

DAILY CURRENT AFFAIRS (DCA)

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CENSUS TO COUNT PARTICULARLY VULNERABLE TRIBAL GROUPS SEPARATELY: MOTA

Context

- The Ministry of Tribal Affairs (MoTA) has written to the Registrar General and Census Commissioner, urging that **particularly vulnerable tribal groups (PVTGs) be separately enumerated in the upcoming census.**
 - While data on Scheduled Tribes was collected during the 2011 Census, **data separately for PVTGs was not collected.**

Who are Particularly Vulnerable Tribal Groups (PVTGs)?

- In 1973, the **Dhebar Commission** set up a separate category for **Primitive Tribal Groups (PTGs).**
 - In 1975, the Union identified 52 tribal groups as PTGs.
 - In 1993, 23 more groups were added to the list. Later, in 2006, these groups were named PVTGs.
- PVTGs are a **more vulnerable group** among tribal groups in India.
 - These groups have primitive traits, geographical isolation, low literacy, zero to negative population growth rate, and backwardness.
 - Moreover, they are largely dependent upon hunting for food and a pre-agriculture level of technology.
- Out of more than 700 tribal communities, there are **75 tribal communities identified as PVTGs** residing in 18 States and the Union Territory of Andaman and Nicobar Islands.

- As per the Ministry of Tribal Affairs, the PVTG population is estimated to be **45.56 lakh.**
- Madhya Pradesh, Maharashtra, and Andhra Pradesh** are the top three in terms of PVTG population.

Challenges Faced by the PVTGs

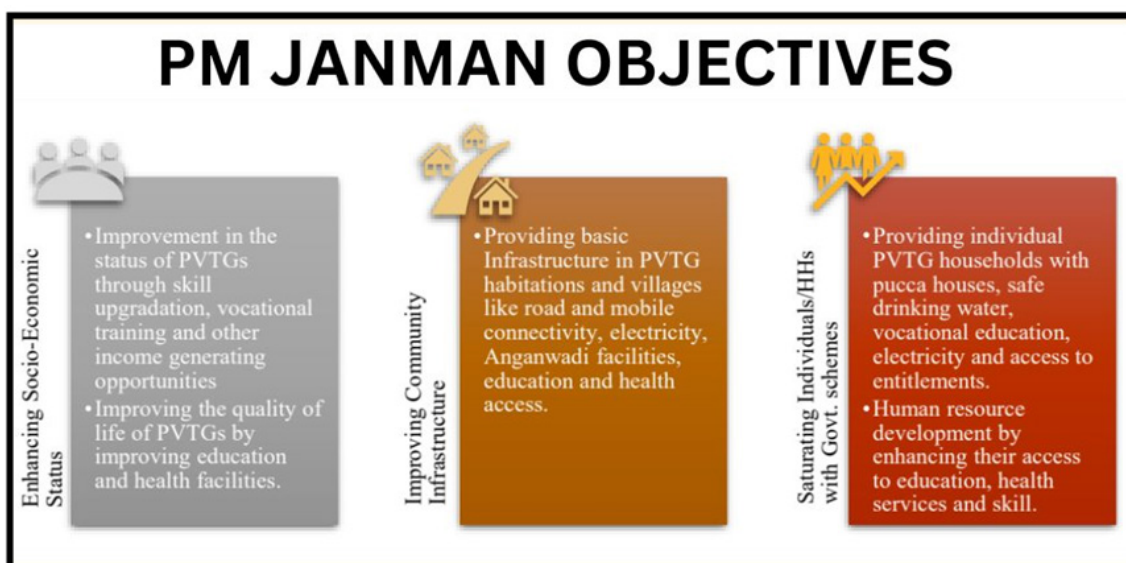
- Marginalisation:** Due to their isolation, small population size, and distinct socio-economic and cultural traits.
- Limited Access to Services:** Poor access to healthcare, education, and other basic facilities.
- Discrimination and Vulnerability:** Subject to social discrimination and displacement from development projects and natural disasters.
- Lack of Political Representation:** Minimal role in decision-making due to low political visibility.

Why the Census Matters?

- Better Resource Allocation:** Helps the government to channel resources effectively for infrastructure, healthcare, and education.
- Targeted Welfare Schemes:** It will enable the design and delivery of focused development programmes.
- Improved Planning:** Provides data for long-term development strategies and policy decisions.
- Support for Research and Governance:** Offers reliable information for the judiciary, policymakers, and scholars to study trends in migration, urbanisation, employment, and fertility.

