



News Analysis (01 Jul, 2021)

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'Union' or 'Central' Government

Why in News

Recently, the Tamil Nadu government has decided to shun the usage of the term '**Central government**' in its official communications and **replace it with 'Union government'**.

In common parlance, the terms "union government" and "central government" are used interchangeably in India. However, the Constituent Assembly did not use the term 'Centre' or 'Central government' in all of its 395 Articles in 22 Parts and eight Schedules in the original Constitution.

Key Points

- **Intent of Constituent Assembly:**
 - **Article 1(1) of the Constitution of India** says "**India, that is Bharat, shall be a Union of States.**"
 - On 13th December, 1946, Jawaharlal Nehru introduced the aims and objectives of the Constituent Assembly by resolving that **India shall be a Union of territories willing to join the "Independent Sovereign Republic"**.
 - The emphasis was on the **consolidation and confluence** of various provinces and territories to form a strong united country.
 - While submitting the draft Constitution in 1948, **Dr B R Ambedkar, chairman of the drafting committee, had said** that the committee had **used the word 'Union' because:**
 - (a) the **Indian federation was not the result of an agreement** by the units, and
 - (b) the component **units had no freedom to secede from the federation.**
 - The members of the Constituent Assembly were very cautious of **not using the word 'Centre' or 'Central government' in the Constitution** as they intended to **keep away the tendency of centralising of powers in one unit.**

- **Meaning of Union & Centre:**

- According to constitution expert Subash Kashyap, from the point of the usage of the words, **'centre' indicates a point in the middle of a circle**, whereas **'Union' is the whole circle**.

In India, the **relationship between the so-called 'Centre' and States**, as per the Constitution, is actually **a relationship between the whole and its parts**.

- Both the Union and the States are created by the Constitution, **both derive their respective authority from the Constitution**.

The one is not subordinate to the other in its own field and the authority of one is to coordinate with that of the other.

- The judiciary is designed in the Constitution to ensure that the Supreme Court, the tallest court in the country, has no superintendence over the High Court.
 - Though the Supreme Court has appellate jurisdiction, not only over High Courts but also over other courts and tribunals, they are **not declared to be subordinate** to it.
 - In fact, the **High Courts have wider powers to issue prerogative writs** despite having the power of superintendence over the district and subordinate courts.
- In very common parlance, Union gives a sense of Federal while centre gives more of a sense of unitary government.

But practically both are the same in Indian political system.

FEDERAL vs. UNITARY

<u>Federal</u>	<u>Unitary</u>
- Dual Government (Central + Regional)	- Single Government - Central only (Regional Gov. may be formed by Central)
- Written Constitution	- Written (France) or Unwritten (Britain) Constitution
- Division of Powers between Central & State Governments.	- No Division of Powers
- Supremacy of the Constitution	- Supremacy of the Constitution not guaranteed (like Britain)
- Rigid Constitution	- Flexible (Britain) or Rigid (France) Constitution
- Independent Judiciary	- Judiciary may or may not be Independent
- Bicameral Legislature	- Bicameral (Britain) or Unicameral (China) Legislature

Associated Issues With the Term Central Government

- **Discarded By Constituent Assembly:** The word 'Centre' is not used in the Constitution; the makers of the Constitution specifically discarded it and instead used the word 'Union'.
- **Colonial Legacy:** 'Centre' is a hangover from the colonial period because the bureaucracy in the Secretariat, New Delhi who are used to using the word 'Central Laws,' 'Central legislature,' etc, and so everyone else, including the media, started using the word.
- **Conflict With Idea of Federalism:** India is a federal government. The power to govern is divided between a government for the whole country, which is responsible for subjects of common national interest, and the states, which look after the detailed day-to-day governing of the state.

According to Subash Kashyap, using the term '**Centre**' or '**central government**' would mean **state governments are subservient to it.**

Way Forward

- The **federal nature of the Constitution is its basic feature** and cannot be altered, thus, the stakeholders wielding power intend to protect the federal feature of our Constitution.
- A diverse and large country like India requires a **proper balance between the pillars of federalism, i.e. autonomy of states, national integration, centralisation, decentralisation, nationalisation, and regionalisation.**
 - Extreme political centralisation or chaotic political decentralisation can both lead to the weakening of Indian federalism.
- The satisfactory and lasting solution of the vexed problem is to be found **not in the statute-book but in the conscience of men in power.**

Source: IE

Global Cybersecurity Index: ITU

Why in News

Recently, **India has ranked tenth (10th) in Global Cybersecurity Index (GCI) 2020** by **ITU (International Telecommunication Union)** by moving up 37 places.

