



**TNPSC GROUP II / IIA MAIN – 2023**

APPOLO  
STUDY CENTRE  
**CURRENT AFFAIRS**

<b>TOPICS</b>	<b>PAGE NO</b>
<b>1. New Space India Limited</b>	<b>6</b>
<b>2. Launch Vehicle Mark</b>	<b>6</b>
<b>3. e-Waste</b>	<b>7</b>
<b>4. Fintech Revolution</b>	<b>7</b>
<b>5. NFT Explained</b>	<b>11</b>
<b>6. Metaverse</b>	<b>11</b>
<b>7. Quantum Computing</b>	<b>12</b>
<b>8. Cloud computing</b>	<b>13</b>
<b>9. Seoul Forest Declaration</b>	<b>13</b>
<b>10. Arth Ganga</b>	<b>14</b>
<b>11. WMO State of Global Climate Report 2021</b>	<b>15</b>
<b>12. Green Economy</b>	<b>16</b>
<b>13. Blue Economy</b>	<b>17</b>
<b>14. e-SIMs Technology</b>	<b>19</b>
<b>15. e-Rupi</b>	<b>20</b>
<b>16. Web 3.0</b>	<b>20</b>
<b>17. e-Retail Revolution / ONDC</b>	<b>22</b>
<b>18. AGNli Mission</b>	<b>23</b>
<b>19. Atal New India Challenge 2.0 (ANIC 2.0)</b>	<b>25</b>
<b>20. Financial Empowerment of Women</b>	<b>28</b>
<b>21. e-AMRIT Portal</b>	<b>30</b>
<b>22. e-FAST – India’s First National Electric Freight Platform</b>	<b>31</b>

<b>23. New India Literacy Programme – NILP</b>	<b>31</b>
<b>24. One District One Product (ODOP) Scheme</b>	<b>34</b>
<b>25. Operation Greens</b>	<b>35</b>
<b>26. National Logistics Policy – NLP 2022</b>	<b>35</b>
<b>27. Sovereign Green Bonds SGB</b>	<b>36</b>
<b>28. Carbon Bombs</b>	<b>38</b>
<b>29. The Future Missions by 2026 – ISRO</b>	<b>38</b>
<b>30. Gig Economy</b>	<b>39</b>
<b>31. Droupadi Murmu Elected as 15<sup>th</sup> President of India</b>	<b>40</b>
<b>32. India Slips to 121<sup>st</sup> Place in Global SDG Index 2022</b>	<b>41</b>
<b>33. Gujarat Tops NITI Aayog’s Export Preparedness Index 2021</b>	<b>41</b>
<b>34. PM PRANAM Scheme Launches</b>	<b>42</b>
<b>35. Gati Shakti Vishwavidyalaya Replaces National Rail and Transportation University</b>	<b>42</b>
<b>36. Centre Implements ‘One Nation One Fertilizer’ Plan Under ‘Bharat Brand’</b>	<b>42</b>
<b>37. Cloudbursts</b>	<b>43</b>
<b>38. Ayushman Bharat Digital Mission (ABDM)</b>	<b>44</b>
<b>39. Bharat Mala Scheme</b>	<b>47</b>
<b>40. Directorate of Public Health &amp; Preventive Medicine – DPH-PM</b>	<b>49</b>
<b>41. e-Sanjeevani Scheme</b>	<b>50</b>

<b>42. e-Munnetram Web Portal</b>	<b>52</b>
<b>43. First Women's Police Station</b>	<b>53</b>
<b>44. India Innovation Index 2021: NITI Aayog</b>	<b>54</b>
<b>45. MRSAM</b>	<b>56</b>
<b>46. PM-SWAMITVA Scheme</b>	<b>56</b>
<b>47. Setu Bharatam Project</b>	<b>57</b>
<b>48. Shoonya Campaign</b>	<b>59</b>
<b>49. Tamil Nadu Medical Services Corporation</b>	<b>61</b>
<b>50. TN Mukh Bharat Abhiyan 'Ni-kshay 2.0' Portal</b>	<b>61</b>
<b>51. TRANSTAN</b>	<b>63</b>
<b>52. Abhilasha Barak become Indian Army's First women Combat Aviator</b>	<b>64</b>
<b>53. Zara Rutherford: 19 year old is Youngest Woman to round the World Solo</b>	<b>64</b>
<b>54. Charlest III Appointed King of the United Kingdom</b>	<b>64</b>
<b>55. Rishi Sunak: The first British Asian Prime Minister</b>	<b>64</b>
<b>56. Geetanjali Shree</b>	<b>65</b>
<b>57. Asha Parekh Gets Dadasaheb Phalke Award, 2020</b>	<b>65</b>
<b>58. Operation Chakra</b>	<b>65</b>
<b>59. US Navy Launched the 28<sup>th</sup> Edition RIMPAC Exercise</b>	<b>66</b>
<b>60. Japan-India Maritime Bilateral Exercise: Jimex 2022</b>	<b>67</b>

<b>61. Indian Navy Participates in KAKADU Exercise 2022</b>	<b>67</b>
<b>62. The Indo-US Tri-Services Amphibious HADR Exercise, 'Tiger Triumph 2022'</b>	<b>67</b>
<b>63. India Participates in 'Pitch Black' Air Combat Exercise</b>	<b>67</b>
<b>64. India Joins Vostok – 2022 Military Drills Exercise</b>	<b>68</b>
<b>65. The 3<sup>rd</sup> Edition of Vietnam, India Bilateral Army Exercise 'Ex VINBAX 2022'</b>	<b>68</b>
<b>66. India, Malaysia Four – day Air Exercise Udara – Shakti</b>	<b>68</b>
<b>67. Prime Minister's Development Initiative for North-East Region (PM-DevINE)</b>	<b>69</b>
<b>68. Har Ghar Tiranga</b>	<b>70</b>
<b>69. Sagarmala Project</b>	<b>70</b>
<b>70. COP-15 Summit Adopts historic biodiversity deal</b>	<b>71</b>
<b>71. Makkal ID</b>	<b>72</b>
<b>72. Joshimath Subsidence</b>	<b>73</b>
<b>73. Global Hunger Index</b>	<b>74</b>
<b>74. Vande Bharat Express</b>	<b>74</b>
<b>75. Kollam is first Constitution Literate District</b>	<b>75</b>
<b>76. Shyam Saran Negi</b>	<b>76</b>
<b>77. Aruna Miller</b>	<b>76</b>
<b>78. Deepfake Technology</b>	<b>76</b>
<b>79. The Future Bio-Economy in India</b>	<b>77</b>

## 1. New Space India Limited

### What is NSIL Aiming at?

- There is a shortage of rockets to launch satellites in the world. In such a situation, India can bridge this gap in the global Commercial satellite launch market with its LVM-3 rocket.
- In that regard India opened a window through New Space India Limited, a Central Public Sector Enterprises (CPSE) functioning under the Department of Space.
- NSIL has signed two Launch contracts with UK-based One Web. One Web plans to launch 648 satellites for its broadband services around the world.
- The operator plans to do it in five missions by the end of spring 2023. Two of these have been signed with ISRO.

## 2. Launch Vehicle Mark

### What is LVM and how does it Fit in the Global Commercial Satellite Launch Market?

- ISRO has renamed the GSLV-MkIII as the LVM-3 and repurposed the rocket not to place satellites in geosynchronous orbit but in Low Earth Orbit.
- The LVM-3 is capable of carrying satellites up to 8,000 kg.
- The first batch of 36 One Web LEO Broadband Communication Satellites was launched on October 23, 2022, by LVM-3 rocket from Satish Dhawan Space Centre.

### 3. e-Waste

- It is a form of electronic waste and the term is used to describe old, end of life or discarded electronic appliances.
- It is divided into 21 types under two broad categories - IT and Communication equipment and Consumer electrical electronic.
- After realising the extent of damage caused by hazardous substances in ewaste, many legislation have been passed regarding disposal and recycle of ewaste.
- Earlier it used to be dumped in landfills or incinerators.
- Three incidents shocked the world - (a) the Khain Sea waste disposal incident - when a Liberian ship carried 14,000 tonnes of toxic ash from incinerated ewaste, in Philadelphia, USA, destined to New Jersey after the denial of entry dumped 4000 tonnes near Haiti in Pacific Ocean and 10,000 tonnes in Indian and Atlantic Ocean. In another incident, 3500 tonnes of toxic waste of Italy was dumped in the small town of Koko in 1988.
- These incidents led to Basel Convention in 1989. The global ewaste totals about 57.4mil-lion tonnes. India generated 10 lakh tonnes in 2019-2020, an increase of 7 lakh tonnes from that of 2017-2018. India ranks 5th among ewaste producing countries, after USA, China, Japan, and Germany. 95% of ewaste is recycled by India.

### 4. Fintech Revolution

#### What is Fintech?

**Fintech:** Fintech means the usage of technology by the industry to make financial systems accessible and more efficient. The Fintech landscape includes technologies such as digital payments, digital

lending, BankTech, InsurTech (technological penetration in the insurance industry) and RegTech (use of technology in regulation), cryptocurrency (based on the block chain technology) etc.

Fintech in India: India's fintech ecosystem is based on the four pillars of income, investment, insurance, and institutional credit.

## Context

- Presently, India is witnessing manifold progress in the Fintech ecosystem due to rapid adoption of digital technology. The Fintech revolution is changing India's position from a cash-driven economy to a digital economy with e-commerce and smartphone penetration, as well as, the banking industry as several banks are now moving towards digitalization, with a predominance of cashless transactions.
- Factors for the growth of Fintech sector: This growth of the Fintech ecosystem in India is aided by many factors such as the growing availability of smartphones, an increase in internet penetration, and high-speed connectivity.

## Technologies used in Fintech:

- Fintech uses various technologies as enumerated below:
- Cloud Computing
- Biometrics
- Big Data
- Distributed Ledger Technology.



- Artificial Intelligence

## **Fintech Industry in India**

- **Boost in Payment infrastructure:** In the previous decade, India's payment infrastructure has developed rapidly with the introduction of new payment mechanisms and interfaces such as Immediate Payments Service (IMPS), Unified Payments Interface (UPI), Bharat Interface for Money (BHIM).
- **Socio-Economic Development:** Digital transactions in India have also led to socio-economic development as they are expected to add 26 lakh jobs and Rs 2.8 lakh crores in economic value by 2025. India has seen the highest Fintech adoption rate globally.
- Paytm, PhonePe, MobileKwik etc., digital payment systems have undeniably been the flag bearers of the Indian FinTech market.