Government Initiatives

- PM-JANMAN Scheme:** It was launched on the occasion of **Janjatiya Gaurav Divas** in 2023 in Jharkhand, targeting 75 PVTGs communities.



- **Particularly Vulnerable Tribal Groups (PVTGs) Development Program:** The PVTG program targets the most vulnerable tribal communities, focusing on improving access to healthcare, education, clean water, and electricity.
 - ♦ Around 7 lakh PVTG families across 22,000 habitations in 200 districts benefit from comprehensive development plans under this initiative.

Conclusion

- PVTGs are one of the most marginalized and socio-economically backward vulnerable sections of the population. Thus, it was imperative to have a “consolidated database” on their population and socio-economic indicators.
- The precise enumeration of PVTGs will help the implementation of targeted welfare schemes.

Source: TH

SCI-HUB BAN AND THE ONE NATION, ONE SUBSCRIPTION (ONOS) SCHEME

In News

- The Delhi High Court has ordered authorities to block access to so-called online shadow libraries Sci-Hub, Sci-Net and their mirror domains, in a **copyright infringement case**.

About

- **Sci-Hub (founded in 2011 by Alexandra Elbakyan (Kazakhstan))**, despite being illegal, has been a crucial resource for many researchers lacking affordable access to scientific papers due to expensive journal subscriptions.
- Against this backdrop, the **government's One Nation, One Subscription (ONOS) scheme** is being positioned as a legitimate alternative to piracy-driven access.

One Nation, One Subscription (ONOS) Scheme

- **Launch:** 2024 (Phase-I operational 2023–26).
- **Budget:** 6,000 crore.
- **Implementing agencies:**
 - ♦ INFLIBNET (UGC body) – manages digital access.
 - ♦ Anusandhan National Research Foundation (ANRF) – monitors usage and publications.
- **Coverage:**
 - ♦ **Phase I:** Public universities and research institutions.
 - ♦ **Phase II:** Private institutions and colleges.
- **Scope:** Access to 13,000 journals from 30 publishers (Oxford, Cambridge, Elsevier, Lancet etc.).

Objective:

- ♦ Ensure universal, legal access to research material.
- ♦ Reduce dependence on piracy.
- ♦ Lower financial burden on researchers who otherwise pay heavy Article Processing Charges (APCs).

Benefits of ONOS

- **Equitable Access:** Researchers across Tier-1 to Tier-3 institutions gain equal access.
- **Boost to Research Quality:** Ensures publications in high-impact journals.
- **Global Collaboration:** Removes barriers for Indian scholars to engage internationally.
- **Cost Efficiency:** Centralised subscription reduces duplication of expenditure by institutions.
- **Innovation Ecosystem:** Supports startups, industry R&D, and policy-making with high-quality knowledge access.

Challenges & Concerns

- **Negotiation with Publishers:** High bargaining power required to secure favorable terms.
- **Predatory Journals' Persistence:** ONOS cannot fully eliminate the lure of easy publication.
- **Awareness Gap:** Researchers in smaller colleges may need training to use these resources effectively.

Why This Debate Matters for India?

- **Equity in Research Access:** Only elite institutions afford high-cost journal subscriptions.
 - ♦ Smaller colleges depend on illegal access. ONOS aims to bridge this gap.
- **Financial Sustainability:** Indian researchers spent 380 crore (2021) on APCs for publishing in open-access journals.
 - ♦ Sci-Hub offered a free workaround but raised IPR concerns. ONOS offers a state-led solution.

Source: TH

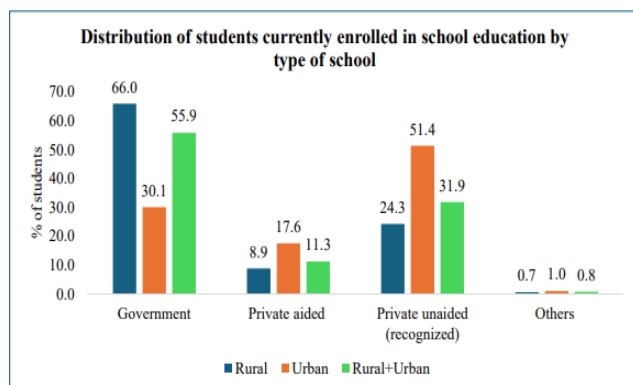
RESULTS OF COMPREHENSIVE MODULAR SURVEY: EDUCATION, 2025

Context

- The **Comprehensive Modular Survey (CMS: Education)** conducted under the 80th Round of the National Sample Survey (NSS), April–June 2025, has revealed that households spend nearly nine times more per child in private schools compared to government schools.