The affirmation came just ahead of the sixth anniversary of **Digital India on 1st July.**

Key Points

- **Top Ranking:**
 - The **US topped (1st)**, followed by the UK (United Kingdom) and Saudi Arabia tied on the **second position together**.
 - Estonia was **ranked third (3rd)** in the index.
- **Results for India:**
 - India **scored a total of 97.5 points from a possible maximum of 100 points**, to make it to the **tenth position worldwide** in the GCI 2020.
 - India **secured the fourth position in the Asia Pacific region**.
 - India is **emerging as a global IT superpower**, asserting its digital sovereignty with firm measures to safeguard data privacy and online rights of citizens.
 - The result shows **substantial overall improvement and strengthening under all parameters of the cybersecurity domain**.
- **Basis of Assessment:**
 - On the basis of performance on **five parameters of cybersecurity**, which are, Legal measures, technical measures, organisational measures, capacity development, and cooperation.
 - The performance is then **aggregated into an overall score**.
- **International Telecommunication Union:**
 - It is the **United Nations specialized agency** for information and communication technologies – ICTs.
 - **Founded in 1865** to facilitate international connectivity in communications networks. It is **Headquartered in Geneva, Switzerland**.
 - It **allocates global radio spectrum and satellite orbits**, develops the technical standards that ensure networks and technologies seamlessly interconnect, and strives to improve access to ICTs to underserved communities worldwide.
 - Recently, **India got elected as a member of ITU Council for another 4-year term** - from 2019 to 2022. India has remained a regular member since 1952.
- **Challenges to Cyber Security in India:**
 - Deploying multiple cybersecurity tools **reinforces a fragmented and complex security environment** that is prone to risks arising from human error.
 - Cybersecurity challenges **companies face as they shift the majority of their employees to a remote working** arrangement in a really short period of time.
 - India **lacks indigenization in hardware as well as software cybersecurity tools**. This makes India's cyberspace vulnerable to cyberattacks motivated by state and non-state actors.
 - India doesn't have an 'active cyber defense' like the EU's **General Data Protection Regulation (GDPR)** or the US' Clarifying Lawful Overseas Use of Data (CLOUD) Act.

- **Efforts to Improve Cyber Security in India:**
 - **National Cyber Security Strategy 2020:** It is being formulated to improve cyber awareness and cybersecurity through more stringent audits.
 - **Draft Personal Data Protection Bill, 2018** (based on the recommendation of Justice BN Srikrishna Committee) to secure citizens' data.
 - The scheme to set up **I4C (Indian Cyber Crime Coordination Centre)** was approved in October 2018, to deal with all types of cybercrimes in a comprehensive and coordinated manner.
 - **National Computer Emergency Response Team (CERT-In)** functions as the nodal agency for coordination of all cyber security efforts, emergency responses, and crisis management.
 - Protection and resilience of critical information infrastructure with the set up of **National Critical Information Infrastructure Protection Centre (NCIIPC)**.
- **International Mechanisms:**
 - **Budapest Convention on Cybercrime:** It is an international treaty that seeks to address Internet and computer crime by harmonizing national laws, improving investigative techniques, and increasing cooperation among nations. It came into force on 1st July 2004. **India is not a signatory to this convention.**
 - **Internet Governance Forum (IGF):** It brings together all stakeholders i.e. government, private sector and civil society on the Internet governance debate.

Source: IE

BharatNet Project

Why in News

Recently, the Union Cabinet approved a **Viability Gap Funding** support of up to Rs. 19,041 crore (Out of the total expense of Rs. 29,430 crore) for the implementation of the **BharatNet project through Public-Private Partnership** model.

- **Public-Private Partnership (PPP)** involves **collaboration between a government agency and a private-sector company** that can be used to finance, build, and operate projects. The PPP Model in this critical infrastructure of Telecom is a **novel initiative**.
- **Viability Gap Funding (VGF)** means a **grant one-time or deferred, provided to support infrastructure projects** that are economically justified but fall **short of financial viability**.

Key Points

- **About:**

- It is the **world's largest rural broadband connectivity programme** using Optical fibre. And also a **flagship mission** implemented by **Bharat Broadband Network Ltd. (BBNL)**.

BBNL is a **Special Purpose Vehicle (SPV)** set up by the Government of India under the **Companies Act, 1956** with an authorized capital of Rs 1000 crore.

- It is a highly scalable network infrastructure accessible on a non-discriminatory basis, **to provide on demand, affordable broadband connectivity of 2 Mbps to 20 Mbps for all households** and on demand capacity to all institutions, to realise the vision of **Digital India**, in partnership **with States and the private sector**.
- It is being implemented by the **Department of Telecommunication under the Ministry of Communications**.
- **National Optical Fibre Network (NOFN)** which was launched in October 2011 was **renamed as Bharat Net Project in 2015**.
NOFN was envisaged as an **information superhighway through the creation of a robust middle-mile infrastructure** for reaching broadband connectivity to **Gram Panchayats**.
- **In 2019**, the Ministry of Communications also launched the **'National Broadband Mission'** to facilitate universal and equitable access to broadband services across the country.

