



# THE CORE IAS

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# APRIL - MAY

# 2026



# CURRENT AFFAIRS COMPILATION — APRIL TO MAY

Prepared for THECOREIAS | UPSC Revision Ready

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### 1.1 Monitoring of Marine Living Resources

The Centre for Marine Living Resources and Ecology (CMLRE), an attached office of the Ministry of Earth Sciences, is mandated with the assessment and monitoring of marine living resources in India's Exclusive Economic Zone (EEZ) and developing management strategies for their conservation. Key programmes include:

- **Marine Living Resources (MLR) Programme** — for survey, assessment, and monitoring of marine living resources in the Indian EEZ.
- **Deep Ocean Mission (DOM)** — CMLRE is the nodal agency for exploration and conservation of deep-sea biodiversity, particularly in hotspots such as seamounts.
- **ICAR-CMFRI (Kochi)** — conducts comprehensive programmes for marine resource assessment resting on two pillars: Landings-Based Production Monitoring and Life-History-Traits-Based Stock Assessment.

A total of **22 research cruises** were conducted during the last three years — 17 in the Bay of Bengal and Arabian Sea, 1 in the Indian Ocean, and 2 each in the Lakshadweep and Andaman Seas.

CMLRE employs advanced biodiversity assessment techniques including **environmental DNA (eDNA) metabarcoding** and genomic analyses alongside conventional sampling methods. The Ministry has strengthened scientific research through:

- Use of the FORV Sagar Sampada for multidisciplinary marine research.
- Strengthening ocean observation systems through glider missions, drifters, and Argo floats.
- Augmentation of marine biodiversity databases through IndOBIS.

**Bhavasagara** is a designated national-level Marine Biodiversity Referral Centre at CMLRE, Kochi. It houses **3,560 voucher specimens**, of which more than 70% represent deep-water and open-ocean species.

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### 1.2 Early Warning System

The India Meteorological Department (IMD), under the Ministry of Earth Sciences, has developed a **Multi-Hazard Early Warning System (MHEWS)** for generation and dissemination of accurate, impact-based weather forecasting and risk-based warnings during severe weather events such as cyclones, heavy rainfall, heat waves, and cold waves.

Key features include:

- **Impact-Based Forecast (IBF) and Risk-Based Warning (RBW)** at the district level using colour codes — operational since 2020.
- A **multi-hazard early warning Decision Support System (DSS)** developed indigenously and operational since 2023.
- IMD operates a **3-tier system** at National, Regional, and State levels.

The **National Centre for Seismology (NCS)** monitors earthquakes and provides precise information on location, date, and magnitude. An intensity map is generated and made available to disaster management authorities via the NCS-MoES website, app, SMS, and social media. Note: no globally proven system exists for precise earthquake prediction in terms of time, location, and magnitude.

The **Central Water Commission (CWC)** issues short-range flood forecasts with a lead time of up to 24 hours and provides a seven-day advisory flood forecast through pan-India rainfall-based mathematical modelling.

Key dissemination channels include the MAUSAM, MEGHDOOT, DAMINI, and UMANG mobile applications; the Common Alerting Protocol (CAP); community radio; the Mausamgram portal; and Gram Panchayat-level weather forecasting through e-Gramswaraj, Meri Panchayat App, and e-Manchitra.

### 1.3 Two Key Institutions as Repositories under Biological Diversity Act, 2002

The National Biodiversity Authority (NBA) has enabled the notification of two institutions as designated repositories under **Section 39 of the Biological Diversity Act, 2002**:

- **Referral Centre Bhavasagara at CMLRE, Kochi** — a unique national facility for deep-sea biodiversity, maintaining over 3,500 taxonomically identified and geo-referenced voucher specimens of marine organisms including invertebrates and deep-sea fishes.
- **MACS Collection of Microorganisms and National Fungal Culture Collection at Agharkar Research Institute, Pune** — a well-established facility with specialised capabilities for handling rare and difficult-to-grow microorganisms including anaerobic and extremophilic species.

These repositories will support safe custody of biological materials, documentation of newly discovered species, and biological resources used for research and commercial purposes.