## **Use of AI in Fintech**

- Adoption of New Transaction Modes
- Analysis of Big Data.
- Linking of Aadhar
- Buy Now, Pay Later
- Chatbots

## **Advantages of Fintech Revolution**

- **Catalytic role:** Digital infrastructure in India is playing a catalytic role in the adoption of technology by public

platforms. It has also helped in achieving the financial empowerment of the citizens and has given an impetus to the Economy.

- **Increased Access to Government initiatives:** Government schemes such as 'Jan Dhan Yojana' (the world's largest financial inclusion scheme), e-RUPI (for cashless transactions), India Stack (API-based public digital infrastructure), Fastag, UMANG App have seen an increase in absorption in the country.

## Tamil Nadu Fintech Policy

- To transform Tamil Nadu into a leading global destination for FinTech firms by 2025.
- To increase financial inclusion and fintech adoption rate in Tamil Nadu by promoting digital solutions for the traditional financial sector.
- To develop a comprehensive and concerted program with government agencies to provide a one-stop shop solution to existing and new FinTech firms in the State.
- To facilitate seamless and transparent Business-to-Business (B2B), Business-to-Consumer (B2C), Government-to-Government (G2G), Government -to-Business (G2B), and Government-to-Citizen (G2C) financial transactions efficiently.
- To develop partnerships with other leading FinTech centres across the world
- To become the leading State in the country in terms of growth of new FinTech firms incorporated during the Policy period.

## 5. NFT Explained

### What is an NFT?

The NFT stands for Non Fungible Token.

NFTs are based on the decentralised cryptocurrencies where the control does not remain with any financial institution constituted by Government but is purely driven by market forces and volition of the 'people' (or computers connected in a block chain Network

### How do NFTs Work?

These NFTs are bought and sold using cryptocurrencies like Bitcoin, Ethereum, XRP, Dogecoin.

Cryptocurrencies are fungible. One Bitcoin can be replaced by another Bitcoin and the value will be the same. Just the way one Rs 500 can be replaced by another Rs 500 note. On the other hand, each NFT is different from another NFT because it is unique, having a unique serial number on the block chain Network. Therefore, each NFT is one of a kind and can have a completely different value.

## 6. Metaverse

Metaverse means a parallel universe present in the digital world that contains most of the things that exist in our physical world. Accessing this virtual world requires the Internet and digital devices, just like you would access a video game.

People like us will be there but in their virtual, digital avatars. Companies like Microsoft, Meta (Facebook), Decentraland, Nvidia, and Unity are engaged in making it a reality. Within the next five to ten years, such possibilities can open for all of us in the digital world that we can only imagine at the moment.

The information stored under the Block chain is even more secure than our banking system because countless copies of that information are kept on computers around the world. No one can hack so many computers.

## 7. Quantum Computing

The Quantum computer is unique because of its infinite power. A quantum computer can perform calculations millions of times faster than a normal computer.

Traditional computers work based on a fundamental unit of binary digits (0 and 1) called 'bit'. On the other hand, the Quantum computer adopts Qubit (Quantum Bit). Unlike traditional computers, quantum computers are not limited to just two states. Where transistors are used in normal computers – atoms, electrons, ions, photons, etc., are used in quantum computers which can be superimposed on each other. The working system of a quantum computer differs completely from the traditional computer, and its capacity is tens of millions of times more.

The world's first, very small quantum computer was built in 1997. In 2007, a company called D-Wave Systems of Canada introduced a powerful 28-qubit quantum computer. They are being used at institutions like IBM, Intel, Google, Rigetti, Microsoft, NASA, D-Wave, Alibaba, IONQ, Oxford, Berkeley, Stanford universities, and the Massachusetts Institute of Technology (MIT).

## 8. Cloud Computing

Cloud computing has made vast computational power and storage space available and technology like AI requires it for calculations.

Cloud computing implies using the resources available on the internet on your computers or devices. These resources are broadly of three types – the complete infrastructure of IT, i.e., hardware, software, etc.

The word 'Cloud' refers to the infrastructure on the internet where various types of technical resources are present, such as hardware, software, and services. There are two more types of cloud- Software as a Service (SaaS) and Platform as a Service (PaaS). Everything is done remotely through the internet, without having to buy anything.

## 9. Seoul Forest Declaration

The 15th World Forestry Congress concluded in Seoul and the Seoul Forest Declaration was adopted. The 15th edition of this event was hosted by the South Korean government in Seoul.

### Key Facts:

### Major Highlights of the Report:

- The responsibilities regarding forests must be integrated and across various stakeholders, sectors, and institutions so as to achieve a sustainable future.
- The vast areas of degraded forest lands must be restored.
- The declaration highlights that on an unhealthy planet there will be no healthy economy.

- The consumption and production have to be sustainable. Policies must be implemented that will help foster mechanisms related to innovative green financing.
- Investment in forest restoration, conservation, and sustainable use must be upscaled.
- Forest-based solutions must include the outlook of the smallholders, family farmers, indigenous peoples, forest communities, youth, and women.
- They must also be empowered to put forward their decisions regarding making forests into sustainable value chains.
- The declaration also showcased that the health of humans and forests are closely tied together and the degradation of forests will have serious negative impacts on the health and wellbeing of humans.

## 10. Arth Ganga

PM-Modi first introduced the concept during the first National Ganga Council meeting in Kanpur in 2019, where he urged for a shift from Namami Gange, the Union Government's flagship project to clean the Ganga, to the model of Arth-Ganga :

- Arth-Ganga focuses on the sustainable development of the Ganga and its surrounding areas, by focusing on economic activities related to the river.
- At its core, the Arth-Ganga model seeks to use economics to bridge people with the river.

- Arth-Ganga concept can be summarised as a river-people connection through the economic bridge to ensure the sustainability of these activities under 'Namami Gange', the flagship programme of the Government to clean Ganga and its tributaries.

## 11. WMO State of Global Climate Report 2021 is released on 18 May, 2022

World Meteorological Organisation (WMO) 2021 annual report gives details of climate indicators such as temperatures, ocean heat, ocean acidification, sea level, sea ice glaciers and extreme weather.

Four key climate change indicators greenhouse gas concentration, sea level rise, ocean heat and ocean acidification – set new records in 2021.

**Greenhouse Gas Concentrations :** Concentration of carbon dioxide (CO<sub>2</sub>) reached 413.2 parts per million (ppm) globally or 149% of the pre-industrial level in 2020. Data from specific locations indicate that they continued to increase in 2021 and early 2022.

**The Global Annual Mean Temperature :** The most recent seven years, 2015 to 2021 are the seven warmest years on record. The global annual mean temperature in 2021 was around  $1.11 \pm 0.13^{\circ}\text{C}$  above the 1850-1900 pre industrial average.

**Ocean Heat:** All data sets agree that ocean warming rates show a particularly strong increase in the past two decades. The upper 2000 m depth of the ocean continued to warm in 2021 and is expected that it will continue to warm in the future.

**Ocean Acidification:** The ocean absorbs emissions of anthropogenic CO<sub>2</sub> to the atmosphere. This CO<sub>2</sub> reacts with seawater and leads to ocean acidification which threatens organisms and ecosystem services and have food security tourism and coastal protection.

**Global Mean Sea Level :** Global Sea level is increasing at an average 4-5 mm per year over the period 2013-2021. This is due to the accelerated loss of ice mass from the ice sheets. This increases vulnerability to tropical cyclones.

This is a clear sign that human activities are causing planetary scale changes on land, in the ocean and in the atmosphere with harmful and long-lasting ramifications for sustainable development and ecosystems.

## 12. Green Economy

### What is a Green Economy?

A green economy is defined as low carbon, resource-efficient and socially inclusive.

In a green economy, growth in employment and income is driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services.

### Introduction

Climate action has been highlighted as one of the priority areas in the budget, along with inclusive development, energy transition, financing of investments, among others.



Acknowledging that the climate crisis is among the strongest negative externalities affecting India, the Finance Minister announced several measures to help the country transition to a low-carbon economy.

### **Key Measures**

The measures include an increased allocation of 19,500 crores for the Production Linked Incentive (PLI) scheme for the domestic manufacturing of solar modules that will aid in the attainment of 280 GW of installed solar capacity by 2030.

This is also envisaged to generate significant employment opportunities in the country.

The proposal to co-fire 5-7% biomass pellets in thermal power plants, will result in carbon dioxide reduction, besides providing a source of income to farmers and aiding in the reduction of stubble burning.

In a further impetus to the Electric Vehicles (EV) ecosystem, a battery swapping policy has been announced and the need for the development of interoperability standards have been highlighted.

The focus of the budget on urban planning, clean technology, and public transport, is a step in the right direction and will be instrumental in giving the much-needed boost to the EV industry in the country.

## **13. Blue Economy**

### **Concept of Blue Economy**

The Blue Economy encompasses a wide range of economic activities pertaining to the sustainable development of resources and assets in the oceans, related rivers, water bodies, and coastal

regions - in a manner that ensures equity, inclusion, innovation, and modern technology.

The Blue Economy is viewed as an integral element of Sustainable Development Goals.

## **Overview of India's Blue Economy**

The Blue Economy of India is a subdivision of the national economy that includes the complete ocean resources system as well as human-made economic infrastructure in the country's legal jurisdiction marine, maritime, and onshore coastal zones.

It accounts for roughly 4% of the GDP and is estimated to increase once the mechanism is improved. The sector has stood strong despite the challenges caused by the Covid-19 pandemic and has recorded exports worth US\$ 7.2 billion between April 2021- February 2022.

Ocean resources, physical infrastructure for maritime economic development, marine amenities, and coastal management services are all part of the plan to ensure economic growth and sustainability, as well as national security.

Fisheries and minerals are the two most viable components of the blue economy in India. The two mineral deposits of commercial significance to developers in the Indian Ocean are polymetallic nodules and polymetallic huge sulphides.

The coastal economy sustains over 4 million fishermen and coastal towns. India is the second largest fish producing nation in the world and has a fleet of 2,50,000 fishing boats. India has a remarkable marine position with 7,517 kilometers of coastline.

Nine of India's states have access to the coastline. India comprises 200 ports of which 12 are major ports. Shipbuilding and shipping are also important aspects of the blue economy in India.

The modal share of coastal shipping has the potential to increase to 33% by 2035, up from roughly 6% presently. Most of the country's oil and gas are supplied by sea, leading to making the Indian Ocean region critical to India's economic growth.

The Indian Ocean's Blue Economy has become a global economic corridor.

It is the world's third-largest body of water, covering 68.5 million square km and rich in oil and mineral resources, and countries around the ocean's periphery are home to about one-third of humanity.

### **The Blue Revolution: Integrated Development and Management of Fisheries**

The Government of India launched the Pradhan Mantri Matsya Sampada Yojana (PMMSY), in May 2020, with the highest investment of Rs. 20,050 crore (US\$ 2.5 billion) to bring about a Blue Revolution through sustainable and responsible development of the country's fisheries sector.