Key highlights of the survey

- **Dominant enrolment in Government schools:** Government schools accounting for **55.9%** of total enrolments.
 - ♦ It is higher in rural areas, where **two-thirds (66.0%)** of students are enrolled, in comparison to **urban areas (30.1%)**.



- **The average per student expenditure** made by households on school education during the current academic year in government schools was estimated at **₹2,863**, while it was significantly higher (**₹25,002**) in non-government schools.
 - ♦ **Only 26.7%** of students enrolled in government schools reported paying course fees, in contrast to **95.7%** of students in non-government schools.
- **Family funding: 95% of students** in India reported that the first major source of their funding was from other household members.
- **Prevalence of private coaching:** Nearly a third of all students (**27.0%**) were taking or had taken private coaching during the current academic year.
 - ♦ This trend was more common in **urban areas (30.7%)** than in **rural areas (25.5%)**.

Reasons for Such a Trend

- **Rural–Urban Divide:** Rural households are more dependent on government schools due to affordability, but urban families often choose private schools.
- **Perceived Quality Gap:** Parents usually prefer private schools due to perceived better teaching standards, infrastructure, and English-medium instruction.
- **Inefficient Learning Outcomes:** Challenges in teacher availability and accountability in government schools push parents towards private institutions.
- **Shadow Education Dependence:** Growing reliance on coaching reflects limitations in classroom learning effectiveness.

Government Initiatives

- **Samagra Siksha Abhiyan (SSA):** It is an overarching scheme for the school education sector extending from **pre-school to class XII**.
 - ♦ **The Scheme subsumes the three erstwhile** Centrally Sponsored Schemes of Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE).
- **PM SHRI Schools:** Development of **14,500 schools** as exemplary institutions with modern infrastructure and pedagogy.
- **Right to Education (RTE) Act, 2009:** Free and compulsory education for children aged 6–14, with 25% reservation in private schools for disadvantaged groups.
- **National Education Policy (NEP) 2020:** Focus on foundational literacy, teacher training, digital integration, and equitable access.
- **Digital Initiatives:** DIKSHA, SWAYAM, and PM e-Vidya to bridge resource gaps.

Way Ahead

- **Enhancing Government School Quality:** Invest in modern infrastructure, digital learning tools, and continuous teacher training to restore confidence in public education.
- **Learning Outcome Focus:** Shift policy emphasis from enrollment numbers to measurable improvements in literacy, numeracy, and higher-order skills.
- **Affordable Private Participation:** Encourage low-cost private schools and public–private partnerships with strict quality benchmarks to expand access.
- **Bridging Rural–Urban Divide:** Special schemes for rural and remote regions to provide digital connectivity, qualified teachers, and adequate infrastructure.
- **Parental & Community Engagement:** Strengthen School Management Committees and awareness campaigns to create ownership of government schools at the grassroots.
- **Data-Driven Governance:** Regular surveys should be integrated into policymaking to monitor progress and course-correct.

Source: PIB

INDIA REQUIRES \$50 BILLION NEW INVESTMENT IN STORAGE BY 2032: REPORT

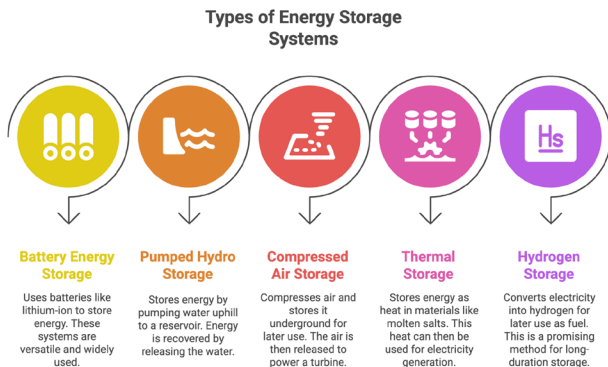
In Context

- India has crossed 50% installed power capacity from non-fossil sources five years early. The next challenge is rapidly scaling up Energy Storage

Systems (ESS) to meet rising demand, cut costs, and keep power affordable.

