scale rural communities who carried on plough agriculture.

2. Formation of the state monarchy system.
3. Rise of social classes.
4. Use of metal coin.
5. Use of writing
6. Beginning of written literature

Which of the above events mark the beginning of the Historical period after the Pre-Historic age?

- (a) 1, 5 and 6 only  
 (b) 4, 5 and 6 only  
 (c) 1, 2, 3 and 4 only  
 (d) 1, 2, 3, 4, 5 and 6

**40.** Consider the following statements :

1. Civil and military offices were held under Cholas by rich peasants, called Vellalars.
2. The ruling class was called 'Arasars'.
3. Arasars had marriage relations with the Vellalars.
4. Vellalars came under the fourth caste.

Which of the above statement/s is/are correct?

- (a) 1, 2 and 3 only (b) 3 and 4 only  
 (c) 1 and 2 only (d) 1, 2, 3 and 4

**41.** Consider the following statements in regard with *Post-Mauryan Age*:

1. Technological knowledge about the work of iron had made great progress.
2. Cloth making, silk-weaving and the making of arms and luxury articles made progress.
3. Mathura became a great centre for the manufacture of a special type of cloth which was called 'Shataka'.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 only  
 (c) 3 only (d) 1, 2 and 3

**42.** Consider the following statements:

1. Ghur, a small isolated area was located in the mountain ranges between the Ghaznavid empire and the Seljukids.
2. Till the 11th Century, it had remained a pagan enclave (non-muslim) surrounded by Muslim principalities.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2

**43.** Consider the following statements in regard with the *Rajput states*:

1. On account of the working of the iniquitous caste system, the Rajput Kings were not able to find sufficient soldiers to man their armies.
2. The Rajput armies consisted only of Caste

Rajputs.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

44. "His policy was one of steady consolidation rather than rapid expansion. He proceeded against the Khalji Malik of Lakhanuti only when he had consolidated his position in the north-west."

Which ruler of the Ghulam dynasty is discussed in the above passage?

- (a) Qutubuddin Aibak (b) Muizzuddin  
(c) Iltutmish (d) Balban

45. Consider the following statements:

1. In Medieval India, Balban marks the beginning of an era of strong, centralized government at Delhi.
2. Balban sought to centralise all authority in the hands of the Sultan.
3. Balban rejected the Iranian theory of kingship.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 1 and 2 only  
(c) 3 only (d) 1, 2 and 3

46. Consider the following statements in regard with Mongols:

1. Mongols tried three times to conquer Delhi during the rule of Alauddin Khalji.
2. The first two efforts of Mongols to conquer Delhi became unsuccessful during the rule of Alauddin Khalji.
3. In their third effort the Mongols defeated the commander of Alauddin Khalji, Malik Nayak.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 3 only  
(c) 1 and 2 only (d) 1, 2 and 3

47. Consider the following statements:

1. The early Turkish sultans had belived in the virtual monopoly of important posts in the state by high elite class born turks.
2. The most important consequence of the rise to power of the Khaljis was the broadening of the social base of the ruling class.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

48. Consider the following statements in regard with Sikandar Lodi:

1. He was an orthodox Sultan
2. He was deeply interested in music.
3. He got the number of rare Sanskrit works on music, translated into Turkish language.

Which of the above statement/s is/are correct?

- (a) 1 only (b) 2 and 3 only  
(c) 1 and 2 only (d) 1, 2 and 3

49. "Though not a believer in mysticism/sufism he respected the sufi saints and was the first sultan of Delhi to visit the tomb of Muinuddin Chishti at Ajmer. He also built mausoleums over the tombs of many sufi saints, including Nizamuddin Auliya at Delhi."

Which ruler of Delhi Sultanate is discussed in the above passage?

- (a) Alauddin Khalji  
(b) Muhammad-bin-Tughlaq  
(c) Firozshah Tughlaq  
(d) Ibrahim Lodi

50. "One Health Concept", sometimes seen in news is related to which of the following?

- (a) Strategies to prevent non-communicable disease  
(b) Providing health insurance to all the individuals.  
(c) Inter-connectivity among human health, animal health and the environment.  
(d) Prioritising human health over animal health.