## **14. e-SIMs Technology**

### **What is e-SIM ?**

- An e-SIM is an embedded SIM, essentially the same hardware of a regular SIM card chip, but now a permanently embedded part of the motherboard of a watch or smartphone.

## Advantages of e-SIMs

- **Convenience:** It will also save a trip to a telecom store/ service centre when you visit a different state or country where you may want to switch to another operator.
- **Security:** When a phone with a physical SIM card is lost or stolens, the SIM card can be used in illegal activities. An e-SIM prevents this, as there is no physical element to pull out and use in another device.
- **One less opening on your phone:** Having an e-SIM also means there is one less opening on the frame of your phone.

## 15. e-RUPI

### How will e-RUPI Work?

e-RUPI is a cashless and contact-less digital payments' medium, which will be delivered to mobile phones of beneficiaries in form of an SMS-string or a QR code. This will essentially be like a prepaid gift-voucher that will be redeemable at specific accepting centres without any credit or debit card, a mobile app or internet banking. e-RUPI will connect the sponsors of the services with the beneficiaries and service providers in a digital manner without any physical interface.

## 16. Web 3.0

**Web 3'0 :** Web 3 0 represents a new phase in the internet's evolution i.e., a visually dynamic, semantic and spatial Web with concept of decentralisation, openness, and greater user utility. It combines a bouquet of disruptive technologies such as blockchain, Augmented Reality, Virtual Reality, Cloud, Edge, IoT, cryptocurrency and runs on an AI-based analytics layer for data-driven insights.

## Key Facts:

- Web 3 or Web 3-0 refers to the next generation of the worldwide web, which is supposed to take over from Web 2.0.
- Web 3-0 may be a more decentralised web than the Web 2-0 and it may challenge the dominance of the tech giants.

## Difference Between Web 3-0 and Web 2-0

- Web 3 is supposed to be a more decentralised web.
- It challenges the dominance of the tech giants by concentrating the power and data in the hands of the users.
- This means that data is distributed across networks and no single entity owns the information.
- Instead of providing your personal data over and over again on each platform you sign up for, you will instead simply authorise platforms to use your data.

## Pros of Web 3.0

- Open and Transparent Network : Web 3-0 is the open network, all applications and programs are developed using open-source software.

Essentially the code for development, which is a virtual resource, is public for the community and the development process is also kept transparent.

- Seamless Ecosystem : The centralised control over data by platform companies moves into the hands of the individuals with Web 3-0, using smart protocols on blockchain that eliminate the need for third parties.

- **Direct Relationship Between Sellers and Customers:** Web 3 technology can also eliminate middlemen, allowing sellers and customers to interact directly.
- **Personalised Experience:** It has the potential to blur the lines between the physical and digital world. For instance, in the case of e-commerce using AI-powered Web 3-0, sellers would be able to better understand the buying needs.
- **Independent Monetization:** In centralised content management, user-generated content typically belongs to the platform it is published but Web 3-0 can empower creators by giving them a better opportunity to monetize.

## 17. e-Retail Revolution/ONDC

Open Network for Digital Commerce christened ONDC is globally first-of-its-kind initiative that aims to democratise Digital Commerce, moving it from a platform-centric model to an open-network. As UPI is to the digital payment domain, ONDC is to e-commerce in India.

ONDC will enable buyers and sellers to be digitally visible and transact through an open network. ONDC will empower merchants and consumers by breaking silos to form a single network to drive innovation and scale, transforming all businesses from retail goods, food to mobility.

ONDC is a plan for a well developed Information, Education and Communication campaign to educate, encourage and to address any apprehensions of various network participants.

The ONDC project has been commissioned by the Department of Promotion of Industry and Internal Trade (DPIIT) through the Quality Council of India (QCI).

## Objectives

The ONDC aims "at promoting open networks developed on open-sourced methodology, using open specifications and open network protocols, independent on any specific platform. ONDC is expected to digitise the entire value chain, standardise operations, promote inclusion of suppliers, derive efficiency in logistics, and enhance value for consumers".

Another key stated aspect of ONDC is that it is aimed at curbing "digital monopolies". The creation of ONDC also means access to a large repository of buyer and seller data for those joining the open-source platform.

Such data has so far been accumulated by large e-commerce marketplaces without them enabling access to this data for their individual sellers.

### Potential advantages of ONDC

E-retail market size expected to surge 250% in next three years : Crisil

Indian e-retail market expected to grow to \$ 140 billion by FY 2025-26 : Bain Company.

## 18. AGNIi Mission

AGNIi is one of the nine missions under the Prime Minister's Science, Technology, and Innovation Advisory Council. The AGNIi Mission focuses on helping to capture the value of Indian technology: assisting Indian innovation, engage key national priorities designated by the Office, in domains ranging from human development through ecological sustainability to public safety.

## **Bridging the Gap between Innovators and Adopters:**

AGNIi helps resolve the mismatch . between innovations and adopter needs.

AGNIi executives to understand, as closely as possible, what the world looks like through their partners' eyes. AGNIi outlines technology stacks, comprising Indian innovation (e.g., from Indian technology startups) that can resolve these pain-points.

## **Creating a Scalable Impact:**

AGNIi helps Indian technologists and innovators engage major adopters - and their networks. For example, in rural livelihood domains, AGNIi will partner with women's Self-Help or Common Service Centre groups - which are part of communities scaled nationwide across rural India.

## **Empowering the Bottom of the Pyramid:**

A primary AGNIi aim is to ensure that Government's guiding principle of Antyodaya - that the poor, marginalised, and those left behind-are engaged to the maximum possible extent, with the capacity Indian technology can create. AGNIi seeks, in its partnerships, to ensure that grassroots and field-level insights are prioritised in AGNIi operational scenarios, and technology stack development.

## **Supporting the Competitiveness and Capturing the Value of Indian Technology.**

AGNIi has refined its technological focus. This includes engaging Indian innovation in the domains of artificial intelligence, quantum computing, robotics, cyber-physical, materials, and energy.



By connecting pain-points to, and defining operational scenarios for, Indian innovators: AGNIi offers insight into opportunity for Indian innovation to evolve solutions and scale.

## 19. Atal New India Challenge 2.0 (ANIC 2.0)

This is the second edition of ANIC 1-0 which was launched on April 28, 2022. Atal New India Challenge is a flag-ship program of Atal Innovation Mission, NITI Aayog. The program aims to seek, select, support and nurture technology-based innovations that solve sectoral challenges of national importance and societal relevance.

One of the primary goals of the ANIC program is to support innovations in areas critical to India's development and growth – Education, Health, Water and Sanitation, Agriculture, Food Processing, Housing, Energy, Mobility, Space Application etc.

Working in collaboration with the different verticals of NITI Aayog and Ministry of Road Transport and Highways, ISRO and Ministry of Social Justice and Empowerment, the 1st phase of ANIC 2 0 will see 18 challenges being thrown open from 7 sectors.

### 1. Sector: E-mobility

- Challenge 1. Electric Vehicles -Innovations in Indigenous Electric Vehicle and EV Component Technology
- Challenge 2. EV Charging Infrastructure - Solutions for Easier and Faster Charging of EV Batteries

## **2. Sector: Road Transportation- (in Partnership with Ministry of Road Transport and Highways)**

- Challenge 1. Safe Transport -Innovations—to improve Rider / Driver Safety
- Challenge 2. Smart Mobility -Smart- Solutions to Develop Intelligent Transport Systems
- Challenge 3. Sustainable Mobility -Sustainable Innovations in Mobility

## **3. Space Technology and cation (in Partnership with Department of Space -Indian Space Research Organization)**

- Challenge 1. GIS Solution- GIS Solution Across Sectors- Agriculture, Water, Forestry, Urban Affairs, Road Transport etc.
- Challenge 2. Propulsion - Innovations in Green Propellants, Electric Propulsion, Advanced Air-breathing.
- Challenge 3. Navigation -Nav IC Based Navigation Solution in Internet of Things (IoT)
- Challenge 4. Navigation NavIC Based Navigation Solution in Internet of Things Applications.

## **4. Sanitation Technology and Equipment (in Partnership Ministry of Social Justice and Empowerment)**

Challenge 1. Preventing Human Intervention - Innovations to Mechanize Cleaning of Septic-. Tanks, Drainages and Manholes

Challenge 2. Protecting Humans Engaged in Sewage Cleaning - Protective Gears, Equipment and Other Solutions for Ensuring the Health and Safety of Humans Engaged in Sewage Cleaning.

## **5. Medical Devices and Equipment**

- Challenge 1. Portable Point-of- Care (POC) Diagnostic or Monitoring Devices
- Challenge 2. Low Cost Consumables & Implants
- Challenge 3. Advanced Surgical and Non-Surgical Equipment
- Challenge 4. Advanced Assistive and Rehabilitative Devices.

## **6. Waste Management**

- Challenge 1. Municipal Solid Waste Management
- Challenge 2. E-waste Management

## **7. Agriculture**

- Challenge 1. Climate Smart Agriculture.

## 20. Financial Empowerment of Women

Some major initiatives taken by Government of India in this regard are:

1. **Bachao Beti Padhao (BBBP)** to ensure the protection, survival and education of the girl child.
2. **Mahila Shakti Kendra (MSK)** aims to empower rural women with opportunities for skill development and employment.
3. **Working Women Hostel (WWH)** ensures the safety and security for working women.
4. **Scheme for Adolescent Girls** aims to empower girls in the age group 11-18 and to improve their social status through nutrition, life skills, home skills and vocational training.
5. **Mahila Police Volunteers (MPV)** envisages engagement of Mahila Police Volunteers in States/UTs who act as a link between police and community and facilitates women in distress.
6. **Rashtriya Mahila Kosh (RMK)** is an apex micro-finance organisation that provides microcredit at concessional terms to poor women for various livelihood and income generating activities.
7. **The National Croche Scheme** ensures that women take up gainful employment through providing a safe, secure and stimulating environment to the children.
8. **Pradhan Mantri Matru Vandna Yojana** aims to provide maternity benefit to pregnant and lactating mothers.