What are Energy Storage Systems (ESS)?

- Energy Storage Systems store energy when supply exceeds demand and release it when demand peaks. They provide flexibility, reliability, and stability to the power grid, especially when renewable sources like solar and wind are intermittent.



- States leading storage deployment:** Gujarat, Rajasthan, Maharashtra, Uttar Pradesh, Andhra Pradesh, and Telangana.

Why is ESS Crucial for India?

- Round-the-clock Renewable Energy (RE):** Solar and wind are variable; storage balances supply-demand.
- Peak Load Management:** Batteries can release power during evening peaks when solar declines.
- Grid Stability:** Reduces frequency fluctuations and blackout risks.
- Economic Gains:** According to a 2025 study by the India Energy & Climate Centre (UC Berkeley) and the Power Foundation of India, large-scale ESS could save consumers \$7 billion (60,000 crore) annually by 2032.
- Avoiding Stranded Assets:** With storage, coal plants can be used sparingly, reducing the risk of under-utilised capacity.
- Climate Commitments:** ESS is key to achieving India's 500 GW non-fossil capacity by 2030 and Net Zero by 2070.

Challenges in ESS Deployment

- High Upfront Costs:** Despite falling prices, large-scale projects need massive investment.
- Policy Gaps:** Lack of clear storage obligations for discoms.
- Revenue Models:** No clear rules for "revenue stacking" (multiple uses of batteries).
 - Revenue stacking means making money from one battery system in many different ways at the same time.

- Domestic Manufacturing:** Dependence on imported lithium and other critical minerals.
- Stranded Coal Assets:** 50–70 GW of thermal capacity may run below 30% PLF by 2032.

Policy Support & Government Initiatives

- Production-Linked Incentive (PLI) Scheme for Advanced Chemistry Cells (ACC).
- Viability Gap Funding (VGF):** To support early storage projects.
- National Green Hydrogen Mission (NGHM):** Hydrogen as long-duration storage.
- Battery Recycling Rules:** To ensure circular economy and reduce import dependence.
- Critical Minerals Policy:** Securing lithium, cobalt, nickel supply chains.
- Draft National Electricity Plan (NEP):** Identifies storage as key for renewable integration.

Conclusion

- India's energy future depends on swift expansion of energy storage, supported by robust policy, investment, and technology. This transition will enable sustainable, reliable, and affordable clean power—making the country a global leader in the renewable energy revolution.

Source: DTE

CENTRE FINALISES NATIONAL DESIGNATED AUTHORITY TO KICK-START CARBON MARKETS

Context

- The Ministry of Environment, Forest, and Climate Change has announced a '**National Designated Authority (NDA)**' to enable a carbon emissions trading regime.

About

- It is a mandatory requirement under the provisions of the **2015 Paris Agreement**.
 - Within the Paris Agreement, a section called **Article 6** defines the contours under which such an emissions trading regime, or a market, can take shape.
- Composition:** A **21-member committee** headed by the Secretary of the Environment Ministry.
 - Includes officials from the Ministry of External Affairs, the Ministry of Renewable Energy, NITI Aayog, and the Steel Ministry.
- Functions of NDA:** Recommending to the Union government the list of activities that can be considered for the trading of emission reduction units from projects.

- ♦ Modifying them from time to time, keeping in view national sustainable goals, country-specific criteria, and other national priorities;
- ♦ receive projects or activities for evaluation, approval, and authorisation;
- ♦ authorise the use of emission reduction units from projects for use towards the achievement of Nationally Determined Contributions (NDC).

Nationally Determined Contributions (NDC)

- The NDC refers to commitments by countries to reduce emissions in line with diverting their energy consumption towards renewable energy sources, as well as taking action to reduce carbon concentrations in the atmosphere.
- India's NDC commits to reducing its **GDP's emission intensity by 45% by 2030** from 2005 levels, achieving **50% cumulative electric power capacity** from non-fossil fuel sources by 2030, and creating an **additional carbon sink of 2.5-3 billion tonnes** of carbon dioxide equivalent by 2030 through afforestation.

