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SHIKSHA BY SWATHIKA - AN IAS ACADEMY

GROUP 2 MAINS 2023

NATIONAL CURRENT AFFAIRS -PART 1

JAN 2022 - JUNE 2022

1 | Page

Govt. Job is Not Anymore A Dream!

S.NO	TITLE				
1)	Hyderabad Declaration On E - Governance Adopted				
2)	Revised Rural Area Development Plan Formulation And Implementation (Radpfi) Guidelines Released				
India On Track To Surpass China As Third 3) Largest Ethanol Consumer By 2026: International Energy Agency (Iea					
4)	Cheetah Reintroduction Plan				
5)	Carbon Inequality And Climate Policy				
6)	Cop26: Green Revolution 2.0				
7)	Organ Transplantation				
8)	National Health Mission Launches Project Niramay In Assam				
9)	Jallikattu				
Government Approves Implementation Of Into					
111)	Ombudsperson App				
12)	Safforn Bowl Project				
13)	Water Taxi Service				

2 | Page

Govt. Job is Not Anymore A Dream!

14)	Green Hydrogen/Green Ammonia		
15)	Wetlands: The Unsung Heroes Of The Planet		
16)	Green Highway Policy, 2015		
17)	7) Nanoplastic		
Union Minister For Social Justice And Empowerment Launches The Scheme For Economic Empowerment Of Dnts (Seed) Cabinet Approves Implementation Of Ayus Bharat Digital Mission (Abdm) For Five Year			
		20)	Parvatmala- An Efficient And Safe Alternate Transport Network
21)	One Nation One Election		
22)	22) The Criminal Procedure (Identification) Act, 2022		
23) Draft India Data Accessibility & Use Policy, 2			
24)	Disaster Management Plan Of Ministry Of Panchayati Raj		
25)	Minamata Convention		
26)	National Wetland Decadal Change Atlas Titled National Wetland Inventory And Assessment- 2006-07 And 2017-18		
27)	Mekedatu Dam		

3 | Page

Govt. Job is Not Anymore A Dream!

28)	Election Freebies	
29)	Fast And Secured Transmission Of Electronic Records (Faster)	
30)	Intelligent Transportation Systems (Its)	
31)	Cryptocurrency Crimes	
32)	32) New Cybersecurity Guidelines	
33)	Pinaka Missile Systems	
34)	Helina	
35)	Dornier (Do-228) Aircraft Flight	
36)	Geneva Biodiversity Meetings	
37)	Nitrogen Levels On A Decline	
38)	First Carbon-Neutral Panchayat	
39)	Industrial Waste Road	
40)	Green Hydrogen	
41)	Chamoli Disaster	
42)	2) Thiruvananthapuram Declaration	
43)	E-Shram Portal	
44)	Gatishakti Sanchar Portal	
45)	National Policy On Biofuels-2018	

4 | Page

Govt. Job is Not Anymore A Dream!

46)	Un-Energy Plan Of Action Towards 2025		
47)	People's Biodiversity Register (Pbr)		
48)	Bharat Tap		
49)	World's First Liquid Nano Urea Plant At Kalol (Gujarat)		
50)	50) Swachh Survekshan (Ss) 2023 Under Swachh Bharat Mission Urban (Sbmu) 2.0		
51) Advanced Knowledge And Rural Technology Implementation (Akruti) Programme			
52)	National E-Vidhan Application (Neva)		
53)	Gig Workers Jan Samarth Portal		
54)			
55)	Niryat (National Importexport Record For Yearly Analysis Of Trade) Portal		
56)) Agni-4		
57)	Climate Equity		
58)	Ban On Single Use Plastic		
59)	Forest (Conservation) Rules, 2022		
60)	Eco-Sensitive Zones (Esz)		
61)	India Achieved 10% Ethanol Blending Target In		
	Petrol		
-	5 l D a r		

5 | Page

Govt. Job is Not Anymore A Dream!

62)	Surrogacy (Regulation) Rules, 2022	
63)	Swachh Bharat Missionurban 2.0 (Sbm-U 2.0) Launches Revised Swachh Certification Protocols To Sustain Odf Status	
64)	Bharat Gaurav Train	

SHABYSWATHIRA

6 | Page

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1. HYDERABAD DECLARATION' ON E - GOVERNANCE ADOPTED

- 1. 24th National e-Governance conference unanimously adopted the Hyderabad declaration.
- 2. Conference was jointly held by Ministry of Electronics & Information Technology (MeitY), Department of Administrative Reforms & Public Grievances, in collaboration with Telangana Government.
- 3. e-Governance is use of Information and Communication Technology (ICT) at all level of Government to transform relations with citizens, businesses, and other arms of government.
- 4. It has helped Government to enhance coverage, increase transparency, improve response to citizens and lower costs and has facilitated citizens to have better access, equity & social empowerment.

Key highlights of Hyderabad Declaration

- 1. Transform citizen services by using Aadhaar, UPI, DigiLocker, UMANG, e Sign etc.
- 2. Fast track implementation of national level public digital platforms in key social sectors viz. Health, Education, Agriculture, etc.
- 3. Foster responsible use of emerging technology such as AI, Machine Learning, Blockchain, 5G etc.
- 4. National e-Governance Service Delivery Assessment (NeSDA) to be adopted in collaboration with MeITY.

Some e-governance initiatives

- 1. Bhoomi Project for (Karnataka): Online Delivery of Land Records.
- 2. eSeva (Andhra Pradesh)
- 3. **Gyandoot** (MP): Service delivery initiative.

7 | Page

Govt. Job is Not Anymore A Dream!

- 4. **Lokvani** (UP): For handling of grievances, land record maintenance and providing a mixture of essential services.
- 5. **FRIENDS** (Fast, Reliable, Instant, Efficient Network for the Disbursement of Services) in Kerala.
- 2. REVISED RURAL AREA DEVELOPMENT PLAN FORMULATION AND IMPLEMENTATION (RADPFI) GUIDELINES RELEASED

Released by: Ministry of Panchayati Raj.

RADPFI guidelines aim is to have **planned spatial development** for overall integrated development of villages.

Need of Spatial Planning

- 1. Unplanned spatial development in Gram Panchayats
- 2. Extended Urbanisation Area
- 3. Emergence of Census Towns
- 4. Improve the Quality of Life & Sustainability of Gram Panchayats,
- 5. Integration of Reforms/programs (SVAMITVA, RURBAN, New changes in State Acts & Amendments, re-emphasis on Disaster, Climate Change, Resilience Codes, etc.)
- 6. Need to be linked to Agro-Climatic Regions/zones linked to SDGs

Village Town Planning Scheme (VPS) – Through community based on Collaborative Planning.

Linking 15th Finance Commission with State Finance commission with respect to village level planning.

Improving the E-Governance through Spatial Data
Infrastructure.

Planning for environmental benefit and disaster preparedness.

8 | Page

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3. INDIA ON TRACK TO SURPASS CHINA AS THIRD LARGEST ETHANOL CONSUMER BY 2026: INTERNATIONAL ENERGY AGENCY (IEA)

- 1. The IEA report noted that **ethanol demand in India tripled between 2017 and 2021** with consumption at 3 crore liters in the last year.
 - 1. Ethanol is a renewable fuel made from various plant materials.
 - 2. It is a clear, colourless liquid, has a higheroctane number (ON) providing premium blending properties.
 - 3. ON is a measurement of the quality or performance of gasoline. The higher the number, the better the fuel burns.
 - 4. India is to become carbon neutral by 2070, brought forward its 20% ethanol blending target with fuel from 2025 to 2030 India is on track to achieve 10% blending this calendar year.
 - 2. **Significance** of ethanol blending:
 - a) Helps reduce oil imports
 - b) Cut down air pollution
 - c) Offers economic and employment opportunities for farmers.
 - 3. Challenges:
 - i. **Vehicle compatibility**: Existing vehicle fleet may have compatibility issues with fuel blends above E10.
 - ii. Greenhouse gas (GHG) and sustainability criteria

 Feedstock availability
 - iii. Maintaining incentives at the right level
 - Steps taken to promote ethanol economy
 - i. A **guaranteed prices** per liter of ethanol according to feedstock;
 - ii. Established **financial support** for new ethanol capacity;

9 | Page

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iii. **Planning to mandate flex-fuel vehicle**s that can operate on higher ethanol blends.

4. CHEETAH REINTRODUCTION PLAN

Recently, The Government of India has decided to reintroduce Cheetahs in National Parks over five years, under 'Action Plan for Introduction of Cheetah in India'.

More details

- 1. It was launched at the 19th meeting of the National Tiger Conservation Authority (NTCA).
- 2. This aims to establish viable cheetah metapopulation in India that allows the cheetah to perform its functional role as a top predator and provides space for the expansion of the cheetah within its historical range thereby contributing to its global conservation efforts.
- 3. Cheetah is the only large carnivore that got completely wiped out from India in 1952, mainly due to over-hunting and habitat loss.
- 4. As per the action plan, a cohort of around 10-12 young African Cheetahs- a different subspecies (Acinonyx jubatus) that are ideal for reintroduction will be sent from Namibia or South Africa to the grassland habitats that the Asiatic cheetahs occupied in the past as a founder stock during the first year.
- 5. The locally extinct cheetah-subspecies of India is found in Iran and is categorized as critically endangered. Since it is not possible to source the critically endangered Asiatic cheetah from Iran without affecting this sub-species, India will source cheetahs from Southern Africa, which can provide India with substantial numbers of suitable cheetah for several years.
- 6. Amongst the 10 surveyed sites of the central Indian states, Kuno Palpur National Park (KNP) in Madhya Pradesh has

10 | Page

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been rated the highest. This is because of its suitable habitat and adequate prey base.

- 7. KNP is 748 sq. km. in area, devoid of human settlements, forms part of Sheopur-Shivpuri deciduous open forest landscape and is estimated to have a capacity to sustain 21 cheetahs.
- 8. The other sites recommended for holding and conservation breeding of cheetah in India, in controlled wild conditions are:
 - i. Nauradehi Wildlife Sanctuary (1,197 sq.km, habitat 5,500 sq.km), Madhya Pradesh
 - ii. Gandhi Sagar Wildlife Sanctuary Bhainsrorgarh Wild life Sanctuary complex (2500 sq.km), Madhya Pradesh
 - iii. Shahgarh bulge in Jaisalmer, Rajasthan (4,220 sq.km)
 - iv. Mukundara Tiger Reserve as fenced enclosure (80 sq.km), Rajasthan.

Significance of Reintroduction of cheetah

- 1. Restoration of wildlife habitat:
- 2. **Genetic diversity:** to maintain the diversity in lower trophic levels of the ecosystems.
- 3. Additional habitat for other species:
- 4. **Economic benefits:** will boost ecotourism and enhance livelihood options
- 5. Among large carnivores, conflict with human interests is lowest for cheetahs,
- 6. Support global effort to conserve cheetah:
- 7. Support climate change mitigation goals:

Concerns

- 1. Coexistence of large predators
- 2. Size of Indian parks
- 3. Protection of grassland

11 | Page

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- 4. May harm the current species
- 5. Impact other wildlife protection efforts
- 6. Human-Wildlife Conflict
- 7. Rehabilitation of people

5. CARBON INEQUALITY AND CLIMATE POLICY

According to studies **Wealthy people have disproportionately** large carbon footprints and the percentage of the world's emissions they are responsible for is growing.