### 1.4 India's Green Pathway

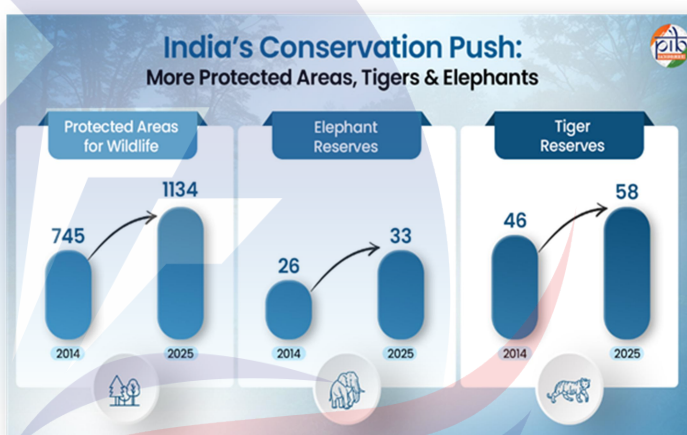
#### Biodiversity Conservation and Ecosystem Restoration

India is one of the world's **17 mega-biodiverse countries**, occupying 2.4% of global land area but accounting for approximately 8% of all recorded species worldwide. It is home to over 96,000 animal species and 47,000 plant species.

India's biodiversity governance is anchored in the **Biological Diversity Act, 2002** and the National Biodiversity Action Plan. At COP16 of the CBD in Cali, Colombia, India launched its updated **National Biodiversity Strategy and Action Plan (NBSAP) 2024–2030**, aligned with the Kunming-Montreal Global Biodiversity Framework.

#### Wildlife Conservation — Key Programmes

- **Protected Areas:** Expanded from 745 in 2014 to **1,134 in 2025**.
- **Project Tiger:** Tiger Reserves increased from 46 to **58** (covering ~85,000 sq km). The newest addition is **Madhav Tiger Reserve, Madhya Pradesh**. India recorded **3,167 tigers in 2022**. There are 32 identified tiger corridors.
- **Project Elephant:** Elephant Reserves increased from 26 to **33**, adding 8,610 sq km. There are 150 elephant corridors across 15 states.
- **Project Cheetah:** Entered expansion phase in 2025. Cheetahs introduced at **Gandhisagar Wildlife Sanctuary**. Total cheetah population reached **30**, including 19 cubs born in India.
- **Project Snow Leopard:** First nationwide assessment (2019–2023) estimated **718 snow leopards** — Ladakh: 477, Uttarakhand: 124. SPAI 2.0 launched in Wildlife Week 2025.
- **Project Dolphin:** Nationwide survey (2021–23) estimated **6,327 riverine dolphins**. Second range-wide estimation launched from Bijnor in January 2026.
- **International Big Cat Alliance (IBCA):** Led by India, launched April 2023 to conserve 7 big cat species globally. Framework Agreement entered into force on 23 January 2025; membership expanded to 18 countries.



## Ecosystem Restoration

India has **18 notified Biosphere Reserves** covering 91,425 sq km, of which 13 are recognised under UNESCO's World Network of Biosphere Reserves. The **Cold Desert Biosphere Reserve, Himachal Pradesh** was added in September 2025.

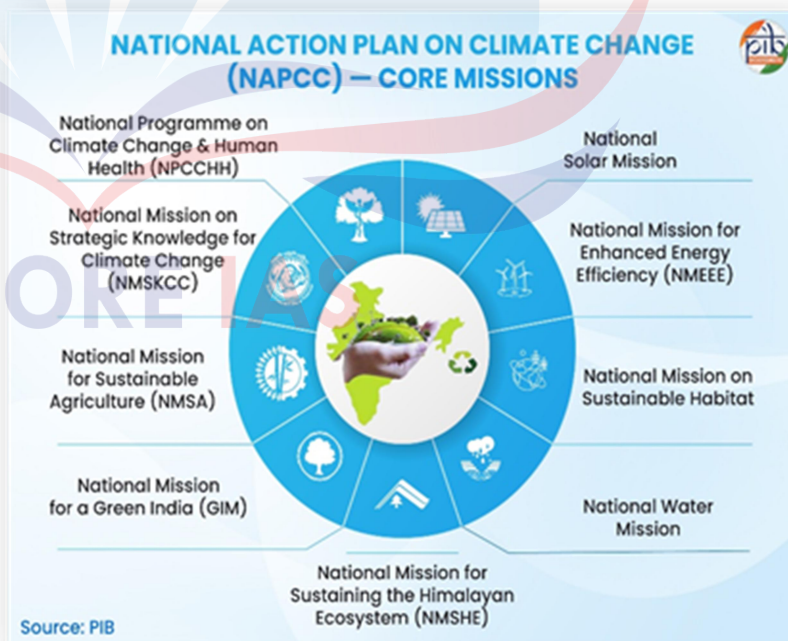
Key initiatives:

- **Ek Ped Maa Ke Naam (Plant4Mother Campaign):** A total of **262.4 crore saplings** planted by 31 December 2025.
- **MISHTI (Mangrove Initiative for Shoreline Habitats and Tangible Incomes):** In 2025, restored **4,536 hectares** of mangroves; identified 22,560 hectares of degraded areas for future restoration.
- **Ramsar Sites:** 11 new sites declared in 2025, taking the total to **98 sites** as of 31 January 2026 — highest in Asia and third globally. Recent additions include Patna Bird Sanctuary (UP) and Chhari-Dhand (Gujarat). **Udaipur and Indore** became India's first Ramsar-accredited Wetland Cities.
- **National Coastal Mission:** Extended for 2025–31 with ₹767 crore allocation.
- **Blue Flag Certification:** Achieved for **18 beaches** across 7 coastal states and 4 Union Territories.



## Climate and Strategic Policy Frameworks

- **NAPCC** and its nine national missions provide the overarching framework for India's climate strategy.
- **Updated NDC (2022):** India committed to reducing emissions intensity of GDP by **45% from 2005 levels by 2030** and achieving **50% non-fossil electricity capacity by 2030**. By June 2025, India reduced emissions intensity by ~36% and crossed 50% non-fossil capacity ahead of schedule.
- **Long-Term Low Emissions Development Strategy (LT-LEDS):** Submitted to UNFCCC in 2022; outlines pathways to net-zero by 2070.

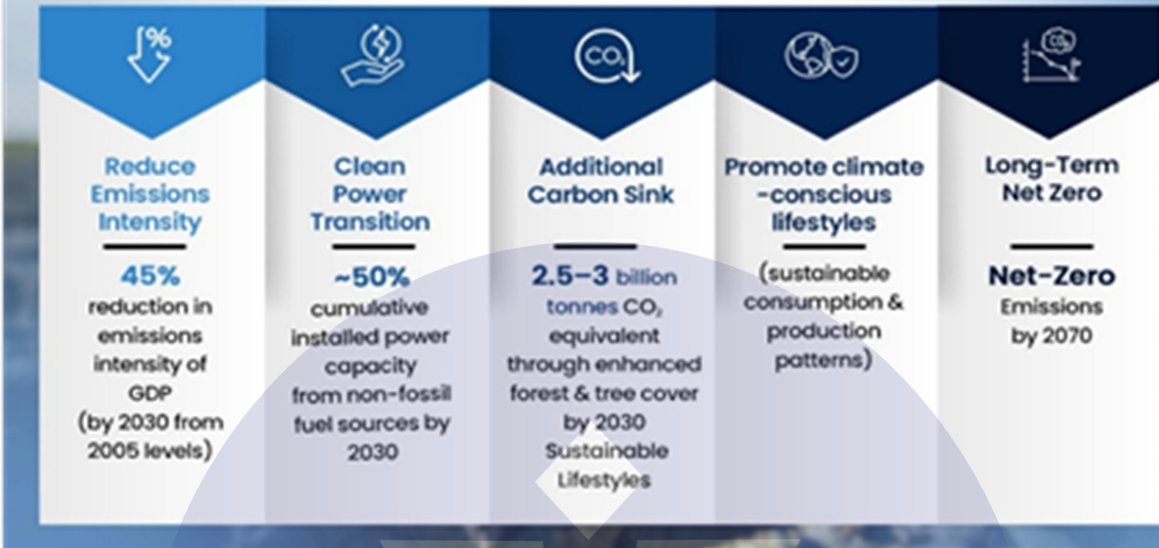


# India's Nationally Determined Contribution (NDC)



Under the Paris Agreement

## 5 Key Climate Target



- **National Green Hydrogen Mission (2023):** Targets 5 million metric tonnes of annual green hydrogen production by 2030.
- **Mission LiFE (Lifestyle for Environment):** More than 6 crore people participated in over 34 lakh events; 4.96 crore pledges taken as of December 2025.