Carbon Markets

- Carbon markets are **trading systems** in which **carbon credits are sold and bought**.
- Companies or individuals can use carbon markets to **compensate for their greenhouse gas emissions** by purchasing carbon credits from entities that remove or reduce greenhouse gas emissions.
- **One tradable carbon credit equals one tonne of carbon dioxide** or the equivalent amount of a different greenhouse gas reduced, sequestered, or avoided.
- When a credit is used to reduce, sequester, or avoid emissions, **it becomes an offset and is no longer tradable**.
- There are broadly **two types of carbon markets: compliance and voluntary**.
 - ♦ **Compliance markets** are created as a result of any national, regional, and/or international policy or regulatory requirement.
 - ♦ **Voluntary carbon markets** – national and international – refer to the issuance, buying, and selling of carbon credits voluntarily.

India's Position in the Global Carbon Pricing Landscape

- India is moving towards a **rate-based Emissions Trading System (ETS)** with the adoption of the **Carbon Credit Trading Scheme (CCTS)** in 2024.
 - ♦ Rate-based ETS refers to a system where total emissions are not capped, but **individual entities are allocated a performance**

benchmark that serves as a limit on their net emissions.

- The national ETS will initially cover **nine energy-intensive industrial sectors**.
- The scheme focuses on **emissions intensity, not absolute emissions caps**.
- Credit Certificates will be issued to facilities that outperform benchmark emissions intensity levels.

Country	ETS Type	Coverage Sectors	Operational Status
India	Rate-based	9 industrial sectors	Regulatory stage
China	Rate-based	Power, cement, steel, aluminum	Operational
Brazil	Cap-based	All sectors except agriculture	Law passed in Dec 2024
Indonesia	Rate-based	Sectors expanded in 2024 to include Grid-connected coal/gas power plants	Operational

The Carbon Credit Trading Scheme (CCTS)

- **It involves two key elements:** a compliance mechanism for obligated entities (primarily industrial sectors) and an offset mechanism for voluntary participation.
- The CCTS aims to incentivize and support entities in their efforts to decarbonize the Indian economy.
- CCTS laid the foundation for the Indian Carbon Market (ICM) by establishing the **institutional framework**.

Government Steps to Strengthen Carbon Market Readiness

- As highlighted during the COP 27, India balances its developmental needs with lower carbon emissions through **Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) principles**.
- **India's efforts include:**
 - ♦ Mission LiFE and the Green Credit Program to promote a sustainable lifestyle.
 - ♦ Creation of the National Steering Committee for the Indian Carbon Market (NSCICM) and the Bureau of Energy Efficiency (BEE) under the Ministry of Power.
 - ♦ Incentives for private sector participation.

Conclusion

- As global markets evolve and instruments like CBAM create external pressures, India is aligning its policies to maintain competitiveness while achieving climate goals.
- By focusing on emissions intensity rather than absolute caps, India's rate-based ETS offers a pragmatic and flexible path forward, particularly for an economy balancing development with decarbonization.

Source: TH

NEWS IN SHORT

COMMITTEES TO CELEBRATE 150TH BIRTH ANNIVERSARIES OF SARDAR PATEL AND BIRSA MUNDA

Context

- The Government of India has set up three separate high-level committees to oversee celebrations of the **150th Birth Anniversaries of Sardar Vallabhbhai Patel (1875–2025), Birsa Munda (1875–2025) and Birth Centenary of Atal Bihari Vajpayee (1924–2024).**
- The Committee is tasked to **approve plans, programmes, supervise, and guide the commemoration ceremony across the country.**

About Sardar Vallabhbhai Patel (1875–1950)

- Vallabhbhai Patel** was born on 31st October 1875 in Gujarat. His birth anniversary is now observed as **National Unity Day or Rashtriya Ekta Diwas.**
- He had accomplished the task of **integrating 565 Princely States** into the Union of India within a remarkably short span of time.
- Vallabhbhai Patel is also known as the **Iron Man of India.**
- Civil Services Day** is observed on **21st April every year** to commemorate the day in **1947 when Sardar Vallabhbhai Patel addressed the first batch** of civil servants at the Metcalfe House, New Delhi.
- He was bestowed with the title of **‘Sardar’** after the success of Bardoli Satyagrah.
- He was **conferred the Bharat Ratna in 1991** posthumously.