- 1. As per the study, most affluent 10% of households emitted 34% of global CO2, 50% of the global population in lower-income brackets accounted for just 15%.
- 2. By 2015, the richest 10% were responsible for 49% of emissions

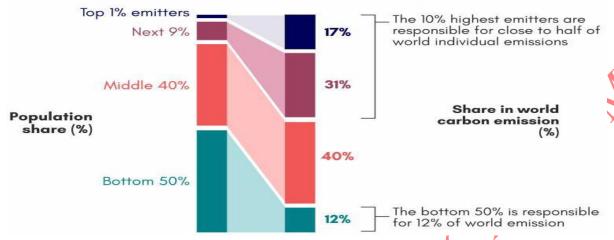
Carbon inequality?

- 1. It is the phenomena of the highly unequal distribution of carbon emissions throughout the world.
- 2. **Carbon Inequality Between Nations**: A small number of developed countries are responsible for substantially higher share of the CO2 emitted globally.
- 3. **Carbon Inequality within Nations**: Within countries, carbon emissions of higher income groups are significantly higher compared to other citizens.
- 4. According to WIR 2022, in 1990, **63% of the global carbon inequality was due to 'between country'** inequality but in 2019, 63% of global carbon inequality was due to 'within country' inequality.

12 | Page

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Global carbon emissions inequality, 2019



Status of Carbon inequality in India

1. **Inequality within India**: The bottom 50%, middle 40% and top 10% respectively consume 1, 2, and 9 t CO2e/capita.

Comparison with other nations:

a) India is a low carbon emitter with the average per capita consumption of greenhouse gas is equal to just over 2 tCO2e lower than the Global average of 6.6 tCO2e.

Significance of addressing Climate Inequality

- 1. Strengthen India's case on multilateral platforms for addressing between country carbon inequality:
 India has been advocating for the just transition for the developing countries with adequate time frame and financial assistance for climate adaptation and mitigation based on historical responsibilities.
- 2. Standard climate measures are unjust in unequal societies: Climate policies have been disproportionately borne by lowincome consumers over the past decades, in particular via carbon and energy taxes.
- 3. Designing effective climate policies:

 The scale of transformation required to cut greenhouse gas emissions drastically cannot be attained if environmental and social inequalities are not integrated into the design of climate policies.

13 | Page

Govt. Job is Not Anymore A Dream!

4. Productive use of public investment:
Instead of large financial and other incentives to the private sector, public investment should focus on transition to affordable green energy.

Findings related to India

- 1. Income of 84% of households declined in 2021 but number of Indian billionaires grew from 102 to 142.
- 2. In 2021, share of the bottom 50% of the population in national wealth was a mere 6%.
- 3. More than 4.6 crore Indians are estimated to have fallen into extreme poverty in 2020.

6. COP26: GREEN REVOLUTION 2.0

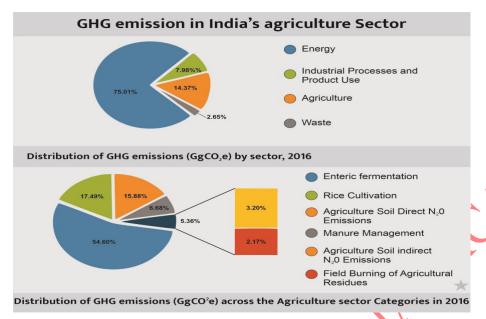
The 2021 United Nations Climate Change Conference, more commonly referred to as COP26, was the 26th United Nations Climate Change conference, held at the SEC Centre in Glasgow, Scotland, United Kingdom, from 31 October to 13 November 2021. Significant discussions took place at COP26 in the direction of aligning agriculture policies with climate action agenda, warranting a second green revolution along with next-generation reform.

Green Revolution 2.0: The need for reforms in Agriculture sector of India

1. **Reducing emissions**: Agriculture sector amounts to around **14% of Greenhouse gas (GHG) emissions of India**. Thus, reductions of emission from the sector can play a crucial role in fulfilling commitments by India made in COP26 under pledge of Panchamrit (five-fold strategy) to fight climate change, during the COP26.

14 | Page

Govt. Job is Not Anymore A Dream!



Build climate resiliency: Climate change induces increase in temperatures, rainfall variation and the frequency and intensity of extreme weather events are predicted to severely impact the agriculture sector.

Making food systems more sustainable: While Green Revolution in India made the country self-reliant in food grain production and contributed to tremendous growth in the sector, it had certain fallouts that threaten overall sustainability of India's food systems.

steps taken in India

National Mission for Sustainable Agriculture (NMSA), one of the 8 missions under National Action Plan on Climate Change, aims at making agriculture more productive, sustainable, remunerative and climate resilient.

National Innovations in Climate Resilient Agriculture (NICRA) programme is in place to enhance the resilience of Indian agriculture, covering crops, livestock and fisheries to climatic variability and climate change.

National Adaptation Fund for Climate Change (NAFCC) supports adaptation action, in, inter alia, agriculture, water, forestry, livestock and ecosystems.

15 | Page

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Resource use efficiency:

- 1. **Pradhan Mantri Krishi Sinchayi Yojana (PMKSY)** aims to Introduce sustainable water conservation practices, among others.
- 2. **Soil Health Cards scheme:** to improve Soil Health by providing nutrients information to the farmers.

Greener approaches:

- 1. Paramparagat Krishi Vikas Yojana
- 2. Active promotion of Zero Budget Natural Farming
- 3. Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue
- 4. Bharatiya Prakritik Krishi Paddhati Programme (BPKP).

7. ORGAN TRANSPLANTATION

Recently, the world's first pig-to-human transplant took place in USA.

- 1) Recently, the world's first pig-to-human transplant took place in USA.
- 2) A team at the University of Maryland Medicine transplanted a heart from a pig with 10 modifications into a terminally ill man.
 - i) The patient had been deemed ineligible for a human transplant, hence went for pig heart transplant.
- 3) The pig used in the transplant had been **genetically** modified to knock out several genes that would have otherwise led to the organ being rejected.
- 4) Also, in October 2021, Doctors in New York announced had successfully transplanted a pig's kidney into a person.
- 5) The possibility of using animal organs for Xenotransplantation is to meet the demand for organs

16 | Page

Govt. Job is Not Anymore A Dream!

and pig heart valves are already widely used in humans, and pig skin is grafted on human burn victims.

About Organ transplant

- 1) Organ donation and transplantation is removing an organ from one person (the donor) and surgically placing it in another (the recipient) whose organ has failed.
- a) Organs must be removed as soon as possible after the determination of brain death, while circulation is being maintained artificially. Tissues may be removed within 12 to 24 hours.
- b) People who have a **cardiac death cannot be organ donors** however they can donate tissues after death.
- 2) **Benefits:** The benefits of an organ transplant depend on the organ a person receives. Some benefits may include:
 - a) Avoiding medical procedures such as dialysis
 - b) Living a longer life
 - c) Living a healthier or less painful life
 - d) Gaining an improved quality of life, such as when a cornea transplant restores a person's sight
 - e) Correcting congenital disabilities that endanger a person's life
 - f) Spending less time in the hospital, needing fewer surgeries, or taking fewer medications
- 3) **Risks:** Some risks associated with organ transplant surgery Trusted Source include:
 - a) Complications related to the use of anesthesia, including death
 - b) Bleeding or other complications during the procedure
 - c) Postsurgical complications, such as infection
 - d) A higher risk of infections and other illnesses due to antirejection or other transplant-related drugs
 - e) Organ rejection
 - f) Organ failure

17 | Page

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Challenges in Organ Transplantation

- 1) Shortage of organs.
- 2) Socioeconomic Factors
- 3) Cultural and Religious Aspects
- 4) Organizational Support
- 5) Organ Transport

Transplants from other people

- A transplant between two people who are not genetically identical is called an **allotransplant and the process is called allotransplantation.**
- Donor organs and tissues can be from people who are living, or people who have died because of a significant brain injury or lack of circulation.

Types of organ donation

Living Donor Organ Donation: Living Donor is any person not less than 18 years of age, who voluntarily authorizes the removal of any of his organ and/or tissue, during his o her lifetime, as per prevalent medical practices for therapeutic purposes.

A person during his life can donate one kidney (the other kidney is capable of maintaining the body functions ladequately for the donor), a portion of pancreas (half of the pancreas is adequate for sustaining pancreatic functions) and a part of the liver (the segments of liver will regenerate after a period of time in both recipient and donor).

Deceased Donor Organ Donation: Deceased Donor is anyone, regardless of age, race or gender can become an organ and tissue donor after his or her Death (Brainstem/Cardiac).

A person can donate multiple organ and tissues after (brain-stem/cardiac) death. His/her organ continues to live in another person's body.

Challenges in Animal to Human transplantation

- 1) Adequate study
- 2) Commercialisation: Several companies are engineering pigs for solid organ transplants with different genetic modifications, although none yet has medical-grade facilities. There are concerns regarding the unknown long-term effects of genetic modification on the pig's health.

18 | Page

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- i) **E-Genesis in Cambridge** is making pigs that cannot pass on retroviruses that are present in all pig genomes.
- ii) **NZeno in Auckland**, is breeding miniature pigs whose kidneys remain human-sized.
- **3) Animal Rights:** People for the Ethical Treatment of Animals (PETA) has condemned pig heart transplant as 'unethical, dangerous, and a tremendous waste of resources.

8. NATIONAL HEALTH MISSION LAUNCHES PROJECT NIRAMAY IN ASSAM

About Niramay Project

- 1. It is a digital health project that will provide teleconsultation, patient's health records, digital health infrastructure in three aspirational districts in Assam.
- 2. It aims to leverage the learnings of the pilot to facilitate Ayushman Bharat Digital Mission (ABDM) roll out in the state to develop a digital backbone on transforming healthcare delivery in the state and nation.
- 3. It is based on the integrated technology platform AMRIT (Accessible Medical Records via Integrated Technologies).

9. JALLIKATTU

- 1. Jallikattu is a bull-taming sport of Tamil Nadu that has traditionally been part of the festival of Pongal.
- The festival is a celebration of nature, and thanksgiving for a bountiful harvest, of which cattleworship is part.
- 3. There are references to Jallikattu in Sangam literature too. Also, a reference to bull taming is found in a seal discovered at Mohenjodaro, which is dated betwee 2,500 BC and 1,800 BC.

19 | Page

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4. Other states will similar sports include–Kambala (Andhra Pradesh), Bullock Kart races (Maharashtra), Cock Fight (Andhra and other states), Camel Race (Rajasthan).

10. GOVERNMENT APPROVES IMPLEMENTATION OF INTER-OPERABLE CRIMINAL JUSTICE SYSTEM (ICJS) PROJECT

Ministry of Home Affairs has approved implementation of ICJS project Phase II during 2022-23 to 2025-26

- i. An initiative of e-Committee of Supreme Court to enable seamless transfer of data and information among different pillars of criminal justice system.
- 1. ICJS is a national platform for enabling integration of the main IT system used for delivery of Criminal Justice in the country by five pillars namely:
 - a) Police (Crime and Criminal Tracking and Network Systems)
 - b) e-Forensics
 - c) e-Courts
 - d) e-Prosecution for Public Prosecutors
 - e) e-Prisons
- 2. Phase-II is built on the principle of 'one data one entry' whereby data is entered only once in one pillar and the same is then available in all other pillars.
- 3. National Crime Records Bureau will be responsible for the implementation of ICJS in association with National Informatics Center.
- 4. Significance
 - i. Make justice delivery system speedy and transparent.
 - Strengthen smart policing which include empowering citizen, investigating agencies and poicymakers.

About e-Committee of Supreme Court

1. e-Committee is governing body charged with overseeing e-Courts Project conceptualized under "National Policy and

20 | Page

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Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary-2005".

2. e-Courts is a pan India project to transform the judicial system of the country by ICT enablement of courts.