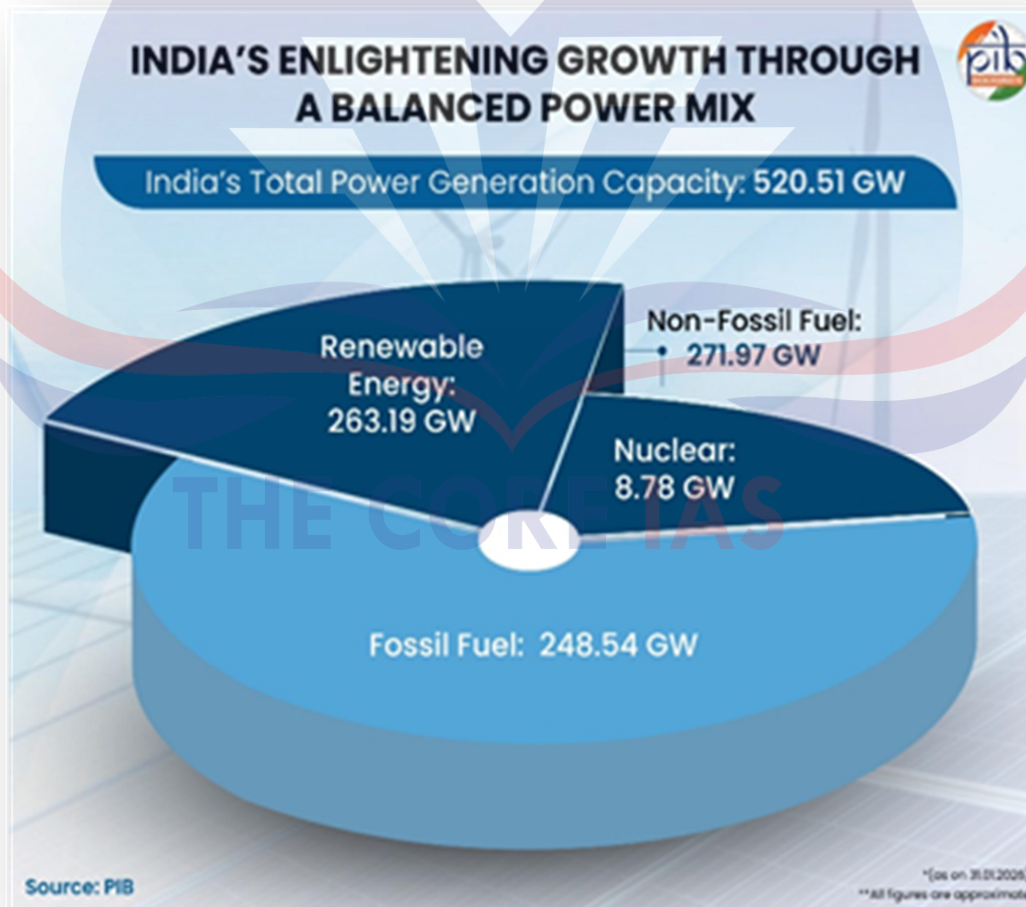
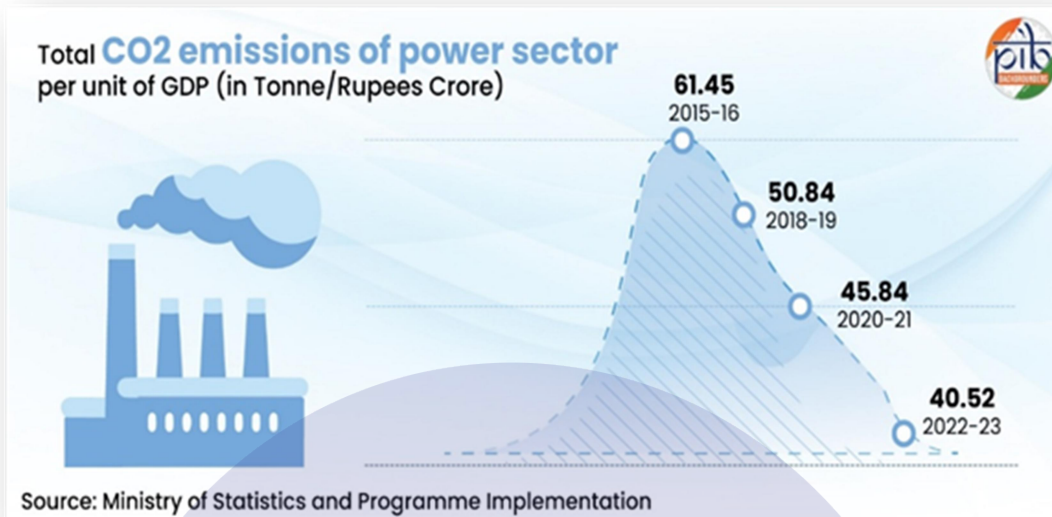
### Clean Energy Expansion