9. **Pradhan Mantri Awaas Yojana** aims to provide housing under the name of the women also.
10. **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** aims to enable a large number of Indian youth including women to take up industry-relevant skill training in securing a better livelihood.
11. **Deen Dayal Upadhyay National Urban Livelihoods Mission (DAY-NULM)** focuses on creating opportunities for women in skill development, leading to market-based employment.
12. **Pradhan Mantri Ujjwala Yojana** empowers women and protects their health by providing LPG cylinder free of cost.
13. **Sukanya Samridhi Yojna(SSY)** scheme has empowered many girls economically by opening their bank accounts.
14. **Skill Upgradation and Mahila Coir Yojna** is an exclusive training programme of MSME aimed at skill development of women artisans engaged in coir industry.
15. **Prime Minister's Employment Generation Programme (PMEGP)** is a major credit-linked subsidy programme aimed at generating self-employment opportunities through establishment of micro-enterprises in the non-farm sector.
16. **Female Entrepreneurship:** To promote female entrepreneurship, the government has initiated Programmes like Stand-Up India and Mahila e-Haat (online marketing platform to support women entrepreneurs/ SHGs/NGOs), Entrepreneurship and Skill Development Programme (ESSDP). Pradhan Mantri Mudra Yojana (PMMY) provides access to institutional finance to micro and small businesses.

## 21. e-AMRIT Portal

### Introduction:

India on November 10, 2021, launched an electric vehicle awareness web portal called e-Amrit.

### Aims:

The e-AMRIT portal aims at creating awareness about electric mobility in India. It has been developed as a 'one-stop site' for all the information related to the adoption of electric vehicles (EVs) in India.

### Features:

**Feasibility research on switching to EV:** Switch to electric vehicles by offering insights about electric vehicle technologies, types of electric vehicles, insurance options, and financing options.

**Knowledge repository on EV:** Set up the electric vehicle or associated enterprise by providing insights on the key initiatives of central and state governments.

**Tools to calculate EV experience:** Assess the benefits of electric vehicles with uniquely designed tools to determine the users' savings with electric vehicles compared to petrol/diesel vehicles.

**Information about EV businesses:** Get all the information on the Indian electric vehicle market and industry and the key developments driving the e-mobility ecosystem forward.

## 22. e-FAST - India's First National Electric Freight Platform

On 8th September 2022, NITI Aayog, in collaboration with World Resources Institute (WRI), India, launched the country's first national electric freight platform - e-FAST India (Electric Freight Accelerator for Sustainable Transport - India).

### Aim of e-FAST - India

The platform aims to raise awareness on freight electrification bolstered by on-ground demonstration pilots and evidence-based research.

### Benefits of this Platform

**Innovative Solutions:** It will help strengthen partnerships and identify and support innovative freight solutions.

**Reduce Emission:** Road freight is a high-impact area for reducing transport emissions. India being the third-largest truck market, after China and the United States, early adoption of zero-emission trucks would be instrumental in not only accelerating domestic climate imperatives but also in supporting global climate action.

**Impetus to Electric Freight:** It will also help in transition to electric freight. It will support scalable pilots and inform policies aimed at accelerating freight electrification in India.

## 23. New India Literacy Programme - NILP

New India Literacy Programme" for the period FYs 2022-2027 to cover all the aspects of Adult Education to align with National Education Policy 2020 has been approved.

## Objective:

- To impart not only foundational literacy and numeracy but also to cover other components which are necessary for a citizen of the 21st century.
- Other components include:
  - Critical life skills (including financial literacy, digital literacy, commercial skills, health care and awareness, child care and education, and family welfare).
  - Vocational skills development (with a view towards obtaining local employment).
  - Basic education (including preparatory, middle, and secondary stage equivalency).
  - Continuing education (including engaging holistic adult education courses in arts, sciences, technology, culture, sports, and recreation, as well as other topics of interest or use to local learners, such as more advanced material on critical life skills).

## Implementation:

- The scheme will be implemented through volunteerism through online mode.
  - The training, orientation, workshops of volunteers, may be organized through face-to-face mode. All material and resources shall be provided digitally.



- School will be Unit for implementation of the scheme.
  - Schools to be used for conducting surveys of beneficiaries and Voluntary Teachers.

### **Covered under the Scheme**

- Non-literates of the age of 15 years and above in all states/UTs in the country.
- The target is 5 (five) crore learners @ 1.00 crore per year by using “Online Teaching, Learning and Assessment System (OTLAS)” in collaboration with National Informatics Centre, NCERT and NIOS.

### **Need for the Scheme**

As per Census 2011, the absolute number of non-literates of the country in 15 years and above age group is 25.76 crore (Male 9.08 crore, Female 16.68 crore).

### **Other Initiatives taken in this Direction**

- **National Skill Development Corporation (NSDC)**
- **Digital India Programme**
- **Pradhan Mantri Gramin Digital Saksharta Abhiyan**
- **Samagra Shiksha**

## 24. One District One Product (ODOP) Scheme

### Introduction:

One District One Product (ODOP) scheme aims to realize the true potential of a district, fuel economic growth, and generate employment and rural entrepreneurship.

### Objectives:

- **Transforming Districts into Export Hubs:** One District One Product (ODOP) scheme aims to convert each District of the country into an Export Hub by-
  - Identifying products with export potential in the district,
  - Addressing bottlenecks for exporting these products,
  - Supporting local exporters/manufacturers to scale up manufacturing, and find potential buyers outside India.
- **Promoting Industry and Export:** One District One Product (ODOP) initiative aims to promote the manufacturing & services industry in the District, along with promoting exports of identified products.
- **Generating Employment:** One of the key goals of the One District One Product (ODOP) initiative is to generate employment for the local people in the District.

### Key Points:

- **Background:** One District One Product (ODOP) initiative is operationally merged with the 'Districts as Export Hub' initiative.

- **About:** One District One Product (ODOP) is an initiative that is seen as a transformational step forward towards realizing the goal of AtmaNirbhar Bharat.
- **Mandate:** One District One Product (ODOP) scheme aims to realize the true potential of a district, fuel economic growth and generate employment and rural entrepreneurship.

## 25. Operation Greens

### Introduction:

A new Scheme “Operation Greens” was announced on the line of “Operation Flood”, with an outlay of Rs. 500 crore to promote Farmer Producers Organizations, agri-logistics, processing facilities and professional management.

Operation Greens seeks to stabilize the supply of Tomato, Onion and Potato (TOP) crops and to ensure availability of TOP crops throughout the country round the year without price volatility.

The scheme was extended during June 2020 to cover all fruits & vegetables (TOTAL) for a period of six months on pilot basis as part of Aatmanirbhar Bharat Abhiyan.

The Ministry of Food Processing Industries has launched the scheme. NAFED will be the Nodal Agency to implement price stabilisation measures.

## 26. National Logistics Policy - NLP 2022

Logistics is an aspect of the supply chain that stores or delivers finished goods or services to the customer, whether that's manufacturer, distributor or consumer. The goal of logistics is to get goods and services to the customer on time and at a competitive price.

## Key Facts:

- The National Logistics Policy (NLP) was announced by the Finance Minister in the 2022-23 Union Budget.
- The policy has four features that will be implemented through the Comprehensive Logistics Action Plan (CLAP):
- **Integration of Digital System (IDS)** : For the digital integration of different systems of seven various departments (like road transport, railways, aviation, commerce ministries and foreign trade).
- **Unified Logistics Interface Platform (ULIP)**: This ensures shorter and smoother cargo movement and enables the exchange of information confidentially on a real - time basis. This National Industrial Corridor Development Corporation (NICDC) Logistics Data Bank Project has been leveraged.
- **Ease of Logistics (ELOG)**: This will enable and ensure the ease of logistics business through transparency and accessibility.
- **System Improvement Group (SIG)**: This will monitor all logistics - related projects regularly.
- The e-handbook on the policy gives insight into the standardization of the warehousing sector.

## 27. Sovereign Green Bonds SGB'

- Green bonds are issued by companies, countries and multilateral organisations to exclusively fund projects that have positive environmental or climate benefits and provide investors with fixed income payments.

- The projects can include renewable energy, clean transportation and green buildings, among others.
- Proceeds from these bonds are earmarked for green projects.
- The international green bond market has seen cumulative issuance worth more than USD 1 trillion since market inception in 2007.
- **Aims and Objectives:**
  - They are aimed at energy efficiency, pollution prevention, sustainable agriculture, fishery and forestry, the protection of aquatic and terrestrial ecosystems, clean transportation, clean water, and sustainable water management.

### **How 'Sovereign Green Bonds-SGB' work**

- An investor lends money to the board of issuer.
- The issuer uses the investment to fund their project.
- The investor earns interest through 'coupons'.
- The issuer repays the investor's principal at the end of the term.

### **Green Bonds and India**

- The green bonds issuance in India in 2021 was exceptional and is to set a new record in 2022. India issued \$ 611 billion of green bonds in 2021. It was the strongest issue since the first issue in 2015.

## 28. Carbon Bombs

### What is a Carbon Bomb?

It is "an oil or gas project that will result in at least a billion tonnes of CO<sub>2</sub> emissions over its lifetime."

Whenever coal, oil, or gas is extracted it results in pollution and environmental degradation.

Further, carbon emissions take place in particularly large amounts when fuel is burned. In total, around 195 such projects have been identified world over, including in the US, Russia, West Asia, Australia and India.

According to the report, they will collectively\*overshoot the limit of emissions that had been agreed to in the Paris Agreement of 2015.

The agreement was to contain the global rise in average temperature to 2 °C and strive for the target of 1.5°C as compared to preindustrial levels - when the widespread use of coal for industry in the beginning in the mid-19th century led to a rapid rise in average global temperatures.

## 29. The Future Missions by 2026 - ISRO

- ❖ Aditya-L1: cost of Rs. 3.7b
- ❖ Chandrayaan-3: Rs. 2.5b
- ❖ XPoSAT: Rs. 0.60b
- ❖ Space Docking Experiment- launch by Q3 2024 (Rs. 1.24b)
- ❖ Gaganyaan: launch by 2024 (Rs.90.23 b).

- ❖ Space Tourism Next ISRO is developing 'space tourism' LEO capabilities, like Blue Origin joyride and SpaceX Dragon spacecraft.

### 30. Gig Economy

#### What is Gig Economy?

A gig economy is a free market system where temporary positions are common and organisations contract with independent workers for short-term engagements.

According to a report by Boston Consulting Group, India's gig workforce comprises 15 million workers employed across industries such as software, shared services and professional services.

#### Potential of India's Gig Sector

While the gig economy is prevalent among blue-collar jobs in India, the demand for gig workers in White-collar jobs such as project-specific consultants, salespeople, web designers, content writers and software developers is also emerging.

#### Key Drivers of the Gig Sector

**Flexibility to Work from Anywhere:**

In the digital age, the worker need not sit at a fixed location – the job can be done from anywhere, so employers can select the best talent available for a project without being bound by geography.

**Changing Work Approach:** The millennial generation seems to have quite a different attitude to careers. They seek to do work that they want to do rather than have careers that may not satisfy their inner urges.