11. OMBUDSPERSON APP

1. To ensure transparency and accountability union govt has launched Ombudsperson App for Mahatma Gandhi NREGA.

2. About app

- a) Developed for smooth reporting and categorization of grievances based on complaints received from various sources related to the implementation of the MGNREGA.
- b) At present, the reporting of complaints, passing awards and disposal of complaints are in physical form.
- c) This will strengthen Ombudsperson in the discharge of her/his duty in a hassle-free manner by enabling easy tracking and timely passing of awards on each case.

12. SAFFORN BOWL PROJECT

- 1. Efforts are being made by North East Centre For Technology Application & Reach (NECTAR) to expand saffron bowl of India (earlier confined to Kashmir) to parts of the North East.
- 2. NE saw the successful cultivation of saffron for the first time in Yangang village of South Sikkim.

About Saffron bowl project:

- a) Under the project NECTAR has identified few locations in Arunachal Pradesh and Meghalaya for saffron cultivation.
- b)Sites identified in Meghalaya under the said project are Barapani, Cherrapunji, Mawsmai, shillong and lalingtop.

21 | Page

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13. WATER TAXI SERVICE

- 1. India's first water taxi service connecting the twin cities, Mumbai and Navi Mumbai, was flagged off by Union Shipping Minister.
- 2. The water taxi will ply between Domestic Cruise Terminal in South Mumbai and the newly inaugurated Belapur Jetty in Navi Mumbai.

Benefits

- a) Promise a comfortable and stress-free journey;
- b) Time-saving and eco-friendly;
- c) Major boost to the tourism sector;
- d) Opens avenues for employment generation.

14. GREEN HYDROGEN/GREEN AMMONIA

Recently, the Ministry of Power notified the first part of the Green Hydrogen/Green Ammonia Policy to enable production of Green Hydrogen/Green Ammonia using Renewable Sources of Energy.

About Green Hydrogen and Green Ammonia

Hydrogen and Ammonia have emerged as future fuels to replace fossil fuels in a cost-effective manner and achieve sustainable development along with Wind and Solar Energy. The Government of India has recognized their role to tackle global carbon challenge and ensure environmentally sustainable energy security of the nation.

Properties of Hydrogen and Ammonia as Fuel

Feature	Hydrogen	Ammonia
About	Hydrogen (H2) is a	Ammonia (NH3) is
	clean-burning	the basic building
	molecule with water	block of all
	as its	nitrogen fertilizer.
	by-product.	
Production	Primarily through	Primarily through
	Steam Methane	the Haber-Bosch

22 | Page

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Reforming

(producing
H2 from natural
gas), along with
other methods like
Methane Pyrolysis,

Methane Pyrolysis,
Coal Gasification,
Electrolysis of
water

etc.

Process, i.e.

ammonia production natural from hydrogen (H2) with and nitrogen (N2) through a high rolysis, pressure (150-300)

on, bar) exothermic catalytic reaction at 350-500 °C.

When they are produced using power from renewable energy (RE), it is termed as Green Hydrogen and Green Ammonia.

other forms of Ammonia

Brown Ammonia: Higher carbon ammonia made using fossil fuels as feedstock; and

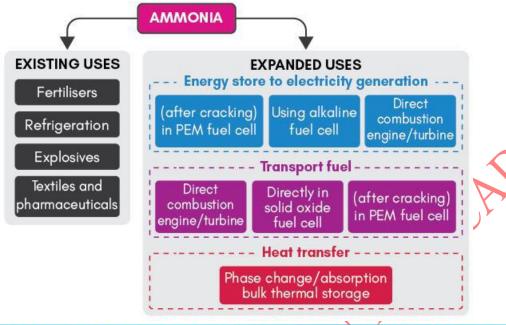
Blue Ammonia: Brown Ammonia with use of Carbon Capture and Storage technology while manufacturing it.

Benefits of Green Hydrogen/Green Ammonia (GH/GA) for India

- 1. Reduction of energy imports as India purchases nearly 85% of its oil and 53% of gas demand from other countries.
- 2. Increased green fuels penetration, promoting developments in RE as well as De-carbonization of the energy sector; achieving Net-Zero Emission target by 2070.
- Reduced Green hydrogen production cost to \$1-1.5/kg with potential to become a net exporter of hydrogen.

23 | Page

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INDIA GREEN HYDROGEN ROADMAP



15. WETLANDS: THE UNSUNG HEROES OF THE PLANET

1. This year, for the first time since it was established by the Ramsar Convention on Wetlands in 1972, World Wetlands Day (February 2) is being observed as a United Nations international day.

a) A wetland is defined as any land area that is saturated or flooded with water, either seasonally or permanently

24 | Page

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such as lakes, aquifers and marshes, mangroves, peatlands, estuaries, coral reefs etc.

2. Importance of Wetlands

- a) Wetlands store more carbon than any other ecosystem, with peatlands alone storing twice as much as all the world's forests.
- b) Wetlands are home to over 100,000 freshwater species of amphibians, reptiles and migratory birds.
- c) Provision of fresh water; filtration of harmful wastewater; sustains the livelihood of over 61.8 million people (food, fishing and aquaculture) etc.
- 3. However, 85% of wetlands present in 1700 were lost by 2000 due to development, farming or other "productive" uses.
- 4. They are facing extinction due to invasive species, pollution, habitat loss and overharvesting.

Global initiatives for Wetlands

- 1. Ramsar Convention adopted in 1971, is an intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources.
- 2. Sustainable Development Goal 6, Target 6 Mandates all countries are committed to protecting and restoring wetlands by 2030.
- 3. Protection of wetlands is a priority for UNEP and a special focus of the UN Decade on Ecosystem Restoration (2021-2030)

Iwo new Ramsar sites in India

- 1. **Khijadia Wildlife Sanctuary**, a freshwater wetland near the coast of the Gulf of Kutch (Gujarat).
- 2. Bakhira Wildlife Sanctuary, a freshwater marsh in the Sant Kabir Nagar district (UP).

25 | Page

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- 3. With the latest addition, India now has 49 Ramsar Sites (Wetlands of International importance).
- 4. It is an "eco-sensitive zone", protected under the Wildlife Protection Act (1972).
- 5. It provides habitat for endangered Egyptian vulture, vulnerable greater spotted eagle, common pochard, wamp francolin, woolly-necked stork.

16. GREEN HIGHWAY POLICY, 2015

- 1. Under the policy, 244.68 lakh plants have been planted upto December, 2021 across 869 NH projects having length of 51,178 Km.
- 2. Green Highways (Plantation, Transplantation, Beautification & Maintenance) Policy 2015 aims to promote greening of corridors across all the National Highways of the country.
- 3. It also aims:
 - a) Making India pollution free
 - b) Help in curtailing the number of road accidents,
 - c) Help local communities, and generate employment.

17. NANOPLASTIC

- 1. Nanoplastics are particles resulting from the degradation of plastics. They present colloidal behavior within the size range from 1 to 1000 nm.
- 2. A study conducted at Alps to determine the amount of plastic falling to Earth from the atmosphere concluded that plastic nanoparticles travel over 1,200 miles through air before settling.
- 3. **Sources of nanoplastics**: Densely populated and urban areas; oceans (plastics entering the air via spray of waves) etc.

26 | Page

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4. **Impact**: Unlike micro-particles, they are likely capable of crossing the cell-blood barrier after respiration into the lungs and eventually entering the bloodstream.

18. UNION MINISTER FOR SOCIAL JUSTICE AND EMPOWERMENT LAUNCHES THE SCHEME FOR ECONOMIC EMPOWERMENT OF DNTS (SEED)

- 1. There are four components of the scheme
 - a) Educational empowerment Free coaching to students from these communities for Civil Services, entry to professional courses like medicine, engineering, MBA, etc.
 - b) Health Insurance through PMJAY of National Health Authority.
 - c) Livelihoods to support income generation, and
 - d) Housing (through PMAY (IAY)
- 2. A budget of Rs.200 crore has been earmarked and timeline of scheme is five years beginning 2021-22.
- 3. De-notified Tribes' stands for those communities which were notified as 'born criminals' under colonial-era Criminal Tribes Act (CTA) 1871.
 - a) Post-independence, CTA, 1871 was repealed, and these communities were "De-Notified".
 - b) It was replaced with Habitual Offenders Act, 1952.
- 4. Nomads and semi-nomads are applied to 'social groups who undertook a fairly frequent, usually seasonal physical movement as part of their livelihood strategy in the recent past.

27 | Page

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19. CABINET APPROVES IMPLEMENTATION OF AYUSHMAN BHARAT DIGITAL MISSION (ABDM) FOR FIVE YEARS

- 1. ABDM, of Ministry of Health and Family Welfare, is a Central Sector Scheme that aims to develop the backbone necessary to support the integrated digital health infrastructure of the country.
- 2. National Health Authority (NHA) is the implementing agency.

3. Objective of ABDM is to:

- 1. Establish state-of-the-art digital health systems, to manage the core digital health data, and the infrastructure required for its seamless exchange.
- 2. **Establish registries** of clinical establishments, healthcare professionals, health workers, drugs and pharmacies at appropriate level.
- 3. **Create a system of personal health records,** easily accessible to individuals and healthcare professionals and services providers.
- 4. **Ensure national portability** in provision of health services.
- 4. **Benefits:** Evidence-based decision making, better continuum of care, catalyse innovation and generate employment, Improve efficiency, effectiveness, and transparency of health service etc.

28 | Page

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20. PARVATMALA- AN EFFICIENT AND SAFE ALTERNATE TRANSPORT NETWORK

- 1. Union Finance Minister in Union Budget for 2022 -23 announced National Ropeways Development Programme "Parvatmala", a preferred ecologically sustainable alternative in place of conventional roads in difficult hilly areas.
 - i. It is being presently started in regions like Uttarakhand, Himachal Pradesh, Manipur, Jammu & Kashmir and other North Eastern states.

2. Major Factors Driving Ropeway Infrastructure:

- i. Ropeway projects results in lower land acquisition costs.
- ii. Faster mode of transportation.
- iii. Environmentally friendly as it emits low dust.
- iv. Last mile connectivity.

Benefits of Ropeways:

i. Ideal for difficult / challenging / sensitive terrain.

29 | Page

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- ii. Ropeway having multiple cars propelled by a single power-plant and drive mechanism. This reduces both construction and maintenance costs.
- iii. A ropeway allows for the simultaneous transport of different types of material.
- iv. Ropeways and cableways (cable cranes) can handle large slopes and large differences in elevation.

21. ONE NATION ONE ELECTION

Why in news?

Chief Election Commissioner recently told that the Election Commission (EC) is ready to hold simultaneous elections on the lines of Prime Minister's call for 'One Nation One Election'.

About One Nation One Election

- 1. Ideally 'One Nation One Election' should imply that elections to all the three tiers of constitutional institutions take place in a synchronized and co-ordinated fashion. It means that a voter casts his vote for electing members for all tiers of the Government on a single day.
- 2. However, the elections to third tier institutions comes in the ambit of the State as per the Constitution. Further, elections to the third tier are directed and controlled by the State Election Commissions and their sheer numbers in the country is significantly large.
- 3. Thus, it would be impractical to synchronize and align election schedules of the third tier with that of Lok Sabha and State Assembly election.
- 4. Accordingly, the term "One nation one election" is defined as structuring the Indian election cycle in a manner that elections to Lok Sabha and State Assemblies are synchronized together.

30 | Page

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- 5. In such a scenario, a voter would normally cast his/her vote for electing members of Lok Sabha and State Assembly on a single day and at the same time.
- 6. It does not mean that voting across the country for Lok Sabha and State Assemblies needs to happen on a single day. This can be conducted in a phase-wise manner as per the existing practice.