- **Funding:**

The entire project is being funded by **Universal service Obligation Fund (USOF)**, which was set up for improving telecom services in rural and remote areas of the country.

- **Objective:**

The objective is to **facilitate the delivery of e-governance, e-health, e-education, e-banking, Internet** and other services to rural India.

- **Phases of the Project:**

- **First Phase:**

Provide one lakh gram panchayats with broadband connectivity by laying underground **Optic Fibre Cable (OFC) lines by December 2017**.

- **Second Phase:**

Provide connectivity to all the gram panchayats in the country using an optimal mix of underground fibre, fibre over power lines, radio and satellite media **by March 2019**.

- **Third Phase:**

From **2019 to 2023**, a state-of-the-art, future-proof network, including **fibre between districts and blocks, with ring topology** to provide redundancy would be created.

- **Current Extension of BharatNet:**

- The project will be **extended to all inhabited villages beyond the gram panchayats in 16 States** which are:
Kerala, Karnataka, Rajasthan, Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, West Bengal, Assam, Meghalaya, Manipur, Mizoram, Tripura, Nagaland and Arunachal Pradesh.
- The revised strategy will include **creation, upgrading, operation, maintenance and utilisation of BharatNet** by the **private sector partner**, who will be selected by a competitive international bidding process.
- The selected **private sector partner** is expected to provide **reliable, high speed broadband services** as per predefined **Services Level Agreement (SLA)**.

- **Significance of PPP in BharatNet:**

- **Faster Roll Out:**

The **PPP Model** will **leverage private sector efficiency for operation, maintenance, utilisation and revenue generation** and is expected to result in the faster roll out of BharatNet.

- **Increased Investment:**

The private sector partner is expected to **bring an equity investment and raise resources towards capital expenditure and for operation and maintenance of the network**.

- **Better Access:**

Extension of BharatNet to all inhabited villages will **enable better access to e-services offered by various governments, enable online education, telemedicine, skill development, e-commerce and other applications of broadband**.

Source:TH

Revamped Distribution Sector Scheme

Why in News

Recently, the **Cabinet Committee on Economic Affairs** has approved a **Reforms-based and Results-linked, Revamped Distribution Sector Scheme** worth Rs. 3.03 trillion wherein the Centre's share will be Rs. 97,631 crore.

It aims to improve the **operational efficiencies** and **financial sustainability of discoms (excluding Private Sector DISCOMs)**.

Key Points

- **About:**
 - It will provide **conditional financial assistance** to strengthen the **supply infrastructure of discoms (power distribution companies)**.
The **financial assistance** will be based on **meeting pre-qualifying criteria** and upon achievement of **basic minimum benchmarks**.
 - All the **existing power sector reforms schemes** such as **Integrated Power Development Scheme, Deen Dayal Upadhyaya Gram Jyoti Yojana, and Pradhan Mantri Sahaj Bijli Har Ghar Yojana** will be merged into this umbrella program.
 - The scheme will be **available till 2025-26**.
- **Implementation:**

It would be based on the **action plan worked out for each state** rather than a **‘one-size-fits-all’ approach**.
- **Nodal Agencies:**

Rural Electrification Corporation and Power Finance Corporation.
- **Components:**
 - **Consumer Meters and System Meters:**
 - The scheme involves a **compulsory smart metering ecosystem** across the distribution sector—starting from electricity feeders to the consumer level, including in about 250 million households.
 - It is proposed to install approximately **10 crore prepaid Smart Meters** by December, **2023 in the first phase**.
 - **Feeder Segregation:**
 - Scheme also focuses on funding for **feeder segregation for unsegregated feeders**, which would enable solarization under the **PM-KUSUM Scheme**.
 - Solarization of feeders will lead to cheap/free day time power for irrigation and additional income for the farmers.
 - **Modernization of Distribution system in Urban Areas:**

Supervisory Control and Data Acquisition (SCADA) in all urban areas.
 - **Rural and Urban area System strengthening.**
- **Special Category States:**

North-Eastern State of Sikkim and States/Union Territories of Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Andaman & Nicobar Islands, and Lakshadweep will be treated as Special Category States.
- **Objectives:**
 - Reduction of **AT&C losses (operational losses due to inefficient power system)** to pan-India levels of 12-15% by 2024-25.
 - Reduction of **cost-revenue gap** to zero by 2024-25.
 - Developing Institutional Capabilities for Modern DISCOMs.