## ANSWER

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 1.  | (b) | 14. | (b) | 27. | (c) | 40. | (d) |
| 2.  | (d) | 15. | (d) | 28. | (c) | 41. | (d) |
| 3.  | (d) | 16. | (b) | 29. | (b) | 42. | (c) |
| 4.  | (b) | 17. | (d) | 30. | (c) | 43. | (d) |
| 5.  | (d) | 18. | (d) | 31. | (a) | 44. | (c) |
| 6.  | (c) | 19. | (c) | 32. | (c) | 45. | (b) |
| 7.  | (d) | 20. | (a) | 33. | (c) | 46. | (c) |
| 8.  | (d) | 21. | (a) | 34. | (c) | 47. | (c) |
| 9.  | (b) | 22. | (d) | 35. | (b) | 48. | (c) |
| 10. | (c) | 23. | (c) | 36. | (c) | 49. | (b) |
| 11. | (b) | 24. | (b) | 37. | (c) | 50. | (c) |
| 12. | (b) | 25. | (a) | 38. | (d) |     |     |
| 13. | (d) | 26. | (a) | 39. | (d) |     |     |

## MCQs Based on Current Affairs

1. Consider the following statements regarding CRISPR-Cas9.

1. CRISPR technology can allow easily altering DNA sequences and modifying gene function.
2. It can be used to correct sickle cell anemia, a genetic blood disorder.
3. Gene editing systems occur naturally in organisms.

Which of the above statements is/are correct?

- A. 1 and 2 only                      B. 2 and 3 only  
C. 1 and 3 only                      D. 1, 2 and 3

**Answer: D**

2. Which one of the following has announced the 'Women Icons Leading Swachhata' (WINS) Awards 2023 on the eve of International Women's Day?

- A. NITI Aayog  
B. President Office  
C. Prime Minister Office  
D. Ministry for Housing and Urban Affairs

**Answer: D**

3. The Global Findex Database is released by

- A. International Monetary Fund  
B. World Economic Forum  
C. World Trade Organization  
D. World Bank

**Answer: D**

4. Which of the following statements is/are correct?

Viruses can infect

1. bacteria
2. fungi
3. plants

Select the correct answer using the code given below.

- A. 1 and 2 only                      B. 3 only  
C. 1 and 3 only                      D. 1, 2 and 3

5. Tetracycline, sometimes mentioned in the news

- A. Superconductor                      B. Decomposer  
C. Super plastic                      D. Antibiotic

6. Consider the following statements:

1. The Indian States Electricity Transition (SET) report is published by The Energy and Resources Institute.
2. As per the report, Karnataka and Gujarat top

the list of Indian states adopting clean energy transition.

Which of the statements given above is/are correct?

- A. 1 only  
B. 2 only  
C. Both 1 and 2  
D. neither 1 nor 2

**Answer: B**

7. With reference to the Foreign Contribution (Regulation) Act, consider the following statements:

1. FCRA was enacted in 1976 to maintain strict control over voluntary organizations and political associations receiving foreign funding.
2. FCRA applies to all associations, groups and NGOs operating in India.
3. The registration is initially valid for five years and can be renewed subsequently if they comply with all the criteria.

Which of the statements given above is/are correct?

- A. 1 and 2 only                      B. 2 and 3 only  
C. 1 and 3 only                      D. 1, 2 and 3

**Answer: C**

8. Consider the following statements about House Price Index

1. It is a quarterly report released by National Housing Bank (NHB).
2. It is calculated for all million plus cities.

Which of the following is/are correct?

- A. 1 only                      B. 2 only  
C. Both 1 and 2                      D. Neither 1 nor 2

**Answer: D**

9. Consider the following statements about Capital-to-Risk Weighted Assets Ratio (CRAR):

1. RBI has mandated a CRAR of 12% for Scheduled Commercial Banks (SCBs).
2. CRAR for FY22 remains healthy.
3. It not only accounts for credit risk but also for market and operational risks.

Which of the following statements are correct?

- A. 1 and 2 only                      B. 2 and 3 only  
C. 1 and 3 only                      D. All of the above

**Answer- B**

10. Atmanirbhar Clean Plant Program launched

in budget 2023-24 is related to which of the following?

- A. Bio-energy crops
- B. Green hydrogen plants
- C. Horticulture crops
- D. Biofertiliser plants

**Answer-C**

11. Unity Mall as provisioned in the budget 2023-24 is associated with the promotion and sale of
- A. Low cost quality horticulture seeds
  - B. Fortified rice kernels
  - C. Low cost assistive devices for divyangs and elderly
  - D. ODOPs, GI products and handicrafts

**Answer- D**

12. PM-PRANAM as envisioned in the budget 2023-24 is related to which of the following?
- A. To promote alternative fertilizers and balanced use of chemical fertilizers
  - B. To develop entrepreneurship and self-confidence in elderly population
  - C. To promote historical pilgrimage in India
  - D. To develop central repository of inscriptions, manuscripts and other ancient texts

**Answer- A**

13. Recently, a medicinal plant called Borthecera has been found to have the ability to cure which type of diseases?
- A. Heart disease
  - B. Brain disease
  - C. Liver diseases
  - D. Skin diseases

**Answer-A**

14. Consider the following statements
1. The decision of some states to restart the old pension scheme will definitely be a regressive step
  2. The NDA government decided to shut down the OPS in 2003 and it became effective from April 1, 2004.
- Which of the above statements is/are not correct?
- A. Only 1
  - B. Only 2
  - C. Both 1 and 2
  - D. Neither 1 nor 2

**Answer- C**

15. Consider the following statements regarding India-Italy relations:

1. Italy has decided to join the Indo-Pacific Ocean Initiative (IPOI).

2. The two countries also talked about the growing bilateral trade which reached an all-time high of \$15 billion last year.