Need

- 1. Expenditure on elections
- 2. Invisible and incalculable socio-economic costs
- 3. Engagement of security forces
- 4. Others
 - i. Frequent elections lead to disruption of normal public life. Holding of political rallies disrupts road traffic and also leads to noise pollution.
 - ii. If simultaneous elections are held, this period of disruption would be limited.
 - iii. Frequent elections also perpetuate caste, religion and communal issues across the country.

Concerns associated with One Nation One Election

- 1. Operational feasibility
- 2. Inconsistent with Westminster democracy and federalism
- 3. Disadvantage to regional parties
- 4. **Others:** Having to face electorate more than once every 5 year enhances the accountability of politicians and keeps them on their toes.

22. THE CRIMINAL PROCEDURE (IDENTIFICATION) ACT, 2022

Recently, the Criminal Procedure (Identification) Act, 2022 received the assent of the President.

About the Act

31 | Page

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1. The Act seeks to replace the Identification of Prisoners Act, 1920.

Need for such Act:

- a) New "measurement" techniques being used in advanced countries are giving credible and reliable results.
- **b)** In 1980, the Law Commission of India noted the need to revise the act to bring it in line with modern trends in criminal investigation.
- c) In 2003, the Malimath Committee recommended amending the Act to empower the Magistrate to authorise the collection of data such as blood samples for DNA, hair, saliva, and semen.

Objective: To expand the scope and ambit of the "measurements" which can be taken under the provisions of law that will help in unique identification of a person involved in any crime and will assist the investigating agencies in solving the criminal case.

23. DRAFT INDIA DATA ACCESSIBILITY & USE POLICY, 2022

Recently, the Ministry of Electronics and Information Technology (MeitY) has released the Draft India Data Accessibility & Use Policy 2022.

Importance of Data in Digital Economy

- 1. Good governance
- 2. Harness the data
- 3. Informed policymaking
- **4.** Improve coordination

About Draft India Data Accessibility & Use Policy, 2022

- 1. Major Objectives of the policy include:
 - a) Maximising access to and use of quality of Non-Personal Data (NPD) available with public sector.

32 | Page

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- b) Improving policy making, evaluation, and monitoring.
- c) Building digital and data capacity, knowledge & competency of government officials.
- d) Ensuring greater citizen awareness, participation, and engagement with open data.

Issues with Data sharing and use policy

- 1. Privacy issue:
- 2. Lack of proper standards and framework on data anonymisation.
- 3. **Ambiguity on concepts**: Few concepts have been defined in a vague and ambiguous manner which opens them up to misinterpretation.

Major Data initiatives

- 1. Personal Data Protection Bill (PDPB), 2019
- 2.Non-Personal Data Protection Framework (NPDF)

24. DISASTER MANAGEMENT PLAN OF MINISTRY OF PANCHAYATI RAJ

Why in news?

Disaster Management Plan of Ministry of Panchayati Raj (DMP-MoPR) was recently released.

About DMP-MoPR

It has been prepared in compliance of Section 37 of Disaster Management Act and guidelines issued by National Disaster Management Authority with larger perspective of community-based planning starting from village to District Panchayat level.

Key Components of the plan:

Institutional arrangement: Village Committee on Disaster Management in each village and a Working Group on Disaster Management in each Panchayat for planning, implementation and monitoring of the plan.

33 | Page

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- 2. Mainstreaming of Community Based DMP of Villages and Panchayats: Every Indian village would have Village Disaster Management Plan. These plans would be the basis for preparation of disaster management mainstreamed Gram Panchayat Development Plan (GPDP), Block Development Plan (BDP) and District Development Plan (DDP) for the respective Panchayat.
- 3. **Hazard Risk, Vulnerability and Capacity Analysis**: It involves vulnerability mapping, zoning for natural disasters such as cyclone, floods, drought, earthquake, Tsunami etc.
- 4. Coherence of Disaster Risk Management across Resilient Development and Climate Change Action: by mutual reinforcing of the national initiatives corresponding to the three global frameworks- Disaster Risk Reduction, Sustainable Development Goals (SDGs) and Paris Agreement on Climate Change and the ten point agenda
- 5. Socially Inclusive Disaster Risk Reduction in Rural Area: Processes and methods have been highlighted for incorporating needs of vulnerable Groups like, Sexual Minorities, Scheduled Castes and Scheduled Tribes, Children and Specially Abled Persons.
- 6. **Capacity Building Framework**: Competence based training for two members of every village committee on DM, members of the Working Group on DM for each Panchayat, etc.
- 7. The MoPR would support the first component of training to the State Resource Persons under the Rashtriya Gram Swaraj Abhiyan (RGSA).
- 8. Coordination, Convergence and Collective Action: Functional coordination with multiple agencies, convergence with structure and system of disaster management.

Constitutional Provision for DM Planning at local level Article 243G:

Article 43ZD

34 | Page

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25. (COP4) - MINAMATA CONVENTION

- 1. Fourth Conference of Parties (COP4) to the Minamata Convention (MC) on Mercury being held in Bali, Indonesia
- 2. It is named after the city in Japan that became the epicenter of Minamata disease, a neurological disease caused by severe mercury poisoning, in the 1950s.
- 3. India signed the MC in 2014 and ratified in 2018.
- 4. It came into force in 2017.
- 5. At the meeting, Indonesia as well as the United Nations have introduced a global declaration that calls on parties to the MC on Mercury to tackle global illegal trade of mercury.
- 6. Mercury is considered by WHO as one of the top ten chemicals or groups of chemicals of major public health concern.
- 7. It may have toxic effects on nervous, digestive and immune systems, lungs, kidneys, skin and eyes.
- 8. India is second-largest user of mercury in world after US

26. NATIONAL WETLAND DECADAL CHANGE ATLAS TITLED NATIONAL WETLAND INVENTORY AND ASSESSMENT-2006-07 AND 2017-18

- 1. It was prepared by the Space Applications Centre (SAC) of ISRO, highlighting the changes which have happened in Wetlands across the country in the past decade.
- 2. The original Atlas was released by SAC in 2011 and has over the years been used extensively by all the State Governments also in their planning processes.

3. Key highlights

- a. At the national level, the total wetland area has been estimated at 15.98 Mha, which is around 4.86 per cent of country's total geographic area.
- **b.** Among the wetland types, more than one-third of the total wetland area is covered by rivers (35.2 per cent),

35 | Page

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another around 43 per cent wetland area is covered combining reservoirs (17.1 per cent).

c. There is an increase in the mangroves area, coral reefs area.

4. About Wetlands

- i. Ramsar convention defines wetlands as areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.
- ii. India has come up with Wetlands (Conservation and Management Rules) 2017 for protection, management of wetlands in India.

27. MEKEDATU DAM

1. Tamil Nadu government has recently passed a resolution against move to build the dam.

2. About the Dam

- a) To be built across the Cauvery River by Karnataka as a reservoir and drinking water project. It will also recharge the aquifers in the region.
- b) However, Tamil Nadu has been opposing the project as it violates the final award of the Cauvery River Water Tribunal of 2007 and SC judgement of 2018.
- c) Also, the dam would disrupt the natural flow of water from the upper riparian state and affect its agrarian community.
- d) The project is now before the Cauvery Water Management Authority.

36 | Page

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28. ELECTION FREEBIES

Recently, the 15th Finance Commission chairperson raised concerns over growing political election freebies with the need to contemplate adopting the concept of sub-national bankruptcies.

About Election Freebies

- 1. Election Freebies are the offerings/distribution of irrational freebies from political parties as part of electoral promises.
- 2. In the last few years election freebies have become an integral part of Indian elections with cumulative increase in each election. E.g., Free electricity, Free Water, Free Rides, Loan Waivers, Allowances, laptops etc.

Some of these 'freebies' help them to meet basic needs of people and uplift their living standard, helping to temporarily address other issues as well such as unemployment, rising cost of living, economic inequalities etc.

But it goes against the roots of free and fair election in a democracy and gives rise to several issues.

Issues with Freebies: Negative Impact of Freebies

- 1. **Economic Issues:** Freebies are a huge drain on the state exchequer affecting the fiscal balance and macroeconomic stability of the country. If not checked it can lead to greater risks including state bankruptcy due to high debt-to-GDP ratio (see image). E.g.
- 2. **Political Issues:** It goes against Article 14 by distorting the level playing field among political parties, favoring the party in power over others
- 3. **Socio-psychological Issues:** Distorted economic decisions lack equity and fairness, leading to various sociopsychological issues such as reduced efforts or laziness, threats to social cohesion by creating artificial divides between haves and have-nots of the associated freebies.

37 | Page

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4. **Environment:** Freebies promote unsustainable practices by pushing governments and people away from environmentally sustainable practices. E.g.



29.FASTER - FAST AND SECURED TRANSMISSION OF ELECTRONIC RECORDS

- 1. Recently, CJI launched the FASTER, a digital platform for court officials to instantly send e-copies of the orders.
- 2. It will transmit e-authenticated copies of the interim orders, stay orders, bail orders and record of proceedings to the duty-holders for compliance and due execution through a secured electronic communication channel to intended parties.
- **3.** It is developed on directions from Supreme Court (SC) after suo motu cognisance on delayed release of convicts from Jail after court order.

30. INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

1. Ministry of Electronics and Information Technology (MeitY) has launched several applications under the Intelligent

38 | Page

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Transportation System (ITS) as part of the InTranSE- II program to improve India's traffic scenario.

- 2. ITS are control and information systems that use integrated communications and data processing technologies for the purposes of:
 - a) Improving mobility of people and goods.
 - b) Increasing safety, reducing traffic congestion and managing incidents effectively.
 - c) Meeting transport policy goals and objectives.
 - d) Minimizing impacts of environmental, highway and human factors that contribute to accidents.

31. CRYPTOCURRENCY CRIMES

Why in news?

Recently, for the first time Bureau of Police Research and Development (BPRD), a think tank under Ministry of Home Affairs (MHA), has issued a standard operating procedure for law enforcement agencies in India on how to probe crypto crimes, and seize and preserve cryptocurrencies during investigation.

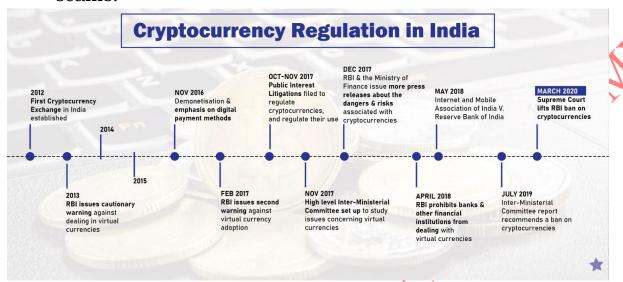
More about news

- 1. In 2021, illicit transactions using cryptocurrencies were estimated to be \$14 billion, 79% increase from \$7.8 billion the previous year.
- 2. Currently, there are no national guidelines on cryptocurrency related cases, due to which enforcement agencies often struggle, particularly in seizure as well as tracing suspects.
- 3. Cryptocurrency and the exchanges where digital currency can be traded anonymously have emerged as key tools for the cyber extortionists.
- 4. Cryptocurrencies can be used either as a tool or target in the facilitation of cybercrimes, including cyber money laundering, cyber extortion, phishing, hacking, cyber fraud

39 | Page

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and other financial crimes such as Ponzi and investment scams.