## INDIA'S RECORD POWER CAPACITY



**Over 11% Increase  
in Total Installed Capacity Within FY 2025-26**

India achieved **over 50% cumulative installed electricity capacity** from non-fossil fuel sources in 2025 — five years ahead of the 2030 target. As of 31 January 2026, total installed power capacity: **520,510.95 MW** — 248,541.62 MW fossil; 271,969.33 MW non-fossil (including 8,780 MW nuclear and 263,189.33 MW renewable). As per IRENA 2025, India ranks **3rd globally in solar power, 4th in wind, and 4th in total renewable energy capacity**.

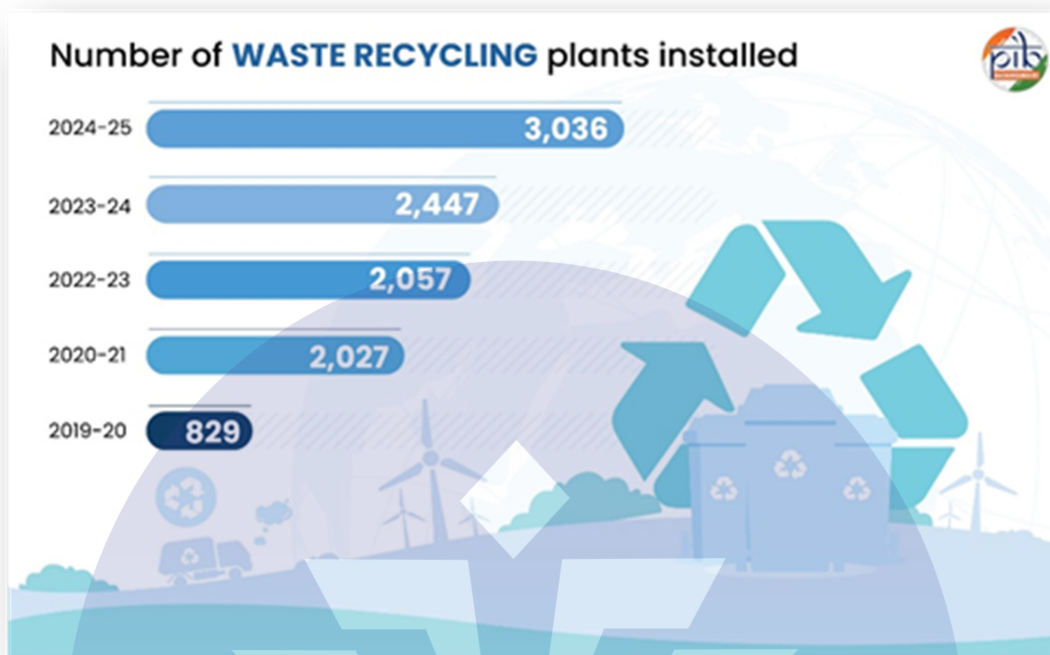


## Carbon Markets and Industrial Decarbonisation

The **Carbon Credit Trading Scheme** has been operationalised; 490 obligated entities now covered. The Union Budget 2026–27 allocated **₹20,000 crore over five years** for Carbon Capture, Utilisation and Storage (CCUS).

### Pollution Control

- **NCAP:** 103 out of 130 cities showed improvement in PM10 concentrations in 2024–25 vs 2017–18 baseline; 64 cities recorded 20% reduction; 25 cities achieved 40% reduction.
- **Fly Ash:** India generated over **340 million tonnes** in 2024–25, of which **332.63 million tonnes** was gainfully used — 32% in roads/flyovers, 27% in cement, 14% in bricks and tiles.