**Business Models:** Gig employees work on various compensation models such as fixed-fee (decided during contract initiation), time & effort, actual unit of work delivered and quality of outcome.

**Emergence of a Start-up Culture:** The start-up ecosystem in India has been developing rapidly.

For start-ups, hiring full-time employees leads to high fixed costs and therefore, contractual freelancers are hired for non-core activities.

## **Challenges of the Gig Sector**

**Unregulated Nature**

**Need for Skills**

**Demand-Supply Mismatch**

### **31. Droupadi Murmu Elected as 15th President of India**

**Who is Droupadi Murmu?**

Ms. Murmu was born in the district of Mayurbhanj (Odisha) in 1958, and belongs to the Santhal tribe who had been a former Governor Jharkhand.

**Political Gist of Droupadi Murmu**

In 2000, Ms. Murmu won her first Assembly election from Rairangpur in Odisha. She was responsible as Minister first for the ministry of Transport and Commerce and then for Fisheries and Animal Husbandry.



Droupadi Murmu, was elected the 15th President of India, the first tribal woman and the youngest as well. She was declared elected after four rounds of counting and lead over her rival and the Opposition's candidate Yashwant Sinha, who conceded the election thereafter.

She received 64-03% of total valid votes polled, much more than what was openly declared in her support and pointing to the fact there hack been a lot of cross-voting in Ms. Murmu's favour from the Opposition ranks.

### **32. India Slips to 121st Place in Global SDG Index 2022**

The Sustainable Development Report (SDR) reviews progress made each year on the Sustainable Development Goals since their adoption by the 193 UN Member States in 2015. Key findings of 2022's report are following:

For the second year in a row, the world was no longer making progress on the SDGs in 2021. At 66.0 points, the average SDG Index score declined slightly from 2020.

### **33. Gujarat Tops NITI Aayog's Export Preparedness Index 2021**

Gujarat has topped NITI Aayog's Export Preparedness Index 2021 that aims to help evaluate states' and Union Territories' preparedness to export and take measures for improvement wherever possible. This is the second consecutive year that Gujarat has emerged as the top performer.

According to a report by the government's policy think tank NITI Aayog released on March 25, 2022, Maharashtra, Karnataka, Tamil Nadu, Haryana bagged the second, third, fourth and fifth positions, respectively. Lakshadweep, Arunachal Pradesh, Mizoram, Ladakh and Meghalaya were placed at the bottom of the index.

### **34. PM PRANAM Scheme Launches**

PM Narendra Modi launched the PM PRANAM (Promotion of Alternate Nutrients for Agriculture Management Yojana) Scheme to reduce the use of chemical fertilisers. This scheme encourages the balanced use of fertilisers in conjunction with bio fertilisers and organic fertilisers and it also bring down the subsidy burden on chemical fertilisers, which is estimated to reach Rs. 2-25 lakh crore in 2022-23 (39%) higher than 2021 figure of Rs. 1-62 lakh crore.

### **35. Gati Shakti Vishwavidyalaya Replaces National Rail and Transportation University**

The National Rail and Transportation University, Vadodara a deemed-to-be university, into Gati Shakti Vishwavidyalaya, an autonomous Central University.

The Central Universities (Amendment) Bill, which also seeks to expand the scope of the University from beyond the railways to cover the entire transport sector to support the ambitious growth and modernisation in the field, was passed by a voice vote after a brief discussion.

Gati Shakti Vishwavidyalaya will be run by the Ministry of Rail ways.

### **36. Centre Implements 'One Nation One Fertiliser' Plan Under 'Bharat' Brand**

To bring about uniformity in fertiliser brands across the country, the government on August 25, 2022 issued an order directing all companies to sell their products under a single brand name of 'Bharat'.

Following the order, all fertiliser bags, whether containing urea or diammonium phosphate (DAP) or muriate of potash (MOP) or NPK will sport the brand name as 'Bharat Urea', 'Bharat DAP', 'Bharat MOP' and 'Bharat NPK' irrespective of the company that manufactures it whether in the public or the private sector.

The order also stated that the single brand name and the logo of Pradhan Mantri Bhartiya Janurvarak Pariyojana (PMBJP), the scheme under which the Central government grants subsidy annually to the fertiliser, companies will have to be displayed on the bags.

### 37. **Cloudbursts**

A cloudburst is a localised but intense rainfall activity. Short spells of very heavy rainfall over a small geographical area can cause widespread destruction, especially in hilly regions where this phenomenon is the most common.

A cloudburst has a very specific definition : Rainfall of 10 cm or more in an hour over a roughly 10 km x 10-km area is classified as a cloudburst event.

To put this in perspective, in a normal year, India, as a whole, receives about 116 cm of rainfall over the entire year. This means if the entire rainfall everywhere in India during a year was spread evenly over its area, the total accumulated water would be 116 cm high.

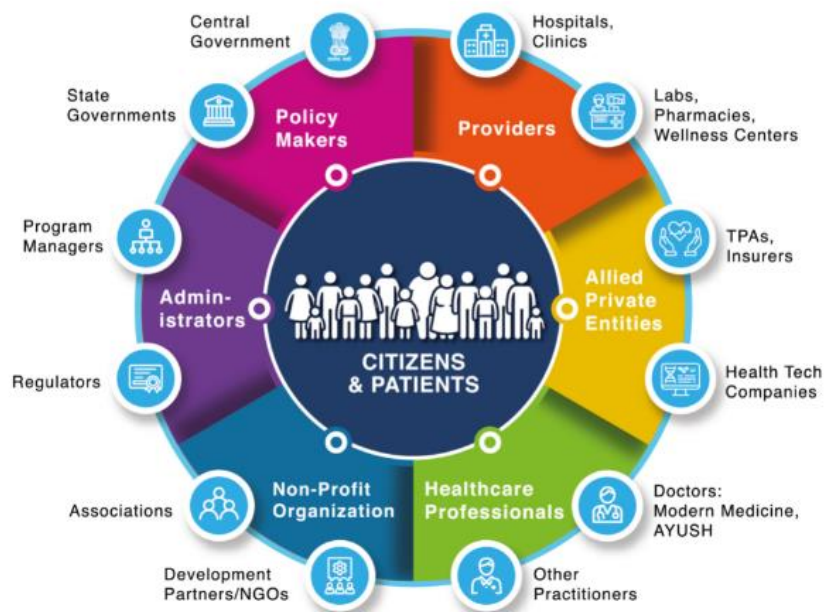
During a cloudburst event, a place receives about 10% of this annual rainfall within an hour. It is a worse situation than what Mumbai had experienced on July 26, 2005, which is one of the most extreme instances of rainfall in India in recent years.

## 38. Ayushman Bharat Digital Mission (ABDM)

### About Ayushman Bharat Digital Mission

- The Ministry of Health and Family Welfare formulated the **Ayushman Bharat Digital Mission** with the aim to **provide the necessary support** for the integration of digital health infrastructure in the country.
- This visionary initiative, stemming from the **National Health Policy, 2017** intends to **digitise healthcare in India**.

### The ABDM Ecosystem



### ABDM Components

- **Health ID:**
  - It is important to **standardise the process of identification** of an individual across healthcare providers.

- It will be used to **uniquely identify persons**, authenticate them, and threading their health records (only with the informed consent of the patient) across multiple systems and stakeholders.
- **Healthcare Professionals Registry (HPR)**
  - It is a **comprehensive repository of all healthcare professionals** involved in delivery of healthcare services across both modern and traditional systems of medicine. Enrolling in the Healthcare Professionals Registry will enable them to get connected to India's digital health ecosystem.

#### **Health Facility Registry (HFR):**

- It is a **comprehensive repository of health facilities of the country across different systems of medicine**. It includes both public and private health facilities including hospitals, clinics, diagnostic laboratories and imaging centres, pharmacies, etc.

#### **Personal Health Records (PHR):**

- It is an **electronic application through which patients** can maintain and manage their health information (and that of others for whom they are authorised) in a private, secure, and confidential environment.
- The citizens can get a longitudinal view of the personal health record by creating and linking the health ID with the visited health care facilities.

#### **Aims and Objectives**

- It aims to develop the backbone necessary to support the **integrated digital health infrastructure of the country**.

- It will bridge the **existing gap amongst different stakeholders** of the Healthcare ecosystem through digital highways.
- It aims to **create a seamless online platform** that will enable interoperability within the digital healthcare ecosystem.
- It aims to give **impetus to open and interoperable standards** in the digital health ecosystem.
- It aims to significantly improve the efficiency, effectiveness, and transparency of health service delivery overall.

### Limitations/Concerns

- **Digital Divide:** This could lead to exclusion of digitally illiterate and unconnected remote, hilly and tribal areas.
- **Data Breach/Privacy issues:** The lack of a data protection bill could lead to the misuse of data by private firms.
- **Huge requirement of skilled labours:** Need for skilled manpower in the digital domain versus the latest computer skills.
- **Inadequate Primary Health Care data:** Lack of infrastructure and staff at primary level.
- **Issue of interoperability** of systems built by different states & the central repositories.
- **India's public health system has to be strengthened and rejuvenated**
- Data protection measures will have to be robust to preserve personal information.

- It should be made transparent and easy to understand for the public.

### 39. Bharat Mala Scheme

#### Introduction:

The development of any nation depends on the transportation networks and the ways in which they are being maintained.

For connecting the areas and maintaining smooth flow of traffic, the construction of new and developed roads are a must. The same will be achieved with the implementation of the Bharatmala project. Under the scheme, a host of new roads will be laid down in the nation.

#### Bharatmala Pariyojana

The Government of India launched “Bharatmala Pariyojana”, a new umbrella program for the highways sector that focuses on optimizing the efficiency of road traffic movement across the country by bridging critical infrastructure gaps.

#### Bharatmala Project Components

- **Economic Corridor** - As per the guidelines of the road construction project, the construction of 9000kms of Economic Corridors will be undertaken by the central government.
- **Feeder Route or Inter Corridor** - The total length of the roads, which fall under the Feeder Route or Inter Corridor category, is a whopping 6000kms.

- **National Corridor Efficiency Improvement** - 5000kms of roads, constructed under the scheme will fall in the category of National Corridor for the better connection between roads.
- **Border Road and International Connectivity** - Connecting the cities and remote areas, which are situated in the border regions, the project has kept provision for constructing 2000kms roads that fall in the Border Road or International Connectivity category.
- **Port Connectivity and Coastal Road** - To connect the areas that are dotted along the shorelines and important ports, the central government has ordered the construction of 2000km of roads.
- **Green Field Expressway** - The main stress will be given on the construction and development of Green Field Expressway for better management of traffic and freight.
- **Balance NHDP Works** - Under the last segment, the project will see construction and maintenance of about 10,000kms of new roads.