India's provisions to control cryptocurrency crime

- 1. Cryptocurrency and Regulation of Official Digital Currency Bill, 2021: It is not yet tabled in Parliament. It seeks to ban all cryptocurrencies based on the risks associated with them such as potential use for money-laundering, risks to consumers and threat to the country's financial stability.
- 2. Also, it seeks to create a facilitative framework for the creation of the official digital currency to be issued by the Reserve Bank of India.
- 3. Prevention of Money Laundering Act 2002 (PMLA):
- 4. **Indian Penal code**, **1860 (IPC)**: Section 420 of IPC penalizes cybercrimes like creation of Bogus websites, cyber frauds like password thefts are punishable with a seven-year jail term and/or fine.
- 5. Information Technology (IT) Act, 2000: Section 66C of IT Act, deals with Identity theft using passwords, digital signatures, biometric thumb impressions or other identifying features of another person for fraudulent purposes.

40 | Page

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How cryptocurrency is threat to the nation?

1. Internal security:

- a) **Terrorism**: There is wider use of cryptocurrencies on the dark net for terror acts and drug trafficking by militant organisations.
- b) **Money Laundering**: Cryptocurrency market isn't universally protected or regulated like Banks, thus is increasingly used to launder money.
- c) **Anonymity**: While all transactions are transparent on blockchain, it is difficult to pin a wallet to a physical person. As a result, it's a safe haven for criminals who carry out ransomware attacks, crypto exchanges hacks and carry out transactions in bitcoins.
- d) **Extortion and Ransomware**: Cryptocurrency is sometimes used as payment for extortion because the money trail is difficult to trace.
- e) **Tax evasion and avoidance**: Anonymity offered by the cryptocurrency ecosystem makes it difficult for tax authorities to trace transactions to individuals and verify their tax liabilities.
- **2. Individual:** Criminals can break into crypto exchanges, drain crypto wallets and infect individual computers with malware that steals cryptocurrency as well as steal personal information and data.

3. Others:

- 1. **Investment risk**: Risks associated with digital currencies vary for different stakeholders, including financial institutions, non-financial firms, and investors.
- **2. Regulatory**: Countries may prevent the use of the currency or may state that transactions break anti money laundering regulation (AML).

41 | Page

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32. NEW CYBERSECURITY GUIDELINES

1. Indian Computer Emergency Response Team (CERTIn) has issued directions relating to information security practices and reporting of cyber incidents under provisions of section 70B of Information Technology (IT) Act, 2000.

2. Key guidelines

- 1. All government and private agencies will mandatorily have to report all cyber breach incidents to CERT-In within six hours.
- 2. All service providers, intermediaries, data centres, and government organisations shall mandatorily enable logs of all their ICT systems and maintain them securely for a rolling period of 180 days and same shall be maintained within Indian jurisdiction.
- 3. Virtual private server (VPS) providers, cloud service providers need to register accurate information related to subscriber names, customer hiring services, etc and maintain them for five years or longer duration as mandated by law.
- 4. It is a step in the direction to make India Cyber secure. India has jumped 37 places to 10th position in Global Cyber Security Index (GCI) 2020 (by International Telecommunication Union) which showcases country's commitment towards cyber security.

Steps taken to improve cybersecurity

- 1. National Cyber Security Policy, 2013.
- 2. National Cyber Security Strategy 2020.
- 3. Indian Cyber Crime Coordination Centre (I4C) by Ministry of Home Affairs.
- 4. National Cyber Coordination Centre (NCCC) under CERT-In.
- 5. Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre).

42 | Page

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33. PINAKA MISSILE SYSTEMS

- 1. Pinaka Mk-I (Enhanced) Rocket System (EPRS) and Pinaka Area Denial Munition (ADM) rocket systems have been successfully flight-tested by Defence Research and Development Organisation and Indian Army at Pokhran.
- 2. The new Pinaka ER gives it a range of around 70 km, over the 45 km existing range of the missile which has been with the Indian forces for nearly a decade.

34. HELINA

- 1. Recently, indigenously developed helicopter launched Anti-Tank Guided Missile 'HELINA' was successfully flight tested.
- 2. About HELINA (Helicopter based NAG):
- 3. It is third generation fire and forget class anti-tank guided missile (ATGM) system mounted on the Advanced Light Helicopter (ALH).
- 4. The system has all weather day and night capability.
- 5. Developed by: Defence Research and Development Organisation (DRDO).

35. DORNIER (DO-228) AIRCRAFT FLIGHT

- 1. Ministry of Civil Aviation has announced the launch of first commercial flight of the made-in-India Dornier- 228.
- 2. Do-228 has been made by Hindustan Aeronautics Limited (HAL) delivered to Alliance Air.
- 3. Alliance Air will be India's first commercial airline to fly an India- made aircraft for civil operations.
- 4. Aircraft will link five remote towns of Arunachal Pradesh to Assam's Dibrugarh, boosting air connectivity in the north-eastern region of the country.
- 5. It is part of government's UdeDeshkaAamNaagrik (UDAN) regional connectivity scheme.

43 | Page

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36. GENEVA BIODIVERSITY MEETINGS

- 1. The United Nations Geneva Biodiversity Meetings recently concluded.
- 2. It included the meetings of Open-ended Working Group on the Post-2020 Global Biodiversity Framework; Subsidiary Body on Scientific, Technical and Technological Advice and Subsidiary Body on Implementation.
- 3. The meetings were held in Geneva, Switzerland to discuss the post-2020 Global Biodiversity Framework.
- 4. update the Strategic Plan for Biodiversity (SBP) 2011-2020 and Aichi Biodiversity Targets adopted in the COP10 of CBD.

Major outcomes of the meetings

- 1. **Release of first negotiated text** of goals, targets and supporting mechanisms for a Post-2020 framework for nature.
- 2. Progress made towards a solution for the fair and equitable sharing of benefits from Digital Sequence Information on the use of Genetic Resources;
- 3. Agreement to address resource mobilization and monitoring framework, marine and coastal biodiversity, and other issues;
- 4. Parties have agreed to hold fourth meeting of working group in Kenya in June, before adoption of framework at resumed COP-15.

37. NITROGEN LEVELS ON A DECLINE

- 1. As per a new study, an imbalance in nitrogen availability has been reported across the globe, with some places having an excess and others a shortage.
- 2. Nitrogen (N) is one of the building blocks of life and is essential for all plants and animals to survive.

44 | Page

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- 3. Without nitrogen plants grow slowly and produce smaller flowers and fruits.
- 4. Nitrogen is also a core component of amino acids (building blocks of proteins) and of nucleic acids (building blocks of genetic material RNA and DNA).
- 5. When excessive nitrogen accumulates in the streams, inland lakes and coastal bodies of water, it could result in eutrophication, leading to harmful algal blooms, dead zones and fish kills.
- 6. Movement of nitrogen between the atmosphere, biosphere, and geosphere in different forms is called the nitrogen cycle.
- 7. Bacteria in the soil "fix" atmospheric nitrogen into ammonia, which plants need in order to grow.
- 8. Other bacteria convert the ammonia into amino acids and proteins. Then animals eat the plants and consume the protein.
- 9. Nitrogen compounds return to the soil through animal waste. Bacteria convert the waste nitrogen back to nitrogen gas, which returns to the atmosphere.

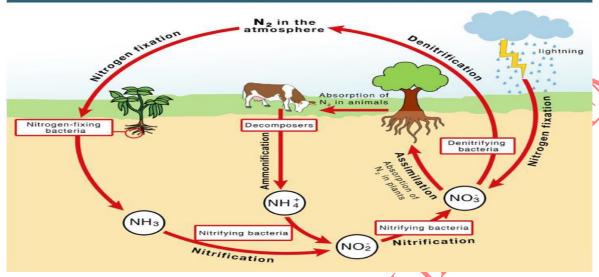
About Nitrogen

- 1. Earth's atmosphere constitutes 78 percent of Nitrogen gas.
- 2. In its gaseous form, nitrogen is colorless, odorless and generally considered as inert.
- 3. In liquid form it looks similar to water.



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NITROGEN CYCLE



38. FIRST CARBON-NEUTRAL PANCHAYAT

- 1. Palli in Jammu becomes India's first carbon-neutral panchayat.
- 2. Carbon neutrality means having a balance between emitting carbon and absorbing carbon from the atmosphere in carbon sinks.
- 3. Removing carbon oxide from the atmosphere and then storing it is known as carbon sequestration.

39. INDUSTRIAL WASTE ROAD

- 1. Surat has become the first city in the country to get a processed steel slag (industrial waste) road.
- 2. Steel slag, a by product of steel making, is produced during the separation of the molten steel from impurities in steel -making furnaces.
- 3. Benefits of using steel slag: Construction cost is 30 per cent cheaper, less thicker, more durable and lower carbon footprint than roads built from natural aggregates.
- 4. Other areas where steel slag can be used: agricultural sector due to its ability to correct soil acidity, as silicate

46 | Page

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fertilizer that can provide silicon to the plants, in manufacturing cement, to treat acidic water.

40. GREEN HYDROGEN

Oil India Limited (OIL) has commissioned India's first 99.999% pure green hydrogen plant in Assam.

About Green Hydrogen:

- 1. Defined as hydrogen produced by splitting water into hydrogen and oxygen using renewable energy such as wind or solar power that does not entail greenhouse gas emissions.
- 2. Hydrogen gas can be used as a fuel in transportation, power generation, and industrial activities.

41. CHAMOLI DISASTER

- 1. Scientists have been able to decode the reason behind the 2021 disaster in Chamoli district (Uttarakhand).
- 2. Scientists have found that the region was seismically active before the disaster hit.
- 3. They also found signals of rock-ice detachment preceded by a formation of a new structure via self-assembly or self-organization.
- 4. Earlier it was believed that Glacial Lake Outburst Flood (GLOF) caused the event.
- 5. GLOF is sudden release of water from a lake fed by glacier melt that has formed at the side, in front, within, beneath, or on the surface of a glacier.

42. THIRUVANANTHAPURAM DECLARATION

- 1. The first National Women Legislators' Conference in Kerala concluded with the adoption of Thiruvananthapuram Declaration.
- 2. The Thiruvananthapuram Declaration laments the longpending Women's Reservation Bill (since 1996) for 33%

47 | Page

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- reservation for women in the Lok Sabha and State Legislatures.
- 3. The low representation of women in Parliament, i.e. lack of political empowerment is the main reason for India's poor performance on Global Gender Gap published by World Economic Forum.
- 4. India was ranked at 140 out of 156 countries in 2021.

43. E-SHRAM PORTAL

Latest governmental data about e-Shram portal highlights the plight of unorganised/informal sector in India as well as sharp disparities existing in the society.

About e-Shram Portal

The portal was launched by the Union Ministry of Labour and Employment (MoLE) in August 2021 for the welfare of workers in the unorganized sector who are not members of the EPFO or ESIC.

Objectives of e-SHRAM Portal

- 1. Creation of a centralized database of all unorganized workers (UWs) including Construction Workers, Migrant Workers, Gig and Platform workers, Street Vendors, Domestic Workers, Agriculture Workers, etc., to be seeded with Aadhaar.
- 2. To improve the implementation efficiency of the social security services for the unorganized workers.
- 3. Sharing of information in respect of registered unorganised workers with various stakeholders such as Ministries/Departments/ Boards/ Agencies/ Organisations of the Central & State Governments through APIs for delivery of various social security and welfare schemes being administered by them.
- 4. Portability of the social security and welfare benefits to the migrant and construction workers.

48 | Page

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5. Providing a comprehensive database to Central and State Governments for tackling any National Crises like COVID-19 in future.