Which of the above statements is/are not correct?

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

**Answer- C**

16. On which of the following grounds can the ban be imposed in the exercise of freedom of the press?

- 1. Sovereignty and integrity of India,
- 2. Security of the state,
- 3. Friendly relations with foreign states,
- 4. Public order, decency or morality

Select the correct option with the help of the following code?

- A. Only 1 and 4
- B. Only 1, 2, and 3
- C. Only 2 and 3
- D. 1, 2, 3 and 4

**Answer:D**

17. Recently in discussion, what is scrub typhus?

- A. Network based new technology
- B. A disease
- C. Seaweed
- D. An Android application

**Answer: B**

18. In the context of vaccines manufactured to prevent Dengue, consider the following statements:

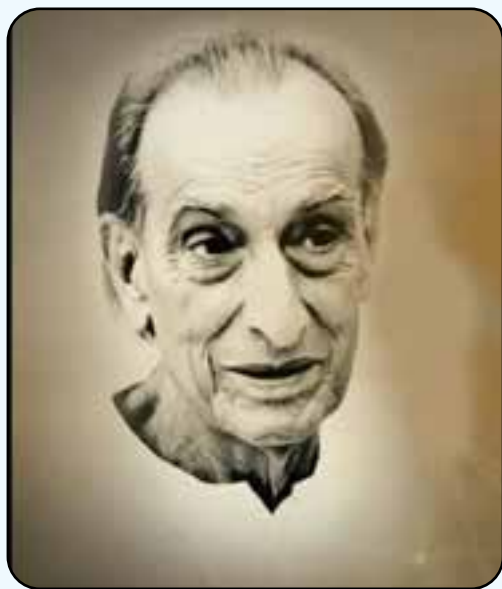
1. Dengvaxia, the first and only approved dengue vaccine is a DNA-based vaccine.
2. A person infected with one dengue serotype is also protected against all other serotypes for a lifetime.

Which of the statements given above is/are correct?

- A. Statement 1 is correct.
- B. Statement 2 is correct.
- C. All Statements are correct.
- D. None of the Statements are correct.

**Ans: D**

## 6 Personality



**Acharya J. B.  
Kripalani**

Many great freedom fighters made an important contribution to the freedom struggle of India. Some of them adopted the path of non-violence of Gandhiji and some followed the path of revolutionaries like Bhagat Singh and Chandrashekhar Azad. Among the freedom fighters who adopted Gandhiji's non-violent path, Acharya J.B. Kripalani's name is prominent. However, on some issues, he also had a different opinion from Gandhiji. Acharya J.B. Kripalani was a freedom fighter, Indian politician and educationist. His full name was Jeevatram Bhagwandas Kripalani. He was born on 11th November 1888 in Hyderabad (present-day Pakistan) of Sindh. After completing his studies he was appointed as Professor in Muzaffarpur. From 1912 to 1927, he taught in many educational institutions before joining the freedom movement. During this time he also taught at Banaras Hindu University and Gujarat Vidyapeeth. During his teaching work, he met Mahatma Gandhi and being a teacher, he received the title 'Acharya'. Influenced by Gandhiji, gradually he started leaning towards the freedom struggle. He had been a part of the Non-Cooperation Movement, the Civil Disobedience Movement and the Quit India Movement. He worked as an associate of Gandhiji in the Champaran Satyagraha.

Acharya J.B. Kripalani met Sucheta Kripalani and in 1936 they got married. Sucheta later became the first woman Chief Minister of India.

During the year 1934-46, Acharya Kripalani was the General Secretary of the Congress. In 1946-47, he became the 57th President of the Congress but resigned in November 1947 due to differences in policy views. In the year 1950, he once again contested the election of Congress President but lost. In 1950 itself, Acharya J.B. started editing the magazine 'Vigil'. He also contributed to the Interim Government of India (1946- 1947) and the Constituent Assembly of India. After independence, he left the Congress and founded a Kisan Mazdoor Praja Party, but after joining the Samajwadi Party, he formed a new party named 'Praja Samajwadi Party'. He was a member of the Lok Sabha four times from this party and after the Indo-China war, he moved a no-confidence motion against the government in 1963 for the first time. When he lost in the 1971 Lok Sabha elections, he left politics and worked towards spirituality and environmental protection. Kripalani was involved in environmental protection and rescue activities in the 1970s along with Vinoba Bhave. He strongly criticized the emergency declared by Indira Gandhi, due to which he was arrested. Acharya Kripalani passed away on 19 March 1982 at Sabarmati Ashram. After his death in 2004, his autobiography 'My Times' was published.

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