### **Features of Bharatmala Pariyojana**

1. The main aim was to improve the quality of roads to bring in a wave of development in every corner of the country.
2. The construction of new roads is another important feature of the announcement for this scheme.
3. The Government plans to finish the construction of all the roads, under this scheme, within a period of five years.



## 40. Directorate of Public Health & Preventive Medicine - DPH-PM

### **Introduction:**

The Department of Public Health and Preventive Medicine is responsible for the implementation of various National and State Health Programmes.

This Department also plans and implements measures to prevent the occurrence of communicable diseases thereby reducing the burden of morbidity mortality and disability in the state.

### **Activities:**

The activities undertaken by the department of public Health and Preventive Medicine are provisions of primary health care, which includes Maternity and Child Health Services, Immunisation of children against vaccine preventable diseases, control of communicable diseases, control of malaria, filaria, japanese encephalitis, elimination of leprosy, iodine deficiency disorder control programme, prevention of food adulteration, health checkup of school children, health education of the community and collection of vital statistics under birth and death registration system and environmental sanitation.

Prevention and control of waterborne diseases like Acute Diarrheal Diseases, Typhoid, Dysentery prevention and control of sexually transmitted diseases including HIV / AIDS.

### **Best Practices**

#### **Public Health Cadre:**

Only in Tamil Nadu, there is a separate Public Health Cadre with a separate directorate. This has helped to improve preventive and promotive health care in the State in addition to the management of primary care services.

## **Birth Companion Programme:**

The State has introduced this new novel Programme since 2004. During delivery, one family member of the pregnant women is allowed as birth companion in the labour room. This had a positive impact and resulted in increasing the institutional deliveries in public health facilities.

## **Maternity Picnic and Bangle Ceremony:**

This helps to build more trust and confidence in availing services from public institutions. It is organised by the Village Health Nurses and Auxiliary Nurse Midwives under the guidance of Medical Officer.

## **Health Sub Centres (HSC)**

Health Sub Centre (HSC) is established for a population of 5,000 in plain areas and 3,000 in hilly areas. HSCs are the hub for delivering Maternal and Child Health (MCH) and Family Welfare (FW) services to the people in the rural areas. There are 8,713 HSCs in Tamil Nadu. Functions of Health Sub Centre.

## **41. e sanjeevani scheme**

### **Introduction:**

The telemedicine service platforms of the Ministry of Health & Family Welfare i.e. 'eSanjeevani' and 'eSanjeevaniOPD' have completed 1.5 lakh tele-consultations.

- The top two States which have registered highest consultations through the platforms are Tamil Nadu and Andhra Pradesh.

- Since November 2019, tele-consultation by eSanjeevani and eSanjeevaniOPD have been implemented by 23 States.
- C-DAC is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas.

## Key Points

- **Telemedicine:** As per the World Health Organisation (WHO), telemedicine is the delivery of health care services, where distance is a critical factor, by all health care professionals using Information Technology (IT) for diagnosis, treatment and prevention of disease and injuries, research and evaluation.
  - Tele-consultation is one of the applications of telemedicine. It uses IT to facilitate communications between a patient and a doctor who are otherwise geographically separated.

## eSanjeevani:

- It is a doctor-to-doctor telemedicine system, being implemented under the Ayushman Bharat Health and Wellness Centre (AB-HWCs) programme.
- AB-HWCs are envisaged to be the platform for delivery of an expanded range of primary health care services closer to the communities.

## eSanjeevaniOPD:

- It was launched amid the Covid-19 pandemic to enable patient-to-doctor tele-consultations.
- Offered at no cost, this e-health service has made it convenient for the people to avail of the health services without having to travel. It enables two-way interaction and even generates a prescription slip.
- It is hosting over 40 online Out Patient Department (OPD) services, more than half of these are speciality OPDs which include Gynaecology, Psychiatry, AntiRetroviral Therapy (ART) for the AIDS/HIV patients, Non-Communicable Disease (NCD) etc.

## 42. e-munnetram web portal

### Introduction:

Tamil Nadu Chief Minister MK Stalin on Friday launched a new web portal 'e-munnetram' that provides the status of about 200 major infrastructure projects, in aggregate, costing over 1 lakh crore. He also launched IT Nanban, an interactive platform to engage with the IT sector.

### Features:

The 'e-Munnetram' portal captures key details such as the agreement date, start date, cost estimates, project progress on both financial and physical parameters on a monthly basis, location data & GIS layers, photographs of the site on a periodic basis.

The portal allows heads of departments to update the progress periodically, flag critical issues and causes for delay if any.

While TN e-Governance Agency developed 'e-munnetram' the Tamil Virtual Academy developed the computing software, says a State government press release.

IT Nanban will enable IT/ITeS companies to interact with the State government and also contribute to policy making, the release said.

### **43. First Women's Police Station**

#### **Introduction:**

On November 2, 1974, cheers rent the air as sub-inspector A.V. Usha marched past at the head of an exclusive contingent of 20 women constables at the Rajarathinam Stadium in Chennai.

That was the first ever all women's wing in the Chennai City Police created a year earlier by the Tamil Nadu government headed by M. Karunanidhi.

#### **First Women's Police Station:**

A new chapter in policing was heralded in the country in 1992 when Chief Minister Jayalalithaa declared open the first All Women Police Station (AWPS) at Chennai's Thousand Lights Police Station.

#### **Conclusion:**

The number of women police personnel in the State has also expanded to over 20,000, including many senior IPS officers handling sensitive assignments.

“To be precise, 20,859 women police personnel are on the rolls in the State’s 1.2 lakh-odd police force. Their cutting-edge contribution is significant and they address the issues faced by women, who are at the receiving end of justice,” said Director-General of Police C Sylendra Babu.

#### 44. India Innovation Index 2021: NITI Aayog

##### Introduction:

- It is a comprehensive tool for the evaluation and development of the country’s innovation ecosystem.
- It ranks the states and the union territories on their innovation performance to build healthy competition amongst them.

##### Institutions Involved:

- NITI Aayog with the Institute for Competitiveness.

##### Categories:

- The Innovation Index is divided into three categories – major states, Union Territories, and hill and North East states.

##### Major States:

- **Top States:** Karnataka topped with a score of 18.05 followed by **Telangana and Haryana.**
  - Karnataka’s success is attributed to its **peak performance in attracting FDI (Foreign Direct Investment)** and a large number of [venture capital deals](#).

- **Bottom States:** Bihar, Odisha and Chhattisgarh scored the lowest on the index, which put them at the bottom in the “major States” category.

- Chhattisgarh ranked last with 10.97 points.

### NITI Aayog Health Index 2021:

The government think tank, NITI Aayog, has issued a health index of States and Union Territories taking 2019-2020 as the reference year.

### NITI Aayog Health Index 2021: Key Highlights

- 1- Among larger states, Kerala has emerged as the top performer while Uttar Pradesh is the worst performer in overall performance. However, the report added that Uttar Pradesh topped in terms of incremental performance while Karnataka is the worst performer.
- 2- Mizoram emerged as the best performer in overall performance while Nagaland is the worst performer among the smaller states. Mizoram topped incremental performance while Goa is the worst performer.
- 3- Chandigarh emerged as the best performer among Union Territories while Puducherry is the worst performer in overall performance. Delhi topped incremental performance while Chandigarh is the worst performer.

Tamil Nadu in NITI Aayog health Index		
Rank	State	Composite Score
1	Kerala	82.90
2	Tamil Nadu	72.42
3	Telangana	69.96

## 45. MRSAM

### What is an MRSAM

#### Army Variant of MRSAM:

- It is a surface to air missile developed jointly by DRDO, India and Israel Aerospace Industries (IAI), Israel for use by the Indian Army.
- It consists of a command and control post, multi-function radar and mobile launcher system.

#### Introduction:

The Defence Research and Development Organisation (DRDO) conducted two successful flight tests of the Army version of Medium Range Surface to Air Missile (MRSAM) at the Integrated Test Range, Chandipur, off the coast of Odisha.

- The tests were part of the live firing trials against high-speed aerial targets. The first launch was to intercept a medium-altitude long-range target and the second launch was for providing capability of a low-altitude short-range target.
- The maiden test of the Medium Range Surface to Air Missile (MRSAM) for the Indian Army was conducted in 2020.

## 46. PM - SVAMITVA SCHEME

The full form of SVAMITVA is Survey of Villages and Mapping with Improved Technology in Village Areas. SVAMITVA Scheme was launched on April 24, 2020, which is also celebrated as National Panchayat Day. Ministry of Panchayati Raj would be the Nodal Ministry for this Scheme.



## Objectives of the SVAMITVA Scheme

The main objectives of the SVAMITVA Scheme are given below.

- Property or land can be used as an asset to get financial benefits or loans which
- will improve the financial stability of the people living in rural areas.
- Determination of the property tax would be easier.
- With the help of the SVAMITVA Scheme, accurate rural planning, and land records can be created.
- With the use of GIS maps under the SVAMITVA Scheme, the Gram Panchayat Development Plan (GPDP) will get support as well.

All the villages in India will be covered in the SVAMITVA Yojana.

### 47. Setu Bharatam Project

It aims to eliminate railway level crossings on national highways by building road over-bridges or road under-bridges. 208 such new bridges are envisaged to be constructed, while 1500 existing bridges are envisaged to be widened, repaired, or replaced under the scheme.

A corpus of Rs. 50,000 crore has been set aside for this ambitious project in order to make highway travel seamless and safe. The project is being implemented by the Ministry of Road Transport and Highways (MoRTH).

Setu Bharatam Pariyojana is a major infrastructure development project of the MoRTH.

### **Setu Bharatam Project - Objectives**

The Setu Bharatam Pariyojana is a multi-faceted project that is likely to benefit the nation in many areas:

- Minimize loss of precious lives lost in road accidents every year due to level railway crossings.
- Decrease traffic congestion at level crossings by building road over-bridges and road under-bridges.
- Decrease travel time on national highways

### **Provisions**

**Following provisions have been included in this project:**

- The Setu Bharatam programme aims to make all National Highways free of railway level crossings by 2019.
- This is being done to prevent the frequent accidents and loss of lives at level crossings.
- In total 208 Railway Over Bridges (ROB)/Railway Under Bridges (RUB) will be built at the level crossings at a cost of Rs. 20,800 crore as part of the programme.