44. GATISHAKTI SANCHAR PORTAL FOR CENTRALIZED RIGHT OF WAY (ROW) APPROVALS

- 1. Department of Telecommunication (DoT) launched GatiShakti Sanchar portal for centralized Right of Way (RoW) approvals.
- 2. In line with PM Gati Shakti National Master Plan, Portal will facilitate smooth deployment of digital communications infrastructure across the country.

Advantages of GatiShakti Sanchar Portal

49 | Page

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- 1. Ensuring transparency, accountability, responsiveness and effective monitoring for timely rollout of 5G network.
- 2. Will streamline Right of Way (RoW) application and permissions through a single interface to submit applications and check status.
- 3. Telecom industry depends upon getting timely approvals for RoW permissions to accelerate infrastructure rollout.
- 4. However, industry faces challenges such as RoW approval timelines, denial of access (in commercial / residential areas), non uniformity in RoW approach, centre-state coordination etc.
- **5.** Achieving 'Broadband for All' as envisaged under National Digital Communications Policy, 2018

Policy envisages three missions:

- 1. **Connect India:** Creating Robust Digital Communications Infrastructure.
- 2. **Propel**
- 3. **India:** Enabling Next Generation Technologies and Services.
- 4. **Secure India:** Ensuring Sovereignty, Safety and Security of Digital Communications

45. NATIONAL POLICY ON BIOFUELS-2018

Recently, the Cabinet approved amendments to the National Policy on Biofuels, 2018 to advance the target of 20% ethanol blending in petrol to Ethanol Supply Year (ESY) 2025-26 from earlier 2030.

About Biofuels

1. Biofuels refers to liquid transportation fuels, such as ethanol and biodiesel, derived from agricultural produce, forests or any other organic material (feedstock).

50 | Page

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- 2. Based on the feedstock (raw materials) used to produce biofuels, they are classified into four generations (see image).
- 3. Presently, first-generation biofuels are the main source of biofuels globally despite 140 billion tonnes of agrowaste or biomass generated from agriculture every year.
- 4. India reached 9.99% ethanol blending in petrol in May 2022, ahead of the National Biofuels Policy-2018 target of year end (2022).









Biofuels

Made from food-related sources such as sugars and starches-materials that are often a food source for people or animals. E.g. Ethanol from sugar soybean or biodiesel from soybeen.

First Generation | Second Generation | Third Generation | Fourth Generation **Biofuels**

Also known as Cellulosic biofuels. these are made from Non-Food Sources such as agricultural residue, wood chips, waste crops etc.

Biofuels

Also known as Algal Biofuels. they are produced from aquatic feedstock such as algae.

Biofuels

Developmental stage biofuels. Using

bioengineered microorganisms and genetically engineered feedstock.

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BIOFUELS: TIMELINE ON KEY DEVELOPMENTS



2002-03
Government of launched Ethanol Blended Petrol Programme for sale of 5% in 9 states/UTs from January, 2003



2014
Introduction of
Administered
Price
Mechanism for
Ethanol procured
under the EBP
Programme



2018

M

2001

India started R&D and Pilot projects with **5% Ethanol Blended Petrol** (EBP)



National Policy on Biofuels launched to achieve 20% blending of biofuels (both for bio diesel and bio-ethanol) by



Launch of National
Policy on Biofuels-2018
and Interest
Subvention Scheme to
enhance and augment
biofuels production in
India

National Policy on Biofuels-2018

- 1. **Aim:** To increase usage of biofuels in the energy and transportation sectors of the country in the coming decade; and to utilize, develop and promote domestic feedstock and its utilization for production of biofuels.
- 2. Biofuels Covered: Bioethanol, Biodiesel and BioCNG.
- 3. **Implementation:** By National Bio-fuel Coordination Committee (NBCC), set up in 2020, chaired by Minister Petroleum and Natural Gas. It has representatives from 14 other ministries and departments to
- 4. Take decisions for effective implementation and monitoring of biofuels program in the country, and
- 5. Provide overall coordination among FCI and oil marketing companies.

46. UN-ENERGY PLAN OF ACTION TOWARDS 2025

Recently, Plan of Action Towards 2025 was launched by the UN Energy against the backdrop of a global energy crisis and worsening climate emergency.

52 | Page

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Seven areas identified under UN-Energy Plan of Action

- 1. **Scale up collective UN-Energy action**: Joint programmes, supported by UN-Energy and leveraging relevant Energy Compacts to significantly scale up collective UN system action.
- 2. **Scale up Energy Compacts**: Through ECAN, UN-Energy will create a framework to bring new stakeholders aboard, foster coalition-building, and drive towards a continuous increase in ambition and accelerated action, catalyzing finance and investment, etc.
- 3. **Lead a Global Campaign for SDG 7 Action:** Campaign will advocate the Global Roadmap, contribute to mobilizing additional Energy Compacts, communicate best practices in support of accelerating SDG 7 action, making use of dynamic digital platforms and social media.
- 4. Lead by example- Greening UN-Energy organizations' operations: To improve the UN system's environmental sustainability, on all energy-related issues, with a view to reduce the carbon and environmental footprint of its own operations.
- 5. **Convene annual Global SDG 7 Action Forum**: It will be organized under the auspices of the UN General Assembly to constructively review, discuss and advance relevant issues.
- 6. It will be supported by UN-Energy and build on UN Decade of Sustainable Energy for All 2014- 2024.

47. PEOPLE'S BIODIVERSITY REGISTER (PBR)

- 1. Kolkata became first major metropolitan city to prepare a detailed register of biodiversity i.e. PBR.
- 2. PBR contains comprehensive information on locally available Bio-resources including landscape and demography of a particular area or village.

53 | Page

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- 3. Biological Diversity Act (BDA), 2002 has made it mandatory for every local self-governing institution in rural and urban areas to constitute Biodiversity
- 4. Management Committee (BMC) within their area of jurisdiction.
- 5. Once constituted, BMC must prepare PBR in consultation with local people.
- 6. **Advantages:** Provides information on Local Biodiversity Hotspots, Sacred Groves, and Other biologically significant areas, locally endemic and endangered Species.

48. BHARAT TAP

- 1. The Ministry of Housing and Urban Affairs (MoHUA) has launched Bharat Tap initiative.
- 2. Bharat Tap initiative aims to provide low-flow, sanitary-ware at scale, and thereby reduce water consumption at source considerably.
- 3. Also, MoHUA launched 'Nirmal Jal Prayas', initiative of National Real Estate Development Council (NAREDCO) Mahi.
- 4. NAREDCO was established as an autonomous selfregulatory body in 1998 under aegis of MoHUA.
- 5. It strives to be the collective force influencing and shaping real estate industry.
- 6. NAREDCO had established Mahi NAREDCO Women's Wing for empowering women entrepreneurs and encouraging participation of women in real estate sector and allied fields.

54 | Page

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49. PRIME MINISTER (PM) INAUGURATED WORLD'S FIRST LIQUID NANO UREA PLANT AT KALOL (GUJARAT)

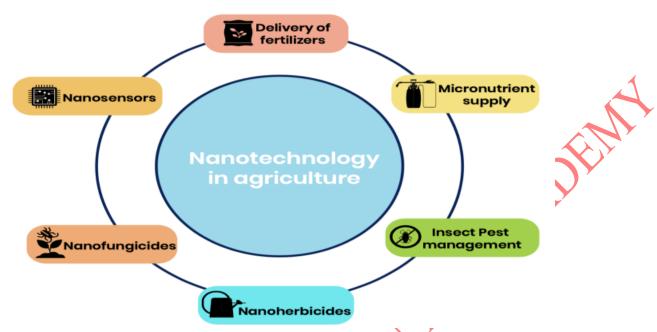
- 1. Liquid nano Urea is a patented chemical nitrogen fertiliser developed by IFFCO's Nano Biotechnology Research Centre at Kalol with nano nitrogen particles (from 20-50 nm).
 - a) One nanometre is equal to a billionth of a metre.
 - b) It is sprayed directly on the leaves of plants and gets absorbed by the stomata- pores found on the epidermis of leaves.

2. Benefits of Nano urea

- 1. Improved agricultural produce with reduced urea consumption as the efficiency of liquid nano urea is as high as 85-90% in comparison to 25% of conventional urea.
- 2. Significant reduction in urea imports, government subsidies and logistics cost.
- 3. Reduced soil, water and air pollution from urea, improving quality of underground water and reduction in global warming.
- 4. Higher shelf life as no issue of caking on coming into contact with moisture.
- 5. Other Potential Nanotechnology Opportunities in Agriculture

55 | Page

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50. SWACHH SURVEKSHAN (SS) 2023 UNDER SWACHH BHARAT MISSION URBAN (SBMU) 2.0

MoHUA has launched the 8th edition of SS survey 2023 with the theme of 'Waste to Wealth'.

It is aligned with SBMU 2.0's commitment to promote circularity in waste management and focuses on the vision of 'garbage free' cities.

About SS-2023

SS, introduced by MoHUA in 2016, is the world's largest annual survey of cleanliness, hygiene and sanitation in villages, cities and towns across India.

Evaluation for SS-23 is based on 3 components:

- i. **Service Level Progress** -covers Segregated collection, Processing, and disposal, Used water management, and Safaimitra Suraksha.
- Certification for Garbage Free City star rating and ODF/ODF+/ODF++/water + certification.
- iii. **Citizens' voice** -through feedback, grievance redressal, engagement, etc.
 - 1. Additional weightage has been given to source segregation of waste, enhancement of waste processing capacity of cities

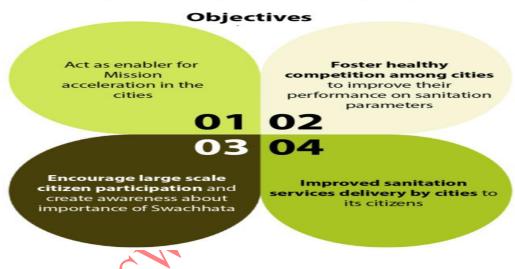
56 | Page

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- and reduction of waste going to dumpsites. Ranking of Wards within cities is being promoted through SS 2023.
- 2. Assessment of cities will be on dedicated indicators on issues of 'open urination' (Yellow Spots) and 'open spitting' (Red Spots), being faced by cities.
- 3. SBM-U 2.0, launched in 2021, focus on source segregation of solid waste, ensures grey and black water (used water) management in all cities other than those covered under AMRUT.

Key objectives of Swachh Survekshan

Annual urban sanitation survey conducted by MoHUA through a 3rd Party Assessment Agency



51. ADVANCED KNOWLEDGE AND RURAL TECHNOLOGY IMPLEMENTATION (AKRUTI) PROGRAMME

- 1. AKRUTI promotes youth entrepreneurship in and around Kudankulam Nuclear Power Project (KKNPP).
- 2. AKRUTI programme is offered by Bhabha Atomic Research Centre (BARC).
- 3. Aimed at encouraging village-level technopreneurship based on BARC technologies.

57 | Page

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- 4. BARC, under AKRUTI program, presently offers Technologies/ Consultancy in fields of Biodegradable Waste Processing, Water, Food, and Agriculture.
- 5. To create awareness regarding use of AKRUTI, several Knowledge and Rural Technology Implementation Kendras (KRUTIK) were opened in villages to impart regional-level training.

52. NATIONAL E-VIDHAN APPLICATION (NEVA)

- 1. NeVA system has been developed to make all the work and data related to legislative bodies available online for the use of both citizens and the members of Assemblies.
- 2. e-Vidhan is re-designated as NeVA.
- 3. Ministry of Parliamentary Affairs is Nodal Ministry for rolling out NeVA.
- 4. NeVA aims to bring all the legislatures of the country together, in one platform thereby creating a massive data depository.
- 5. It will also help in streamlining information related to various state assemblies, and to eliminate use of paper in day-to-day functioning.