- **Related Schemes:**

- **Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya):** To ensure electrification of all willing households in the country in rural as well as urban areas.
- **Integrated Power Development Scheme (IPDS):** The scheme provides for (a) strengthening of sub-transmission and distribution networks in urban areas; (b) metering of distribution transformers/feeders/consumers in urban areas; and (c) IT enablement of distribution sector and strengthening of distribution network.
- **Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY):** The rural electrification scheme provides for (a) separation of agriculture and non-agriculture feeders; (b) strengthening and augmentation of sub-transmission and distribution infrastructure in rural areas including metering at distribution transformers, feeders and consumers end.
- **GARV (Grameen Vidyutikaran) App:** To monitor transparency in implementation of the electrification schemes, Grameen Vidyut Abhiyanta (GVAs) have been appointed by the government to report progress through the GARV app.
- **Ujwal Discom Assurance Yojana (UDAY):** For operational and financial turnaround of Discoms.
- **'4 Es' in the Revised Tariff Policy:** The 4Es include Electricity for all, Efficiency to ensure affordable tariffs, Environment for a sustainable future, Ease of doing business to attract investments and ensure financial viability.

Source: PIB

Gender Self Identification

Why in News

Recently, the **Spanish government approved a draft bill that would allow anyone over the age of 14 to legally change gender** without a medical diagnosis or hormone therapy.

- **Currently**, for someone to change their gender in official records, the law first **requires two years of hormone therapy and a psychological evaluation**.
- **'Self-Identification'** has been a **long held demand of trans-right groups** around the world, **including in India**, as prejudice against trans people remains rampant.

Key Points

- **Gender Self-Identification (Concept):**
 - A **person should be allowed to legally identify with the gender of their choice by simply declaring so**, and without facing any medical tests.
 - **Arguments in Favour:**
 - The **current processes for declaring one's desired gender are lengthy, expensive and degrading.**
 - **Trans people face daily discrimination** and it is vital that steps are taken to tackle discrimination and **provide the services and support people need.**
 - **Gender identity is considered to be an inherent part of a person** which may or may not need surgical or hormonal treatment or therapy and **all persons must be empowered to make their decisions affecting their own bodily integrity and physical autonomy.**
 - **Arguments Against:**
 - Gender self-identification **goes far beyond** respecting people's right to believe what they want; to dress or act or express their identity as they want.
 - This is a political and social demand that **affects everybody, but in particular women, gay people and transsexuals.**
 - The **medicalization of gender identity has allowed for vital legal recognition** and transition-related healthcare for some members of the trans community.
- **Countries where Self-ID is Legal:**
 - **15 countries around the world recognise self-ID**, including Denmark, Portugal, Norway, Malta, Argentina, Ireland, Luxembourg, Greece, Costa Rica, Mexico (only in Mexico City), Brazil, Colombia, Ecuador and Uruguay.
 - In **Hungary**, a newly adopted **law effectively bans all content about homosexuality and gender change** from school curriculum and television shows for children under the age of 18.

- **Rules in India:**

- In India, the rights of transgender persons are governed by the **Transgender Persons (Protection of Rights) Act, 2019** and the **Transgender Persons (Protection of Rights) Rules, 2020**.
 - Under the Rules, **an application to declare gender is to be made to the District Magistrate**. Parents can also make an application on behalf of their child.
 - There will be **no medical or physical examination** for procedures for issue of certificate of identity/change of gender.
- In **National Legal Services Authority (NALSA) v. Union of India**, 2014 case, the Supreme Court declared transgender people to be a **'third gender'**.
 - The Court interpreted 'dignity' under **Article 21 of the Constitution** to include diversity in self-expression, which allowed a person to lead a dignified life. It placed one's gender identity within the framework of the fundamental right to dignity under Article 21.
 - Further, it noted that the **right to equality (Article 14 of the Constitution) and freedom of expression (Article 19(1)(a))** was framed in gender-neutral terms ("all persons").
- In 2018, the SC also **decriminalised same-sex relationships** (Read down the **Provisions of Section 377** of the Indian Penal Code).

Features of Transgender Persons Act, 2019

- **Definition of a Transgender Person:** The Act defines a transgender person as one whose gender does not match the gender assigned at birth. It includes transmen and trans-women, persons with intersex variations, gender-queers, and persons with socio-cultural identities, such as kinnar and hijra.
- **Certificate of Identity:** The Act states that a transgender person shall have the right to self-perceived gender identity.

A certificate of identity can be obtained at the District Magistrate's office and a revised certificate is to be obtained if sex is changed.
- The Act has a provision that **provides transgender the right of residence with parents** and immediate family members.
- The Act **prohibits discrimination against a transgender person** in various sectors such as education, employment, and healthcare etc.
- Seeks to establish **National Council for Transgender persons**.
- **Punishment:** It states that the offences against transgender persons will attract imprisonment between six months and two years, in addition to a fine.

Source: IE

World Bank Support to India's Informal Working Class

Why in News

The **World Bank** has approved a **USD 500 million loan programme to support India's informal working class** to overcome the current pandemic distress.