About Birsa Munda (1875–1900)

- Tribal Freedom Fighter & Social Reformer from the **Munda community (Chotanagpur plateau, Jharkhand).**
- He led the Tribal movements against British rule, like the **Ulgulan (Revolution) in 1899**, which were not only pivotal in challenging British oppression but also inspired a national awakening.
- 15 November is celebrated as Janjatiya Gaurav Diwas.**

About Atal Bihari Vajpayee (1924–2024)

- Atal Bihari Vajpayee** was a poet, writer, and statesman who served as Prime Minister for three terms.

- To commemorate the birth anniversary of Atal Bihari Vajpayee, 25th December is observed as **Good Governance Day.**
- During his tenure as Prime Minister, India carried out the **Pokhran-II nuclear tests in 1998.**
- In 2015, he was conferred the **country’s highest civilian honour- Bharat Ratna.**

Source: AIR

DNIPROPETROVSK REGION

In News

- Russian forces have captured villages in the **region of Dnipropetrovsk .**

Dnipropetrovsk Region

- It is situated in southeastern Ukraine and is a key industrial and logistical hub.
- It borders conflict-prone regions like Zaporizhzhia and Donetsk.
- It is not among the five Ukrainian territories Russia officially claims to have annexed (Donetsk, Luhansk, Kherson, Zaporizhzhia, Crimea).

Importance

- It is an important mining and **industrial hub for Ukraine** and deeper Russian advances into the region could have a serious knock-on effect for Kyiv’s struggling military and economy.

Source: TH

PROJECT AAROHAAN

Context

- National Highways Authority of India (NHAI)** has launched a **Project Aarohan** to support the **educational aspirations of toll plaza employees.**

Project Aarohan

- It aims to remove financial barriers and provide equal access to quality education for students from economically weaker sections.
- It will cover **five hundred students** from Class 11 to the final year of graduation.
- Each student will receive an **annual scholarship of 12 thousand rupees** during the **financial year 2025-26.**
- Additionally, **fifty bright students** aspiring for **postgraduate and higher studies** will be supported with scholarships of **50 thousand rupees each.**

Source: AIR

VIBRANT VILLAGES PROGRAMME (VVP)

In News

- Union Home Minister and Minister of Cooperation inaugurated a two-day workshop on the Vibrant Villages Programme (VVP) in New Delhi.

About Vibrant Villages Programme (VVP)

- It is a flagship initiative aimed at holistic development of remote and strategic villages located along India's land borders.
- The initial phase (VVP-I) covers 662 villages in the northern border districts of Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttarakhand, and Ladakh.
- The latest phase (VVP-II), launched in 2025 as a Central Sector Scheme, expands coverage to select villages along international borders in 17 States/UTs including Northeast, North, East, and West frontier areas.
- It will encourage tourism, skill development, entrepreneurship, agriculture, and cultivation of medicinal plants, while preserving local heritage and organizing community events.