53. GIG WORKERS

In general, gig workers are those engaged in hourly or part-time jobs in everything from catering events to software development. They have a non-standard work arrangement with their employers and share a non-traditional employer-employee relationship.

The work is usually temporary and completed within a stipulated time.

In a report titled 'India's Booming Gig and Platform Economy', NITI Aayog has projected that the Gig workforce in India may hit 23.5 mn by FY30.

58 | Page

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About Gig workers

- 1. **Gig worker** is a person who performs work or participates in a work arrangement and earns from such activities outside of traditional employer-employee relationship, (**Code on Social Security, 2020**).
- 2. They can be broadly classified into two categories as:
- 3. Platform Gig Workers and Non-platform Gig Workers
- 4. With half-a-billion labour force, India has already emerged as one of the world's largest countries of Gig workforce due to pandemic and rising factors like urbanization, access to internet, digital technologies and smartphones in India, start-up culture, freelancing platforms, etc.

Key Findings of NITI Aayog Report

- 1. **Workforce numbers:** In 2020–21, 77 lakh workers (1.5% of total workforce) engaged in the gig economy. It is expected to reach 2.35 crore workers (4.1% of the total workforce) in India by 2029–30.
- 2. **Platformisation of Work:** Higher employment elasticity of gig workers shows their growing demand, indicating platformisation of non-gig work to gig work.
- 3. Currently, more than 75% of the companies have less than 10% gig headcount, but it will rise as more MNCs turn to flexible hiring options.
- 4. It is already expanding in all sectors with nearly 26.6 lakh gig workers in retail trade and sales, 13 lakh in transportation, 6.2 lakh in manufacturing and so on.
- **5. High potential industries for Gig Workers**: Construction, Manufacturing, Retail, and Transportation and Logistics.
- 6. **Skill Level of Gig Workforce:** Presently, about 47% of the gig work is in medium skilled jobs, about 22% in high skilled and about 31% in low skilled jobs.
- 7. **Skill Polarisation:** The report draws attention to skill polarisation as the trend shows gradual decline in

59 | Page

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concentration of workers in medium skills while that of the low skilled and high skilled is increasing.

Issues faced by Gig workers

- 1. The gig economy can benefit workers, businesses, and consumers by making work more adaptable to the needs of present flexible lifestyle. But it requires platform firms and governments policies taking account of the specific characteristics of workers in these sectors as they fall outside the purview of the traditional dichotomy of formal and informal labour leading to various issues such as:
- 2. **Lack of job security**, irregular wages, and uncertain employment status. E.g. declining income of drivers on Ola, Uber or temporary hiring by food delivery apps during IPL.
- 3. The uncertainty of work and income may lead to increased stress and pressure.
- 4. **Limited access to internet and digital technology** can be a restrictive factor for workers willing to take up jobs in the gig and platform sector.
- 5. **Denial of workplace protections and entitlements** due to **contractual relationship** between the platform owner and gig worker.

60 | Page

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BENEFITS OF GIG ECONOMY



- ▶ Cheaper goods and services
- Greater Convenience through personalised services/products
- Increased consciousness on consumers demand



- ► Flexible working hours with remote working opportunity
- Can work for two or more comapnies as freelancer
- Opportunity to develop interest as career



- Cost-Effectiveness due to reduceb Employees cost and overhead cost
- Agile Businesses with ability to scale quickly based on demand
- Greater Diversity at workplace for more creativity and innovation



PM launched the Jan Samarth Portal.

- 1. JanSamarth Portal is a digital portal linking thirteen Credit Linked Government schemes on a single platform, for ease of access to all the beneficiaries and related stakeholders.
- 2. It provides intuitive guidance to beneficiaries for checking subsidy eligibility and auto recommendation system offers best suitable schemes as per Beneficiary's requirements and credentials.
- 3. It is having multiple integrations within the platform with UIDAL, CBDT, NSDL etc.

55. NIRYAT (NATIONAL IMPORTEXPORT RECORD FOR YEARLY ANALYSIS OF TRADE) PORTAL

- 1. Prime Minister launched new portal NIRYAT portal- a onestop place for all info needed on India's foreign trade.
- 2. It will help in breaking silos by providing real time data to all stakeholders.

61 | Page

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- 3. Important information related to more than 30 commodity groups exported to more than 200 countries of the world will be available.
- 4. In the coming time, information related to districtwise exports will also be made available.

56. AGNI-4

- i. A successful training launch of Agni-4 was carried out.
- ii. Agni-4 is an Intermediate Range Ballistic Missile with a range of around 4,000 km.
- iii. Developed by DRDO, it can carry a 1,000-kg payload and can go as high as 900 km.

Series	Range	
Agni 1	1000 kms	
Agni 2	2000 kms	
Agni 3	2500 kms	
Agni 4	4000 kms	
Agni 5	5000-8000 kms	
Agni-P (Prime)	2000 km dual redundant navigation and guidance system	

57. CLIMATE EQUITY

India made an intervention during the closing plenary of the Bonn Climate Conference stating that equity is being overlooked in climate negotiations.

About the Bonn Climate Change Conference

1. The Bonn Climate Change Conference has been the first opportunity for all Parties to the UNFCCC to meet since the

62 | Page

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- adoption of the Glasgow Climate Pact at COP26 last year (2021).
- 2. In Glasgow, governments agreed a package of decisions that pave the way for full implementation of the Paris Agreement.
- 3. The UN Climate Change Conference COP27 will take place in Sharm el-Sheikh, Egypt, in November 2022.

Major outcomes of the conference:

- 1. First technical dialogue of the Global Stocktake, designed to review collective progress towards achieving the Paris Agreement's goal to limit global warming to 1.5 degrees Celsius.
- 2. But the talks ended without the Glasgow Dialogue being added to the formal negotiating agenda.
- 3. Draft of a "global goal on adaptation" (GGA), which aims to reduce vulnerability, strengthen resilience and increase the capacity of people and the planet to adapt to the impacts of climate change, was discussed.
- 4. Negotiations around the Adaptation Fund and to get international carbon markets up and running under Article 6 of the Paris Agreement.
- 5. Additional work streams included those focusing on the gender action plan, the Koronivia joint work on agriculture and Action for Climate Empowerment, which focuses on public involvement in climate action.

What is Climate Equity?

- 1. Climate equity ensures the just distribution of the benefits of climate protection efforts and alleviates unequal burdens created by climate change.
- 2. It ensures that the climate goals are achieved in a sustainable manner, without unjust burden or fallouts on certain sections.
- 3. The principle of equity has been interpreted synonymously with the principle of common but differentiated

63 | Page

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responsibilities and respective capabilities (CBDR/RC) which acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change.

What is the significance of addressing climate equity in Climate Change negotiations?

- 1. India has stressed that countries should acknowledge Intergovernmental Panel on Climate Change (IPCC)'s suggestions on the global carbon budget and equity.
- 2. Social and economic transformation required for climate mitigation: Deeper emissions reduction from developed countries alongside accelerated financial support for developing countries to strengthen their climate action strategies can become a critical enabler to enhance mitigation action.
- 3. **Enable just transition towards low-emissions development**: Transfer of technology and finances,
 concentrated in developed nations, can be utilised by
 developing countries to transition to lower emission
 pathways in the future.
- 4. **Ensure sustainable development**: Developing countries need access to a fair share of carbon budget to achieve their developmental rights and achieve sustainable development goals.
- 5. Fundamental to international co-operation on climate change: In the ongoing climate negotiations, climate equity is a contentious issue among developing and developed nations, especially with respect to funding of Loss and damage.

Other benefits:

1. **Ensures accountability & responsibilit**y for those benefiting from the root causes that drive climate change.

64 | Page

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- 2. Manages the negative consequences of climate mitigation on vulnerable populations.
- 3. Does Paris climate agreement ensure climate equity?

 Several enabling decisions were taken during COP 26 in Glasgow for ensuring climate equity, including establishment Glasgow Dialogue was established on funding for loss and damage, Global goal on adaptation, institutionalising the functions of the Santiago Network on loss and damage, etc.
- 4. But the negotiations saw several setbacks as well;
- 5. **Undermining historic responsibility**: All countries have been requested to revisit and strengthen their climate pledges by the end of 2022 with no differentiation and no concrete targets.
- 6. This not only denies fair share to developing nations in the remaining carbon budget, but also enhances the possibility of exceeding the climate goals creating additional impacts on vulnerable communities.
- 7. **Targeted action against fossil fuels**, calling for a "phasedown of unabated coal" and "phase-out" of inefficient fossilfuel subsidies. Doing so will disproportionately impact developing countries who are dependent on coal and fossil fuel, especially in their efforts to provide accessible and affordable energy to large number of citizens living with either limited or no access to modern energy at all.
- 8. **Absence of financial mechanism for addressing loss and damage:** Discussion have been restricted to technical assistance and insurance based interventions and does not address liability and compensation from developed nations due to push back from countries like US and the European Union.
- 9. Allowing Carbon credits generated under the Kyoto Protocol to be carried over into the Paris mechanism:

65 | Page

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This would make limiting global warming to 1.5°C more difficult, necessitating larger commitment from developed nations.

58. BAN ON SINGLE USE PLASTIC

Several single use plastic (SUP) items identified by the Ministry of Environment, Forest and Climate Change (MoEFCC) will be banned across India from 1st July, 2022.

About the SUP Ban

- 1. MoEFCC had earlier notified the Plastic Waste Management (PWM) Amendment Rules, 2021, to curb pollution caused by littered and unmanaged plastic and phase out SUP items by 2022.
- 2. Under the new rules, several SUP items which have low utility and high littering potential were identified whose manufacture, import, stocking, distribution, sale and use was prohibited with effect from 1st July, 2022.
- 3. The ban will not apply to commodities made of compostable plastic.
- 4. Those found violating the ban can be penalised under the Environment Protection Act 1986 which allows for imprisonment up to 5 years, or a penalty up to Rs 1 lakh, or both.

What is Single use plastic (SUP)?

- 1. It has been defined as a plastic item intended to be used once for the same purpose before being disposed of or recycled.
- 2. Single use plastics do not provide an incentive enough for the effort needed to collect them. Thus, their banning in India is a significant move.

3. Status of Plastic Pollution in India

a. Million Tonnes of plastic waste is generated annually. Per capita plastic waste generation has almost doubled

66 | Page

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over the last five years. Only 60 per cent of plastic waste is collected.

What steps have been taken by the Government to ensure enforcement of the ban?

- 2. Setting up of National and state level control rooms and special enforcement teams for checking illegal manufacture, import, stocking, distribution, sale and use of banned SUPs.
- 3. States and Union Territories directed to set up border check points to stop inter-state movement of any banned SUPs.
- 4. PRAKRITI mascot to spread greater awareness among masses and bring behavioural change.
- 5. MoEFCC and Central Pollution Control Board (CPCB) launched various e-governance portals & apps, likeo
- 6. National Dashboard on **Elimination of Single Use Plastic** and **Plastic Waste Management** (MoEFCC) to bring all stakeholders at one place and track the progress made for elimination of SUP.
- 7. Extended Producer Responsibility (EPR) Portal for Plastic Packaging (CPCB) for compliance to EPR Obligations by Producers, Importers and Brand-owners.
- 8. **Mobile App for SUP Grievance Redressal** (CPCB) to empower citizens to check sale/usage/manufacturing of SUP in their area and tackle the plastic menace.
- 9. **Monitoring module for SUP** (CPCB), for local bodies, State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) and CPCB, to inventorize details of SUP production/ sale & usage in commercial establishments at district level, and on-ground enforcement of ban on SUP.