The loan will create greater flexibility for states **to cope with the ongoing pandemic, future climate and disaster shocks.**

Key Points

- **World Bank's Financial Support:**
 - **About:**
 - Of the USD 500 million commitment, USD 112.50 million will be financed by its concessionary lending arm **International Development Association (IDA)** and the rest will be a loan from **International Bank for Reconstruction and Development (IBRD)**.
 - The loan has a **maturity period of 18.5 years** including a grace period of five years.
 - **Fundings Since Start of Pandemic:**
 - In 2020, **provided immediate emergency relief cash transfers to about 320 million individual bank accounts** identified through pre-existing national social protection schemes.
 - Also **an additional food rations** for about 80 crore individuals.

- **Significance:**

- States can now **access flexible funding** from disaster response funds to design and implement appropriate social protection responses.
- The funds will be utilised in **social protection programmes for urban informal workers, gig-workers, and migrants.**

A gig worker is indulged in the gig economy which is a free market system in which temporary positions are common and organizations contract with independent workers for short-term engagements.

- It is aimed at building the resilience of economies and livelihoods of communities.
- Investments at the municipal level will promote **National Digital Urban Mission** that will create a shared digital infrastructure for people living in urban areas and will scale up **urban safety nets and social insurance for informal workers.**
 - It will also include gender-disaggregated information on women workers and female-headed households.
 - This will allow policymakers to address gender-based service delivery gaps and effectively reach the unreached, particularly widows, adolescent girls, and tribal women.
- **Street vendors** are an integral part of India's urban informal economy. The programme will give street vendors **access to affordable working capital loans of up to Rs 10,000.**

Some five million urban street vendors could benefit from the new credit programme,

- **Informal Sector Worker:**

- The informal sector is the part of any economy that is **neither taxed nor monitored** by any form of government.

The workers who indulge in the informal sector are informal sector workers or informal workers.

- The informal sector provides **critical economic opportunities for the poor.**
- It is largely characterized by **skills gained outside of a formal education, easy entry, a lack of stable employer-employee relationships, and a small scale of operations.**
- Unlike the formal economy, the informal sector's components are not included in **GDP** computations.

- **Need to Protect Informal Workforce:**
 - India's estimated 450 million informal workers comprise **90% of its total workforce**, with 5-10 million workers added annually.
 - Further, according to **Oxfam's latest global report**, out of the total 122 million who lost their jobs in 2020, 75% were lost in the informal sector.
 - **Job loss and further increasing informalisation** due to **the Covid-19 pandemic** and subsequent **lockdown** has resulted in lack of **social protection** to poors.
 - Moreover, in the financial year 2020-21, the economy contracted by 7.7%. So, there is an **urgent need to revive the economy by generating employment** and the informal sector is more labour intensive.
- **Some Initiatives by the Government:**
 - Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM)
 - Labour Reform
 - Pradhan Mantri Rojgar Protsahan Yojana (PMRPY)
 - PM SVANidhi: Micro Credit Scheme for Street Vendors
 - Atmanirbhar Bharat Abhiyan
 - Deendayal Antyodaya Yojana National Urban Livelihoods Mission

World Bank Group

- The World Bank Group is a unique global partnership which consists of five development institutions.
- **International Bank for Reconstruction and Development (IBRD)** provides loans, credits, and grants.
- **International Development Association (IDA)** provides low- or no-interest loans to low-income countries.
- **The International Finance Corporation (IFC)** provides investment, advice, and asset management to companies and governments.
- **The Multilateral Guarantee Agency (MIGA)** insures lenders and investors against political risk such as war.
- **The International Centre for the Settlement of Investment Disputes (ICSID)** settles investment-disputes between investors and countries.
India is not a member of ICSID.
- As of now, IBRD has 189 member countries, while IDA has 173.

Way Forward

- **Strengthening MSME:** Nearly 40% of the informal workforce is employed with **Micro, Small and Medium Enterprises (MSMEs)**. Therefore, it is natural that the strengthening of MSME will lead to economic recovery, employment generation, and formalization of the economy.

- **Skilling Under CSR Expenditure:** The large corporate houses should also take the responsibility of **skilling people in the unorganized sectors** under Corporate Social Responsibility (CSR) Expenditure.
- **Recognizing Invisible Labour:** A national policy for **domestic workers** needs to be brought in at the earliest to recognize their rights and promote better working conditions.

Source: IE

Green Hydrogen

Why in News

According to the International Renewable Energy Agency (IRENA), hydrogen will make up **12% of the energy mix by 2050**.

- The agency also **suggested that about 66% of this hydrogen used must come from water instead of natural gas**.
- Recently, IRENA has released the '**World Energy Transitions Outlook**' Report.