Source: PIB

SCIENTIFIC STEERING COMMITTEE FOR THE NATIONAL ONE HEALTH MISSION

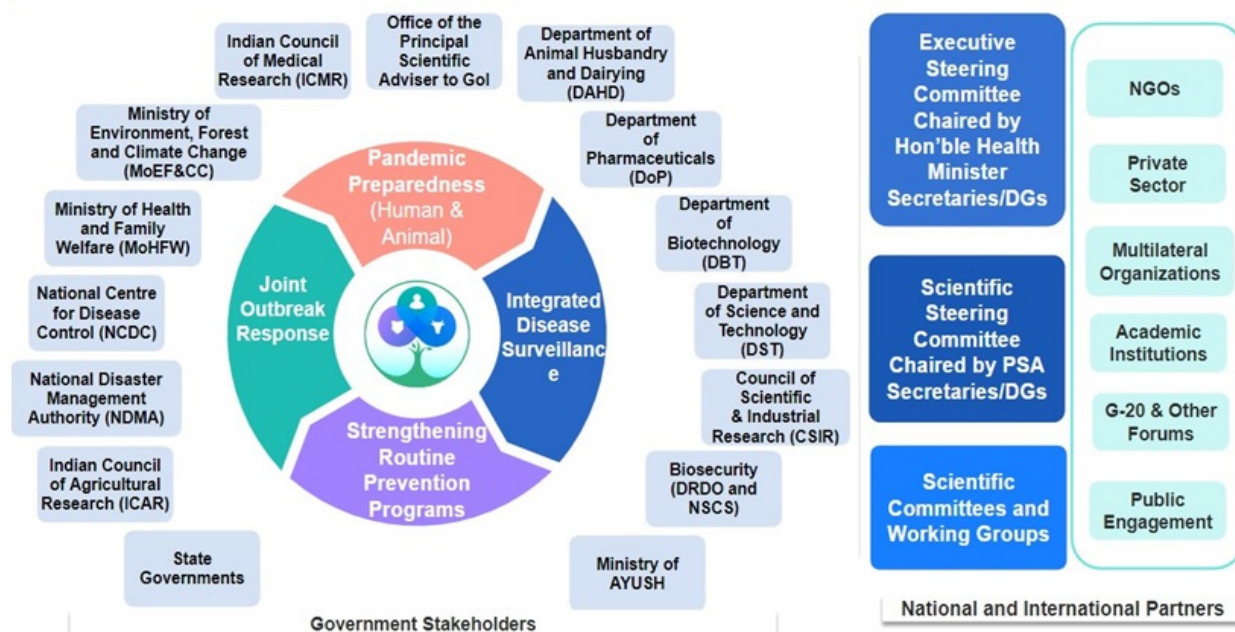
Context

- The third meeting of the **Scientific Steering Committee on One Health Mission** was held.
 - The mission adopts the **"One Health" approach** – recognising the interconnectedness of human, animal, and environmental health.

About the National One Health Mission (NOHM)

- Launched by:** The Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC) approved setting up a National One Health Mission with a **cross-ministerial effort in 2022**.
- Objective:** To develop an integrated framework for surveillance, prevention, and control of zoonotic diseases, antimicrobial resistance (AMR), and emerging health threats.
- Approach:** Cross-sectoral collaboration among ministries (Health, Animal Husbandry, Agriculture, Environment, etc.), research bodies, and state governments.
- Focus areas:**
 - Zoonotic diseases (e.g., Nipah, Avian Influenza, COVID-19 origins).
 - Food safety and antimicrobial resistance.
 - Climate change and its impact on disease spread.
 - Capacity building for laboratories and data integration platforms.

Stakeholders of the One Health Mission



Source: PIB

KUTTIYADI COCONUT

Context

- **Kuttiyadi coconut** from Kerala is seeking a **Geographical Indication (GI) tag**.

About the Kuttiyadi Coconut

- The Kuttiyadi coconut, cultivated mainly in the **Kuttiyadi region of Kozhikode**, is known to be a **high-yielding variety** that starts yielding within **five years of planting**.
- The trunk of this tree is too strong compared to other coconut varieties and **resists most pests and draught**.
- The tree even has a life expectancy of **more than 100 years**. The fruit is larger and heavier while the kernel is thicker than other varieties and hence produces more oil too.

What is a Geographical Indication (GI) Tag?

- A GI tag is a sign used on products that have a specific geographical origin and possess qualities, reputation, or characteristics attributable to that origin.
- **GI Registration:**
 - ♦ Governed by the **Geographical Indications of Goods (Registration and Protection) Act, 1999**.
 - ♦ Applicable to agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial goods.
 - ♦ Validity: **10 years**, renewable in blocks of 10 years.
- **Benefits of a GI Tag:**
 - ♦ Provides **legal protection** to the product in India and prevents **unauthorised use** of the registered GI by others.
 - ♦ Promotes **economic prosperity** for producers in the geographical region.
 - ♦ Helps **boost exports** of GI-tagged products.

Source: TH

SUDARSHAN CHAKRA MISSION

In News

- Prime Minister Narendra Modi announced the launch of "**Mission Sudarshan Chakra**".

Sudarshan Chakra mission

- It is a new national security initiative which is aimed at **protecting India's critical establishments** over the next decade.

- It will be based entirely on indigenous research and technology, aligning with the vision of **Aatmanirbhar Bharat**.
- It is inspired by Lord Krishna's mythological act of shielding the sun.
- It will implement a **multi-layered security framework, including advanced surveillance, cyber protection, and physical safeguards**.

Significance

- The initiative responds to rising global threats like cyber warfare and hybrid attacks, signaling a shift towards proactive, self-reliant security planning for India's future.
- It is aimed at neutralising enemy defence infiltrations and enhancing India's offensive capabilities.