<b>Setu Bharatam Project - Highlights</b>	
Date of Launch	4 <sup>th</sup> March 2016
Launched By	PM Narendra Modi
Nodal Ministry	Ministry of Road Transport and Highways (MoRTH)
Targeted completion date	2019
Budget allocated	Rs. 50,000 crore
Number of new bridges (greenfield)	208
Number of bridges to be rehabilitated (brownfield)	1500
Number of states to be benefitted	19

#### 48. Shoonya Campaign

##### Introduction:

- Recently NITI Aayog has organized an event to mark the first anniversary of Shoonya, India's zero pollution e-mobility campaign.
- Shoonya is a consumer awareness campaign to reduce air pollution by promoting the use of electric vehicles (EVs) for ride-hailing and deliveries.
- The campaign has more than 130 industry partners, including ride-hailing, delivery and EV companies.

##### Electric Vehicles

- An electric vehicle uses electricity from extravehicular sources, or it can be powered by a battery (sometimes charged by solar panels).

- Electric vehicles are vehicles that are either partially or fully powered on electricity.
- Electric vehicles have low running costs as they have fewer moving parts for maintenance and also are very environmentally friendly as they use little or no fossil fuels (petrol or diesel).
- Electric Vehicles are easy and cheaper to maintain because of their simple structure and operations.
- Another benefit that an EV can deliver is the silent functioning capability.
- Switching to Electric Vehicles will improve the overall energy security situation as the country imports over 80% of its total crude oil requirements, and also save valuable foreign reserves. This will help India in achieving the goal of ‘Atmanirbhar Bharat’.
- Increasing demand for EVs is also expected to boost the local EV manufacturing industry, this will support the “Make in India”

### **Steps taken by Government to promote Electric Vehicles**

- The government has taken various initiatives to promote the manufacturing and adoption of electric vehicles in the country.
- Government of India to expand Public Electric Vehicle Charging Infrastructure across the nation.
- The government is working with private and public agencies to increase public EV charging infrastructure.

- Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India Scheme (FAME) was launched in 2015 to promote the manufacturing of electric and hybrid vehicles.

#### 49. Tamil Nadu Medical Services Corporation

Tamil Nadu Medical Services Corporation Ltd., (TNMSC) was set up with the primary objective of ensuring ready availability of all essential drugs and medicines in the Government Medical Institutions throughout the State by adopting a streamlined procedure for their procurement, storage and distribution.

It was incorporated under the Companies Act, 1956 on 1/7/1994 and has commenced its functions of purchase, storage and distribution of drugs and medicines from January 1995. TNMSC aim is to make the drugs and materials available to the poorest of the poor and " Service to the Public ".

##### **Activities**

Procurement, testing, storage and supply of drugs and medicines, suture items and surgical items to the various Government Hospitals, Primary Health Centres and through them to the Health Subcentres throughout Tamilnadu.

Procurement, storage and distribution of veterinary drugs to the various veterinary dispensaries under the control of the Directorate of Animal Husbandry.

#### 50. TB MukT Bharat Abhiyan 'Ni-kshay 2.0' Portal

##### **Introduction:**

- President Draupadi Murmu recently launched the 'Pradhan Mantri TB MukT Bharat Abhiyan' and the Nikshay 2.0 portal to eliminate TB by 2025 through a virtual event.

## Key Facts

- Under this campaign, any person, any representative or organization can adopt TB patients and the adopted patients will be taken care of.
- More than 66 percent TB patients currently undergoing treatment in the country have given their consent for adoption under this campaign.
- Under this scheme, more than 62 lakh TB patients have received financial assistance of Rs 1,651 crore since 2018. This involves a direct transfer of Rs 500 to the patient's bank account.

## Nikshay 2.0 Portal

- The NIKSHA 2.0 portal provides additional patient support to TB patients to take advantage of Corporate Social Responsibility (CSR) opportunities to improve treatment outcomes, enhance community participation and fulfill India's commitment to TB eradication by 2025.
  - Under this initiative, individuals, organisations, corporates, cooperative organisations, elected leaders and NGOs can provide support to persons suffering from TB by adopting them. You can also login to Nikshay 2.0 Portal.
  - The people and institutions who come forward to take care of the patients will be called "Nikshay Mitras".

## 51. TRANSTAN

### Introduction:

- Tamil Nadu is one of the first States to initiate Cadaver Transplant in 1995 after the Transplantation of Human Organs Act was passed in the year 1994.
- Cadaver Transplant Programme was made a Government Society in May 2015 and named as Transplant Authority of Tamil Nadu under the Chairmanship of the Honourable Chief Minister of Tamil Nadu.

### Functions Of Management / Unit:

- Allocating Organs
- Maintaining waiting list, collection of data relating to donors, recipients, transplant hospitals.
- Case Coordination.
- Post Transplant Follow Up, conducting awareness programmes, maintenance of accounts, organizing meetings, liaising with Government / Private officials.

### Functions of TRANSTAN:

- Regional Organ and Tissue Transplant Organization (ROTO) for Southern Region. South ROTTO includes Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Telangana, Karnataka, Puducherry, Andaman & Nicobar and Lakshadweep.
- State Organ and Tissue Transplant Organization (SOTTO) by Government of India order

- Streamlining all procedures related to Cadaver and Living Organ Transplantation.
- Regulates distribution of organs in a transparent manner.

## **52. Abhilasha Barak Becomes Indian Army's First Women Combat Aviator**

Abhilasha Barak (from Haryana) became the first woman combat aviator of the Indian Army. Captain Abhilasha Barak graduated at a ceremony held at the Combat Army Aviation Training School in Nashik.

## **53. Zara Rutherford: 19-Year old is Youngest Woman to round the World Solo**

Zara Rutherford, a British-Belgian teenager became the youngest woman to fly solo around the globe on January 20, 2022 and the first person to do so in a microlight plane after a five-month, five continent odyssey in her Shark ultralight plane.

## **54. Charles III Appointed King of the United Kingdom**

King Charles Philip Arthur George was proclaimed the new King of England as King Charles-III on September 10, 2022 after his mother Queen Elizabeth II passed away on September 8.

## **55. Rishi Sunak: The First British Asian Prime Minister**

On 25 October, 2022, Rishi Sunak formerly became prime minister after losing the Conservative leadership contest to Liz Truss (56th UK Prime Minister) in the first week of September 2022. He became the third Conservative prime minister in less than two months in six years.



He has also made history as the first practising Hindu to lead the country and, at the age of 42, the youngest Prime Minister in more than 200 years. Sunak takes on the role at a time of deep economic crisis, and is expected to make tough decisions on taxation and public spending that may prove unpopular.

## 56. **Geetanjali Shree**

Delhi-based author Geetanjali Shree's Hindi novel 'Tomb of Sand' on May 26, 2022 won the prestigious International Booker Prize 2022, becoming the first book written in an Indian language to be awarded the prestigious 2022 International Booker Prize.

Originally published in Hindi as 'Ret Samadhi', the book is translated into English by Daisy Rockwell. Original! published in Hindi in 2018, 'Tomb of Sand' is the first of Geetanjali's books to be published in the UK in English by Tilted Axis Press in August 2021.

## 57. **Asha Parekh Gets Dadasaheb Phalke Award, 2020**

Veteran actress Asha Parekh of Indian cinema was declared the winner of the Dadasaheb Phalke award 2020, the most prestigious honour of the Indian cinema on September 27, 2022 for her immense contribution to Indian cinema. She will be the recipient of the 52nd Dadasaheb Phalke Award.

## 58. **Operation Chakra**

In an effort to track down cyber criminals who indulge in financial crimes and fraud, the Central Bureau of Investigation (CBI) launched Operation Chakra in October 2022.

The Operation Chakra of the CBI to dismantle cyber crime gangs operating in the country has been launched in coordination with State police, Interpol and agencies of other countries,

After analysing all the inputs, the Operation Chakra" was launched. The police forces in Delhi, Punjab, Rajasthan, Assam, Karnataka, Andaman & Nicobar Islands, Chandigarh and Haryana also participated in the searches that took place at 115 locations.

The CBI teams searched 87 places across 16 States in connection with 11 cases. In all, 16 accused persons were arrested, according to the agency.

### **Operation Garuda**

The Central Bureau of Investigation (CBI) in coordination with the Narcotics Control Bureau (NCB) and police of multiple states conducted a major crack-down against drug peddlers under 'Operation Garuda'.

The federal probe agency said on September 29, 2022 that they have launched a multi phase 'Operation Garuda' to disrupt, degrade and dismantle drug networks with international linkages through rapid exchange of criminal intelligence on drug trafficking and coordinated law enforcement actions across international jurisdiction through Interpol.

### **59. US Navy Launched the 28th Edition RIMPAC Exercise**

US Navy launched the 28th edition of the biennial Rim of the Pacific (RIMPAC), which is the world's largest international maritime exercise. Twenty-six nations, 38 surface ships, four submarines, nine national land forces, more than 30 unmanned systems approximately 170.

## **60. Japan-India Maritime Bilateral Exercise: Jimex 2022**

Japan India Maritime Exercise 2022 (JIMEX 22)'hosted by Indian Navy commenced in the Bay of Bengal. JIMEX 22 involves two Phases; exercises at sea and a harbour phase at Visakhapatnam.

This edition marks the 10th anniversary of JIMEX, which began in Japan in 2012. It also coincides with the 70th anniversary of establishing of diplomatic relations between India and Japan.

## **61. Indian Navy Participates in KAKADU Exercise 2022**

A P8I Long Range Maritime Patrol Aircraft of the Indian Navy participated in the Multinational Maritime Exercise Kakadu 2022 hosted by Royal Australian Navy -Darwin. The exercise had the participation of 34 aircraft from over 20 nations.

## **62. The Indo-US Tri-Services Amphibious HADR Exercise, 'Tiger Triumph 2022'**

The second edition of the Indo-US Tri-Services Amphibious HADR Exercise, "Tiger Triumph 2022" at Visakhapatnam from 18 to 20 October, 2022. The Tiger Triumph exercise was the second collaboration between the Indian and PUS Militaries to coordinate disaster relief in the region.

## **63. India Participates in 'Pitch Black' Air Combat Exercise**

India Participated in one of 17 nations the Pitch Black air combat exercises organized by Australia from 19 August to 6 September. The biennial exercises are being conducted after hiatus of four ye due to the COV pandemic.

The combat exercises conducted by Royal Australian Air Force (RAAF) and 17 countries engaged in Offensive Counter Air (OCA) and Defensive Counter Air (DCA) combat exercises.

#### **64. India Joins Vostok-2022 Military Drills Exercise**

India took part in the Vostok-2022 strategic command and staff exercise in Russia, which also includes the armies of China, Belarus, Tajikistan, and Mongolia. Vostok-2022 military drills exercise was conducted from 1 September to September in Russia.

The People's Liberation Army of China took part in the Vostok-2022 strategic command and staff exercise in Russia, which also includes the armies of India, Vostok-2022 military drills exercise Belarus, Tajikistan, and Mongolia, according to the country's defence ministry.