Hydrogen

- **Hydrogen** is one of the most abundant elements on earth for a **cleaner alternative fuel option**.
- **Type of hydrogen** depend up on the process of its formation:
 - **Green hydrogen** is produced by **electrolysis of water using renewable energy (like Solar, Wind)** and has a **lower carbon footprint**.
 - Electricity splits water into hydrogen and oxygen.
 - **By Products** : Water, Water Vapor.
 - **Brown hydrogen** is produced **using coal** where the emissions are released to the air.
 - **Grey hydrogen** is produced from **natural gas** where the associated **emissions are released to the air**.
 - **Blue hydrogen** is produced from natural gas, where the **emissions are captured** using carbon capture and storage.

- **Uses:**

- Hydrogen is an energy carrier, not an energy source and can **deliver or store a tremendous amount of energy.**
- It can be used in **fuel cells** to generate electricity, or power and heat.
Today, hydrogen is most commonly used in petroleum refining and fertilizer production, while transportation and utilities are emerging markets.
- Hydrogen and fuel cells can provide energy for use in diverse applications, including distributed or combined-heat-and-power; backup power; systems for storing and enabling renewable energy; portable power etc.
- Due to their high efficiency and **zero-or near zero-emissions operation**, hydrogen and fuel cells have the potential to **reduce greenhouse gas emission** in many applications.

Key Points

- **Current Status Worldwide:**

- **Less than 1% of hydrogen produced is green hydrogen.**
- Manufacturing and **deployment of electrolyzers will have to increase** at an unprecedented rate by 2050 from the current capacity of 0.3 gigawatts to almost 5,000 gigawatts.

- **Indian Scenario:**

- **Consumption of Hydrogen: India consumes about six million tonnes** of hydrogen every year for the production of ammonia and methanol in industrial sectors, including fertilisers and refineries.
This could **increase to 28 million tonnes by 2050**, principally due to the rising demand from the industry, but also due to the expansion of transport and power sectors.
- **Cost of Green Hydrogen:** By 2030, the cost of green hydrogen is expected to compete with that of **hydrocarbon fuels** (coal, Crude Oil, natural gas).
The price will decrease further as production and sales increase. It is also projected that India's hydrogen demand will increase five-fold by 2050, with 80% of it being green.
- **Exporter of Green Hydrogen:** India will become a net exporter of green hydrogen by 2030 due to its cheap renewable energy tariffs.

- **Benefits of Using Green Hydrogen for India:**

- Green hydrogen can drive **India's transition to clean energy**, combat **climate change**.
Under the **Paris Climate Agreement**, India pledged to reduce the emission intensity of its economy by 33-35% from 2005 levels by 2030.
- It will **reduce import dependency on fossil fuels.**
- The localisation of electrolyser production and the development of green hydrogen projects **can create a new green technologies market in India worth \$18-20 billion and thousands of jobs.**

- **Potential:**
 - India has a **favourable geographic location** and **abundance of sunlight and wind** for the production of green hydrogen.
 - Green hydrogen technologies are **being promoted in sectors where direct electrification isn't feasible.**
 - Heavy duty, long-range transport, some industrial sectors and long-term storage in the power sector are some of these sectors.
 - The **Ministry of New and Renewable Energy (MNRE)** has circulated a draft cabinet note to **establish a hydrogen ecosystem** in the country.
 - The nascent stage of this industry allows for the **creation of regional hubs that export high-value green products** and engineering, procurement and construction services.
- **Challenges:**
 - **Economic Sustainability:** One of the biggest challenges faced by the industry for using hydrogen commercially is the economic sustainability of extracting green hydrogen.
 - For transportation fuel cells, hydrogen must be cost-competitive with conventional fuels and technologies on a per-mile basis.
 - **High Costs and Lack of Supporting Infrastructure:**
 - **Fuel cells** which convert hydrogen fuel to usable energy for cars, are still expensive.
 - The hydrogen station infrastructure needed to refuel hydrogen fuel cell cars is still widely underdeveloped.
- **Step Taken:**

The Union Budget for 2021-22 has announced a **National Hydrogen Energy Mission (NHM)** that will draw up a road map for using hydrogen as an energy source.

Way Forward

- **Set a national target for green hydrogen and electrolyser capacity:** A phased manufacturing programme should be used to build a vibrant hydrogen products export industry in India such as green steel (commercial hydrogen steel plant).
- **Implement complementary solutions that create virtuous cycles:** For example hydrogen infrastructure can be set up for refueling, heating and generating electricity at airports.
- **Decentralised Production:** Decentralised hydrogen production must be promoted through open access of renewable power to an electrolyser (which splits water to form H₂ and O₂ using electricity).
- **Providing Finance:** Policymakers must facilitate investments in early-stage piloting and the research and development needed to advance the technology for use in India.

Source: DTE

G20 Foreign Ministers Meeting

Why in News

Recently, **Italy** hosted the **G-20** foreign ministers' meeting to discuss the **fight against Covid-19** and how to **speed up the recovery of the global economy** and **boost sustainable development in Africa**.