Source :PIB

EARLY DETECTION OF PARKINSON'S DISEASE WITH TINY GOLD PARTICLES

Context

- Researchers at the Institute of Nano Science and Technology (INST), Mohali, have developed a nanotechnology-based biosensor that could **detect Parkinson's Disease (PD)** even before any symptoms appear.

What is Parkinson's Disease?

- Parkinson's Disease (PD) is a **progressive neurodegenerative disorder** affecting movement and motor control.
- It occurs due to the **loss of dopamine-producing neurons** in the brain.
- The disease is linked to the abnormal **misfolding and aggregation of a protein called α -synuclein**, which forms toxic clumps in the brain, leading to **neuronal damage**.
- **Symptoms include** tremors, rigidity, slowness of movement, and postural instability.

How Does It Work?

- Scientists developed **gold nanoclusters (AuNCs)**, which are ultrasmall glowing particles only a few nanometres wide.
 - ♦ These nanoclusters were coated with naturally occurring amino acids to give them selective binding ability.
- **Proline-coated clusters** attach to the normal (monomeric) α -synuclein protein, which is harmless.
- **Histidine-coated clusters** attach to the toxic aggregated (amyloid) form of α -synuclein, which causes Parkinson's disease.

- This selective interaction allows the **sensor to differentiate between healthy and harmful protein states**, enabling early detection of Parkinson's before symptoms appear.

Source: PIB

OPERATION RAINBOW

Context

- The Directorate of Revenue Intelligence (DRI) has recently seized nearly 9 kilograms of narcotic substances in Delhi, under Operation Rainbow.

The Directorate of Revenue Intelligence (DRI)

- The DRI was **founded in December 1957**, with the primary objective of gathering intelligence and combating smuggling activities at an all-India level.
 - ♦ While initially focused on addressing gold smuggling, its mandate has expanded significantly to counter a wide range of economic and narcotics-related crimes.
- **It operates** under the **Central Board of Indirect Taxes and Customs (CBIC)** within the **Ministry of Finance**.
- **Headquarters:** The DRI is headquartered in New Delhi and led by a Director General.
- **International liaison:** The agency maintains contact with foreign countries, and international bodies like INTERPOL to combat transnational smuggling.

Narcotic Drugs and Psychotropic Substances Act, 1985

- It prohibits the production, sale, possession, transport, and consumption of narcotic drugs and psychotropic substances, except for medical or scientific purposes.
- **Scope:**
 - ♦ Regulates operations from cultivation to distribution.
 - ♦ Provisions for forfeiture of property derived from drug trafficking.
- **Narcotics Control Bureau (NCB):** The act led to the establishment of the NCB in **1986** to coordinate enforcement activities across central and state agencies.

Source: PIB

AROGYAPACHA

In News

- Kuttimathan Kani, a member of Kani tribe in Kerala's Agasthya hills, who first revealed the

medicinal plant Arogyapacha to researchers has passed away.

About Arogyapacha

- Arogyapacha (*Trichopus zeylanicus*), often called "Kerala Ginseng," is a rare medicinal herb native to the Western Ghats of India, especially in the Agasthya hills of Kerala.
- Kani tribes historically consumed its fruits for instant energy, especially during strenuous activities, asserting it kept people youthful and resistant to illness.
- Studies highlight pharmacological benefits such as antioxidant, anti-fatigue, aphrodisiac, anti-diabetic, anti-ulcer, antimicrobial, anti-inflammatory, immunomodulatory, cardioprotective, and hepatoprotective activities.

Source: DTE

NEW WORLD SCREWORM

Context

- The Department of Health and Human Services reported the first human case of the flesh-eating parasite, the New World screwworm, in the United States.

What is a New World screwworm?

- **Screwworms (*Cochliomyia hominivorax*)** are a type of **blue-grey blowfly**, typically found in **South America and the Caribbean**.
- Screwworms, specifically females, are attracted to and **lay eggs on open wounds** or another entry point like a nasal cavity in **warm-blooded animals** and rarely humans.
 - ♦ **These eggs hatch into larvae** (known as maggots), which burrow into the wound to feed on the living flesh, leading to infestation.
 - ♦ After feeding, the larvae fall into the ground, burrow into the soil and emerge as adult screwworm flies.
- **Causes myiasis:** When its larvae (maggots) **infest living tissue**, it's known as myiasis.
- New World screwworm infestations are painful, especially in humans, with a **high mortality rate if left untreated**.



Source: IE