67 | Page

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SUP ITEMS BANNED UNDER PWM AMENDMENT RULES, 2016

PLASTIC STICKS



Earbuds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice- cream sticks.

CUTLERY ITEMS



Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays

PACKING/WRAPPING FILMS



Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets.

OTHER ITEMS



Plastic or PVC banners less than 100 microns, stirrers, polystyrene (Thermocol) for decoration.

ADVERSE IMPACTS OF SINGLE PLASTIC USE



Takes a long time to decompose.

- Accumulates and contaminates soil and water.
- Leads to greenhouse gas (GHG) emissions during production and waste management as plastics are largely derived from fossil fuels.
- Poses hazards for marine, avian and terrestrial wildlife: Entanglement in floating plastic debris, increased mortality following ingestion, deposition on coral reefs etc.
- Acts as a sink and transportation media for chemicals and persistent organic pollutants (POPs).



ECONOMIC IMPACTS

- Decline in Tourism: Plastic littered on streets and washed up on shores is visually unattractive.
- Chokes drainage and sewerage infrastructure.
- Marine plastic debris obstructs ships.
- Negative impacts on fishing industry.



IMPACTS

- Can easily enter human food chain: Microplastics have been found in seafood, tap water, bottled water etc.
- Leaches toxins into food and drinks with effects like disruption of normal hormone function, cancer etc.
- Air pollution due to open burning of plastic waste.

59. FOREST (CONSERVATION) RULES, 2022

Recently, Ministry of Environment, Forest and Climate change has notified the Forest Conservation Rules 2022.

68 | Page

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Salient features of Forest (Conservation) Rules, 2022

These rules are notified under the Forest (Conservation) Act, 1980 and will replace the Forest (Conservation) Rules, 2003.

Time frame:

- 1. Non-mining projects between 5-40 hectares: reviewed within 60 days.
- 2. Mining projects between 5-40 hectares: reviewed within 75 days.
- 3. For projects involving a larger area:
- i. 120 days for non-mining projects involving more than 100 hectares.
- ii. 150 days for mining projects involving more than 100 hectares.

Proposals for Prior Approval of the Central Government

- i. In- Principle' approval after considering the recommendation of the Advisory Committee.
- ii. Final approval: The Nodal Officer may, after receipt of the 'In-Principle' approval from the Central Government.

Compensatory Afforestation

Land for compensatory afforestation shall be provided which is neither notified as forest under the Indian Forest Act, 1927 or any other law nor managed as forest by the Forest Department.

60. ECO-SENSITIVE ZONES (ESZ)

Why in news?

The Supreme Court has directed that every protected forest, national park and wildlife sanctuary in the country should **mandatorily have a minimum 1 km ESZ**, from their demarcated boundaries.

More about the judgment

The directions were passed in reference to applications filed under the TN Godavarman Thirumalpad versus Union of India case.

69 | Page

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The order would apply in all such states/UTs where the minimum ESZ is not prescribed.

Other highlights of the judgment:

- 1. Extended boundary shall prevail if the existing ESZ goes beyond 1 km buffer zone or if any statutory instrument prescribes a higher limit.
- 2. No new permanent structure will be allowed within the ESZ.
- 3. Mining within national wildlife sanctuary or national park is not permitted.
- 4. Activity already being undertaken, within the 1km or extended ESZ, but lying outside the ambit of prohibited activities may continue with permission.
- 5. The Principal Chief Conservator of Forests of each State/UT has been directed to make a list of subsisting structures at the ESZs and submit a report to the court within 3 months.
- 6. The requirements could be diluted if there is "overwhelming public interest".
- 7. In respect of PAs for which the proposal of a State/UT has not been given, the 10 kilometres buffer zone as ESZ shall be implemented, according to MoEFCC guidelines, till a final decision is arrived.

70 | Page

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About Eco-sensitive zones (ESZs)

ESZ or Ecologically sensitive areas (ESA) are **ecologically important and fragile areas** around protected areas designated to be protected from industrial pollution and unregulated development under the **Environment**

Protection Act (EPA), 1986.

It is notified by Central Government, i.e. Ministry of Environment, Forest and Climate Change (MoEFCC), under Environment Protection Act, 1986.

61. INDIA ACHIEVED 10% ETHANOL BLENDING TARGET IN PETROL

- 1. The original target for 10% ethanol blending in petrol was November 2022.
- 2. Central government had also set the target of 20% ethanol blending in petrol (also called as E20), by 2025.
- 3. An ethanol blend is defined as a blended motor fuel containing ethyl alcohol that is at least 99% pure, derived

71 | Page

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from agricultural products, and blended exclusively with gasoline.

- 4. Since it is plant-based, it is considered to be a renewable fuel.
- 5. Measures taken to improve ethanol blending
- 6. Government has fixed remunerative prices of ethanol from maize & FCI rice.
- 7. Government is encouraging sugar mills and distilleries to enhance their distillation capacities for which Government is facilitating them to avail loans from banks for which interest subvention up to 6% is being borne by Government.
- 8. The Ministry of Petroleum & Natural Gas (MoPNG) has amended Motor Spirit & High-Speed Diesel (Regulation of Supply, Distribution & Prevention of Malpractices) Order, 2005 by permitting direct sale of Bio-ethanol (E100).
- 9. Ethanol Blended Programme (EBP) to increase indigenous production of Ethanol.
- 10. India is world's fifth largest producer of ethanol after the US, Brazil, EU and China.

Significance

- 1. Reduce Pollution
- 2. Combustion of ethanol made from biomass is considered atmospheric carbon neutral because as the biomass grows, it absorbs CO2, which may offset the CO2 produced when the ethanol is burned.
- 3. Help lower India's energy import dependency and thus, lowering the crude oil import bill.
- 4. Profitable for farmers and sugar mills

62. SURROGACY (REGULATION) RULES, 2022

Why in news?

The government has issued Surrogacy (Regulation) Rules, 2022 under Surrogacy (Regulation) Act, 2021.

72 | Page

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About Surrogacy (Regulation) Rules, 2022

i. Rules provide form and manner for registration and fee for a surrogacy clinic and the requirement, and qualification for persons employed, at a registered surrogacy clinic.

Key Highlights of the rules

- 1. Number of attempts of any surrogacy procedure on surrogate mother shall not be more than 3 times.
- 2. A surrogate mother may be allowed for abortion during surrogacy in accordance with the Medical Termination of Pregnancy Act, 1971 as advised by the doctors.
- 3. A surrogate mother has to give her consent through an agreement for giving up all her rights over the child and shall hand over the child/children to:
 - a) the intending couple, or
 - b) a Person (appointed by the intending couple) in case of their separation during her pregnancy or in case of death of both, or
 - c) The survivor in case of the death of one of intending couple during pregnancy.
 - d) Intending couples will need to purchase a general health insurance cover in favour of the surrogate mother for a period of 36 months from an insurance company/agent recognized by the Insurance Regulatory and Development Authority of India (IRDAI).
 - e) The insurance amount should be sufficient to cover all expenses for all the complications arising out of pregnancy and postpartum delivery complications.

73 | Page

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About Surrogacy (Regulation) Act, 2021

1. Act defines surrogacy as a practice whereby one woman bears and gives birth to a child for an intending couple with the intention of handing over such child to the intending couple after the birth.

74 | Page

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- 2. It allows altruistic surrogacy which involves no monetary incentives or rewards to the surrogate mother other than the medical expenses incurred and insurance coverage.
- 3. It seeks to prohibit commercial surrogacy, which includes trading human embryos and gametes and buying and selling of the services of a surrogate by a monetary reward except for insurance.

New bodies created under the act:

- 1. National Assisted Reproductive Technology (NART) and Surrogacy Board by Central government at Centre level.
- 2. Minister in-charge of the Ministry of Health and Family Welfare, shall be Chairperson of the board.
- 3. The Board shall discharge the following functions:
- 4. To advise the Central Government on policy matters relating to surrogacy;
- 5. To review and monitor the implementation of the Act.
- 6. To lay down the code of conduct to be observed by persons working at surrogacy clinics;
- 7. To set the minimum standards of physical infrastructure, laboratory and diagnostic equipment and expert manpower.
- 8. To supervise the functioning of State Assisted Reproductive Technology and Surrogacy Boards;
- 9. State/ Union territory Assisted Reproductive Technology and Surrogacy Board by each state and UT having a legislature at state level.
- 10. National Assisted Reproductive Technology and Surrogacy Registry for the purposes of registration of surrogacy clinics.

Significance of act

1. **Progressive move**: It aim to clean up India's hitherto unregulated surrogacy industry by bringing thousands of ART and surrogacy clinics under the ambit of the law.

75 | Page

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- 2. **Protection of the rights of the surrogate mother:** Due to the absence of legal regulations, surrogate mothers faced multiple challenges, including exploitation, unhygienic living conditions, and unfair treatment.
- 3. **Safeguards the rights of the child:** Abandonment of child due to genetic or other disability, or changing of couple's social or marital status is legally not allowed.
- 4. **Promotes medical tourism in the country:** India is a huge market for surrogacy as is reflected from the fact that in 2012, the size of India's surrogacy industry was \$2 billion a year with more than 3,000 fertility clinics engaged in this across the country.

63. SWACHH BHARAT MISSIONURBAN 2.0 (SBM-U 2.0) LAUNCHES REVISED SWACHH CERTIFICATION PROTOCOLS TO SUSTAIN ODF STATUS

- 1. SBM-U 2.0 has launched the revised Swachh Certification Protocols for Open Defecation Free (ODF), ODF+, ODF++, and Water+ certifications.
- 2. In October 2021, SBM-U 2.0 (2021-22 to 2025-26) was launched with focus on sustaining sanitation and solid waste management outcomes achieved during SBM.
- 3. SBM-U was launched in 2014 in all Urban Local Bodies, to achieve 100% ODF status through construction of Individual Household Latrines (IHHLs) and Community/Public Toilets (CT/PTs).

Key interventions against each certification

Status	When Declared?	Intervention
ODF	If not a single	Robust monitoring mechanis
	person is found	ensured by increasing the
	defecating in open.	number of survey sample size
		and location types.
ODF+	ODF status	Focus on functionality of

76 | Page

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	11.1	OW / DW
	conditions and all	CT/PT.
	community and	Innovative Operation &
	public toilets are	Maintenance business model for
	functional and well	sustainability in long run.
	maintained.	
ODF++	ODF+ status	Mechanized cleaning of septic
	conditions and	tanks and sewers.
	Toilets with sludge	• Safe collection & treatment of
	and septage	used water as well as safe
	management.	management of faecal sludge.
Water+	All wastewater	Collection, transportation,
	released is treated	treatment, and reuse of both
	to a satisfactory	used water and faecal
	level (as per CPCB	sludge
	norms), before	
	releasing to	
	environment.	

64. BHARAT GAURAV TRAIN

- 1. Maiden Service of Bharat Gaurav Train commenced under Bharat Gaurav Scheme from Coimbatore North to Sainagar Shirdi.
- 2. Bharat Gaurav Trains are theme-based trains launched by Indian Railways in November 2021.
- 3. Objective: To showcase India's rich cultural heritage and magnificent historical places to the people of India and the world.
- 4. Aim: Leverage the core strengths of the professionals of the tourism sector to run theme-based trains to tap India's vast tourist potential.
- 5. Bharat Gaurav Scheme guidelines apply to already running tourist circuit trains by IRCTC as well such as Buddhist Circuit Tourist Train.

77 | Page

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78 | Page