- Currently, **Italy holds the presidency of G-20**. The **G-20 summit** is scheduled to be held in Italy in October, 2021.
- **India** is expected to hold the **presidency of the G-20 in 2023**.

G-20

- The G20 is an **informal group of 19 countries** and the **European Union**, with representatives of the International Monetary Fund and the World Bank.
- The G20 membership comprises **a mix of the world's largest advanced and emerging economies**, representing about **two-thirds of the world's population**, **85% of global gross domestic product**, **80% of global investment** and over **75% of global trade**.
- The **members of the G20** are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the European Union.
- It does **not have any permanent secretariat or headquarters**.

Key Points

- **About the Meeting:**
 - **On Covid-19:**
 - **Criticized China and Russia** for engaging in **vaccine diplomacy**.
Vaccine diplomacy is the **branch of global health diplomacy** in which a nation uses the development or delivery of vaccines to strengthen ties with other nations.
 - Promoting a science-based holistic **One Health approach**.
'One Health' is an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes.
 - **On Climate Change:**
Increased climate variability and extreme weather events **impact agriculture output** and are **among the forces driving the rise in global hunger**.
 - **On Africa:**
 - The **Covid-19 pandemic, conflict, drought, economic woes, and extreme weather** are reversing years of progress.
 - In the whole of Africa, **250 million people** were experiencing hunger, which is nearly **20% of the population (as of 2019)**.
- **India's Stand:**
 - Flagged the issue of **"vaccine equity"**.
 - This came in the wake of the **European Union's (EU) opposition** to India's and South Africa's proposal to increase large-scale manufacturing of vaccines by **waiving some parts of the intellectual property rules** under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement).
 - These rules prevent **international firms with the capacity** to produce approved vaccinations owing to issues with licencing.
 - **Economy** needs **decentralised globalisation**, including in manufacturing, food and health. **Resilient supply chains** must develop in parallel.
 - Today, the **world is much more interlinked and interdependent**. But it **should not be that globalisation should apply only to resources and markets while production centres remain concentrated in the hands of a few**.
 - **Many countries, including India, faced difficulties getting medical equipment during the pandemic** and faced disruption in a number of areas - such as a computer chip shortage and stalling automobile production.

- **Vaccine Equity:**

- **About:**

- It entails **both affordability of vaccines and access opportunities for populations** across the world, **irrespective of geography and geopolitics.**

- **Need:**

- **Inequitable vaccine distribution** is not only **leaving untold millions of people vulnerable to the virus** but also allowing deadly variants to emerge and bounce back across the world.
 - As variants continue to spread, even **countries with advanced vaccination programs** have been **forced to reimpose stricter public health measures**, and some have **implemented travel restrictions.**

- **Initiative to Ensure Vaccine Equity:**

- **COVAX:** It is a **global initiative** aimed at **equitable access to Covid-19 vaccines** led by **UNICEF**, Gavi (The Vaccine Alliance), the **World Health Organization**, the Coalition for Epidemic Preparedness and others.
 - **India** also began its **'Vaccine Maitri'** to supply Covid vaccine to different nations.

Source: IE

Kalbeliya Dance

Why in News

Recently, due to **Covid-19-Pandemic** an app called **chendavia** is gaining popularity among the students of kalbeliya dance.



Key Points

- **About:**

- Kalbeliya dances are an expression of the Kalbelia community's traditional way of life.

It is associated with a **Rajasthani tribe of the same name.**

- It was included in the **United Nations Educational, Scientific and Cultural Organizations (UNESCO)** list of **Intangible Cultural Heritage (ICH)** in **2010**.
 - **UNESCO's List of Intangible Cultural Heritage** is made up of those **intangible heritage elements** that help **demonstrate diversity of cultural heritage** and raise awareness about its importance.
 - It was **established in 2008** when the **Convention for Safeguarding** of the Intangible Cultural Heritage came into effect.
- The dance form consists of **swirling; graceful movements that make this dance a treat to behold.**

The movements associated with the Kalbelia also make it **one of the most sensuous forms of folk dance in India.**
- It is generally performed for any joyous celebration and is considered to be an **integral part of the Kalbeliya culture.**
- Another unique aspect of the Kalbelia dance is that **it is only performed by women while the men play the instruments and provide the music.**

- **Instruments & Dress:**

- Women in flowing **black skirts dance and swirl, replicating the movements of a serpent**, while men accompany them on the "**khanjari**" instrument and the "poongi", a woodwind instrument traditionally played to capture snakes.
- The **dancers wear traditional tattoo designs, jewellery and garments** richly embroidered with small mirrors and silver thread.

- **Kalbeliya Songs:**

- They **disseminate mythological knowledge through stories.**
- They also **demonstrate the poetic acumen of the Kalbeliya**, who are reputed to compose lyrics spontaneously and improvise songs during performances.
- Transmitted from generation to generation, the **songs and dances form part of an oral tradition** for which no texts or training manuals exist.