China's People's Liberation Army will send some troops to Russia to participate in the Vostok-2022 (East) strategic exercise, in accordance with the two countries' yearly military cooperation plan and agreement.

#### **65. The 3rd Edition of Vietnam, India Bilateral Army Exercise 'Ex VINBAX 2022'**

The 3rd Edition of Vietnam India Bilateral Army Exercise 'Ex VINBAX 2022' was conducted at Chandi-mandir, Haryana from 01 to 20 Aug 2022. The exercise is a sequel to previously conducted bilateral exercise in Vietnam in 2019.

#### **66. India, Malaysia Four-Day Air Exercise Udara - shkti**

Indian Air Force (IAF) participated in a four-day (13- 16 August, 2022) bilateral exercise 'Udarashakti' with the Royal Malaysian Air Force (RMAF) in the RMAF base of Kuantan in Malaysia.

Indian Air Force participated in the air exercise with Su-30 MKI and C-17 aircraft while the RMAF with Su 30 MKM aircraft.

Exercise Udarashakti fortified the long standing bond of friendship and enhanced the avenues of defence cooperation between the two Air Forces, thereby augmenting security in the region.

## **67. Prime Minister's Development Initiative for North-East Region (PM-DevINE)**

The PM-DevINE, a Rs.6,600 crore scheme to support infrastructure and livelihood projects in the Northeastern states, is a Central Sector Scheme with 100% Central funding and will be implemented by Ministry of Development of North Eastern Region (DoNER).

PM DevINE will provide support to infrastructure and social development projects which may be larger in size and will also provide an end-to-end development solution instead of isolated projects.

It will be ensured that there is no duplication of project support under PM-DevINE with any of the other schemes of MDoNER or those of any other Ministry/Department.

PM-DevINE was announced in the Union Budget 2022-23 to address development gaps in the North Eastern Region (NER).

Announcement of PM-DevINE is yet another instance of the importance being attached to the development of NE Region by the Government.

### **The objectives of PM-DevINE are to :**

- a. Fund infrastructure convergently, in the spirit of PM Gati Shakti;
- b. Support social development projects based on felt needs of the NER;

- c. Enable livelihood activities for youth and women;
- d. Fill the development gaps in various sectors

## 68. Har Ghar Tiranga

The Indian National Flag is a symbol of national pride for the entire nation. Under the Azadi ka Amrit Mahotsav, to further honour our Flag, 'Har Ghar Tiranga' envisages inspiring Indians everywhere to hoist the National Flag at their homes.

Bringing the Flag home collectively as a nation in the 75<sup>th</sup> year of independence thus becomes symbolic of not only an act of personal connection to the Tiranga, but also an embodiment of our commitment to nation-building.

The idea behind the initiative is to invoke the feeling of patriotism in the hearts of the people and promote awareness about our National Flag.

## 69. Sagarmala Project

Sagarmala is the flagship programme of the Ministry of Shipping to promote port-led development in the country through harnessing India's 7,500 km long coastline, 14,500 km of potentially navigable waterways and strategic location on key international maritime trade routes.

The main vision of the Sagarmala Programme is to reduce logistics cost for international and domestic trade with minimal infrastructure investment.

The prime objective of the Sagarmala Project is to promote port-led direct and indirect development and to provide infrastructure to transport goods to and from ports.

The Sagarmala initiative addresses challenges by focusing on three pillars of development, namely-

- i. Supporting and enabling Port-led Development through appropriate policy and institutional interventions and providing for an institutional framework for ensuring inter-agency and ministries/departments/states' collaboration for integrated development,
- ii. Port Infrastructure Enhancement, including modernisation and setting up of new ports, and
- iii. Efficient Evacuation to and from hinterland.

#### **70. COP-15 summit adopts historic biodiversity deal**

- Kunming Montreal Agreement is aimed at saving the lands, oceans and species from pollution, degradation and climate change, and is being compared to the landmark Paris Agreement
- After four years of fractious talks, nearly 200 countries, including India, approved a historic Parisstyle deal on Monday to protect and reverse dangerous loss to global biodiversity.
- The Chinese brokered deal is aimed at saving the lands, oceans and species from pollution, degradation and climate change.
- Monitored wildlife populations have seen a devastating 69% drop on average since 1970, according to the Living Planet Report (LPR) 2022 of the World Wildlife Fund (WWF).

## 71. Makkal ID

### What is Makkal Id?

Makkal ID, a special kind of personal identity for state citizens. To ensure the smooth implementation of government initiatives, the card will be provided. A single Aadhaar-enabled database of all state residents is what Makkal ID is meant to be.

The Makkal ID can be used to access the SFDB, which will house all of the data of all citizens in one location. All departments that offer services to residents will have access to the data repository. Every inhabitant will receive a special identification card called a "Makkal ID." It will be a series of 10 to 12 digit "random numbers."

### Benefits of Makkal ID

- It securely, centrally, and digitally handles the people of the state's data.
- Real-time integration of departmental utility databases with data from the National Population Register (NPR) with Aadhaar enabled.
- Aadhar authentication is integrated across many departments.
- The SFDB would also develop into a 360-degree profile of citizens of Tamil Nadu when combined with all the other state agency databases.
- Any identity card that a person brings into any office will be utilised to locate that person in any database maintained by any government in Tamil Nadu.



## 72. Joshimath Subsidence

**Joshimath crisis: What is land subsidence and why does it happen?**

The exact reason behind Joshimath land subsidence is still unknown but experts cite unplanned construction, over-population, obstruction of the natural flow of water, and hydel power activities as possible causes.

Authorities declared it a landslide and subsidence-hit zone.

The announcement came after a high-level meeting took place among the senior officials of the Central government, Uttarakhand state officials, and top officers from agencies including the National Disaster Management Authority (NDMA), Geological Survey of India (GSI) and the National Institute of Hydrology (NIH).

According to the National Oceanic and Atmospheric Administration (NOAA), subsidence is the “sinking of the ground because of underground material movement”.

It can happen for a host of reasons, man-made or natural, such as the removal of water, oil, or natural resources, along with mining activities. Earthquakes, soil erosion, and soil compaction are also some of the well-known causes of subsidence.

**Joshimath crisis is due to landslide, not subsidence: Experts**

There are signs of both subsidence and sliding, according to geologists SP Sati and Navin Juyal, who visited Joshimath to document and investigate the crisis.

The extensive damage to buildings and other structures in Uttarakhand's Joshimath is due to a gradual but accelerated landslide, and not because of land subsidence, a new analysis by an earth scientist has suggested.

### **73. Global Hunger Index is out, India in 'serious' category at rank 107**

India ranks 107 out of 121 countries on the Global Hunger Index in which it fares worse than all countries in South Asia barring war-torn Afghanistan.

The Global Hunger Index (GHI) is a tool for comprehensively measuring and tracking hunger at global, regional, and national levels. GHI scores are based on the values of four component indicators - undernourishment, child stunting, child wasting and child mortality.

Countries are divided into five categories of hunger on the basis of their score, which are 'low', 'moderate', 'serious', 'alarming' and 'extremely alarming'.

Prevalence of undernourishment, which is a measure of the proportion of the population facing chronic deficiency of dietary energy intake, has also risen in the country from 14.6% in 2018-2020 to 16.3% in 2019-2021. This translates into 224.3 million people in India considered undernourished.

### **74. Vande Bharat Express**

Vande Bharat Express is the energy efficient and the first locomotive-less train in the country and will be fully air-conditioned. These trains run on electric traction like Metro trains and will start replacing the Shatabdi Express fleet from next year.

India's fastest indigenous train, Train 18 named as Vande Bharat Express will ply between Delhi and Varanasi. Train 18 is an indigenously developed world-class train under Make in India. The 16-coach train has been built completely in India by Indian engineers in a span of 18 months at the Integral Coach Factory, Chennai.

### **Features of the Vande Bharat Express**

The new train provides number of features to enhance passenger comfort which include inter-connected fully sealed gangways, automatic doors with retractable footsteps, onboard Wi-Fi and infotainment, GPS-based passenger information system, modular toilets with bio-vacuum systems, rotational seats which can be aligned in the direction of travel (available only in the executive class), roller blinds and diffused LED lighting and disabled-friendly toilet.

### **75. Kollam is first Constitution literate district**

Kollam will be officially declared India's first Constitution literate district by Chief Minister of Kerala Pinarayi Vijayan on Saturday.

The Citizen, a Constitution literacy campaign jointly launched by the Kollam district panchayat, District Planning Committee and the Kerala Institute of Local Administration (KILA). As part of the ambitious campaign, around 16.3 lakh people in the district above the age of 10 have been educated on various aspects of the Constitution and the strenuous process involved 2,200 trainers called 'senators'.

During the sevenmonth campaign, the senators visited schools, offices, auto stands and tribal councils to spread awareness.

## 76. Shyam Saran Negi

### **Shyam Saran Negi, Independent India's first voter, dies in Himachal Pradesh**

Three days after casting his vote for the 34th time, India's oldest voter Shyam Saran Negi died on November 5, 2022 at his home in Kalpa in Himachal Pradesh. He was 106.

Mr. Negi, who was the Election Commission's brand ambassador, voted for the Himachal Pradesh Assembly election through postal ballot on November 2.

## 77. Aruna Miller

### **Aruna Miller becomes Maryland's first Indian-American Lieutenant Governor**

Aruna Miller has scripted history by becoming the first Indian-American politician to be sworn in as the Lieutenant Governor in the state of Maryland.

Aruna, 58, a former delegate to the Maryland House, made history when the Democrat became the 10th Lieutenant Governor of the state.

## 78. Deepfake Technology

### **About:**

Deepfake technology is a method for manipulating videos, images, audios utilizing powerful computers and deep learning.

It is used to generate fake news and commit financial fraud among other wrong doings.

It overlays a digital composite over an already-existing video, picture, or audio; cybercriminals use Artificial Intelligence technology.

## **79. The Future of Bio-economy in India**

### **What is Bioeconomy?**

Bioeconomy includes those parts of the economy that use renewable biological resources from land and sea. Bioeconomy can be defined as the production, use and conservation of biological resources, including related knowledge, science, technology and innovation, providing information, products, processes.

To provide information, products, processes and services to all sectors of the economy with the aim of moving towards a sustainable economy.

The bioeconomy will play an important role in the fight against climate change.

### **Utility of Bio-economy**

It will be helpful in achieving various goals of sustainable development. It aims to ensure food security and promote the use of more sustainable natural resources as well as reduce dependence on non-renewable resources, such as fossil natural resources and minerals.

To some extent, bioeconomy also helps the economy to reduce greenhouse gas emissions and helps in mitigating and adapting to climate change.