- **Kalbeliya Tribe:**

- Kalbeliya tribe people **were once professional snake handlers**, today they **evoke their former occupation in music and dance** that is evolving in new and creative ways.
- They **live a nomadic life and belong to the scheduled tribes.**
- The largest number of the population of Kalbeliyas is in **Pali district, then Ajmer, Chittorgarh and Udaipur district (Rajasthan).**

- **Other Traditional Folk Dances of Rajasthan:** Gair, Kachchhi Ghodi, Ghoomar, Bhavai, etc.

13 ICH traditions recognised by UNESCO

1. Tradition of Vedic chanting, 2008	8. Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir, India, 2012
2. Ramlila, the traditional performance of the Ramayana, 2008	9. Sankirtana, ritual singing, drumming and dancing of Manipur, 2013
3. Kutiyattam, Sanskrit theatre, 2008	10. Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab, India ,2014
4. Ramman, religious festival and ritual theatre of the Garhwal Himalayas, India, 2009	11. Yoga, 2016
5. Mudi yettu, ritual theatre and dance drama of Kerala, 2010	12. Nowruz, 2016
6. Kalbelia folk songs and dances of Rajasthan, 2010	13. Kumbh Mela, 2017
7. Chhau dance, 2010	

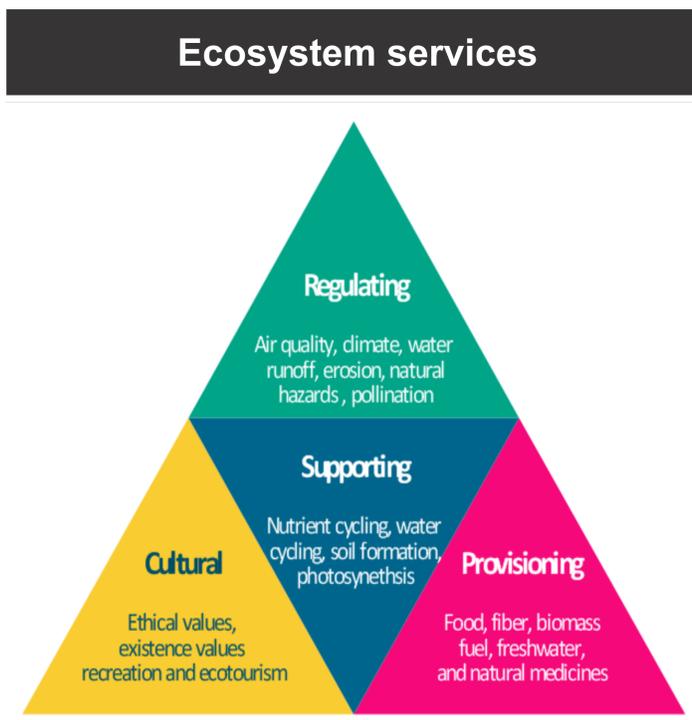
Source: TH

Guindy National Park: Tamil Nadu

Why in News

The **Guindy National Park** provides a number of **ecosystem services** to the people of **Chennai, Tamil Nadu**.

Ecosystem services are the **direct and indirect contributions of ecosystems to human well-being**.



Key Points

- **About:**
 - It is India's **eighth-smallest national park** and one of the very few national parks located inside a city. It is located in the heart of **Chennai's metropolitan area**.
 - It is one of the last remnants of the **tropical dry evergreen forests of the Coromandel Coast**.
 - About 22 acres of the Guindy National Park has been carved out into a park known as the **Children's Park for ex-situ conservation**.
 - **Guindy Snake Park is next to Guindy National Park**. It gained statutory recognition as a medium zoo from the **Central Zoo Authority (CZA) in 1995**.
 - In **1978** the small area, popularly known as **Guindy Deer Park**, was **declared as a national park**.
- **Flora and Fauna:**
 - It contains more than 30 species of trees and a number of century old gigantic **Banyan Trees**.
 - It has a **significant population of black bucks, spotted deers, jackals, varieties of snakes**, over 100 species of birds and over 60 species of butterflies.
- **Other National Parks in Tamil Nadu:**
 - Gulf of Mannar Marine National Park (21 Islands), Dhanushkodi.
 - Indira Gandhi National Park **previously Known as Anamalai Wildlife Sanctuary**, Tiruppur.
 - **Mukurthi National Park**, Ooty.
 - Mudumalai National Park, Madumalai.

Ex-situ and In-situ Conservation Methods

- **Ex situ conservation** is the conservation and **maintenance of samples of living organisms outside their natural habitat**.
Maintenance of **Gene Banks, Seed Banks etc.** comes under this method of conservation.
- **In situ conservation is conservation of species in their natural habitats**.
Maintenance of natural habitats in the form of **wildlife sanctuaries, national parks etc.** comes under this method of conservation.

Source: DTE