- **Waste Recycling Plants:** Increased from 829 (2019–20) to **3,036 (2024–25)**.
- **EPR:** As of December 2025, 71,401 producers and 4,447 recyclers registered; 375.11 lakh tonnes of waste facilitated for recycling.

**SDG Progress:** India's composite SDG Index score improved to **71 in 2023–24**, up from 57 in 2018. Renewable energy share reached **51.55%** of total installed electricity capacity as of November 2025.

At UNFCCC COP30 (Belém, Brazil, November 2025), India highlighted climate leadership and emphasised enhanced climate finance and technology transfer for developing countries. India joined Brazil's Tropical Forests Forever Facility (TFFF) as an Observer.

Under the Montreal Protocol, India achieved a **67.5% reduction** in production and consumption of hydrochlorofluorocarbons (HCFCs) by 2025.

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### 1.5 Renewable Energy Installed Capacity

- India ranks **third globally** in Renewable Energy Installed Capacity as per Renewable Energy Statistics 2026.
- Renewables met **51.5%** of the country's total electricity demand of 203 GW.
- A total of **283.46 GW** of capacity from non-fossil fuel sources installed as on 31 March 2026.

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### 1.6 National Mission for Sustainable Agriculture (NMSA)

**Key Takeaways:** Since 2014-15, ₹2,119.84 crore released under Rainfed Area Development covering 8.50 lakh hectares, benefiting 14.35 lakh farmers. About 109 lakh hectares covered under PDMC with ₹26,325 crore released. 97.53 lakh soil samples collected and 92.87 lakh tested in 2025-26; 25.79 crore Soil Health Cards generated since 2015. Between 2014–2025, 2,996 climate-resilient crop varieties released.

Rainfed agriculture constitutes nearly 60% of the net sown area and contributes approximately 40% of total food production. NMSA was launched in 2014-15 under the NAPCC framework and later subsumed under **Pradhan Mantri Rashtriya Krishi Vikas Yojana (PMRKVY)** from 2022-23.

**Key Interventions under NMSA**

- **Rainfed Area Development (RAD):** Promotes Integrated Farming System (IFS) models by ICAR across agro-climatic zones. In FY 2025–26, ₹343.86 crore allocated; 96,013 farmers received training.

**Soil Health Card (SHCs)**

**25.79 Crore**  
**Soil Health Card (SHCs)**  
Distributed to farmers,  
promoting better  
soil management and  
fertilizer use.

Source: Ministry of Agriculture & Farmers Welfare

**Strengthening Integrated Farming Systems through Rainfed Area Development (RAD)**

- Central Assistance and Coverage**
  - ₹2,119.84 crore allocated as central assistance since inception.
  - Covers **8.50 lakh hectares** and benefits **14.35 lakh farmers**.
- Financial Support for Capacity Building Support**
  - ₹10,000 per cluster for training and adoption of Integrated Farming Systems (IFS).
- Demonstrations and Farmer Training (2024–25)**
  - **4,416** demonstrations conducted.
  - **96,015** farmers trained through Krishi Vigyan Kendras (KVKs).


Source: Ministry of Agriculture & Farmers Welfare

- **Per Drop More Crop (PDMC):** Promotes micro-irrigation (drip and sprinkler). Since 2015-16, **109 lakh hectares** covered with ₹26,325 crore released. Target: 100 lakh hectares under micro-irrigation from 2025-26 to 2029-30.

## Micro Irrigation Systems under PDMC

### Drip Irrigation System

Water delivered directly to the root zone



**How it works**


- Water flows through pipes and emitters
- Applied drop by drop near plant roots

### Sprinkler Irrigation System

Water applied like rainfall over crops

**How it works**

- Pressurised water sprayed through nozzles
- Covers crop canopy uniformly



### Key Benefits of Micro-Irrigation System

- Enhanced Water Use Efficiency
- Coverage of Water-Intensive Crops
- Efficient Fertigation Practices
- Support for Water-Scarce and Stressed Areas
- Energy Efficiency in Irrigation
- Reuse of Wastewater

Source: Ministry of Agriculture & Farmers Welfare

- **Soil Health Management (SHM) and Soil Health Card (SHC) Scheme (2015):** In FY 2025–26, 97.53 lakh soil samples collected, 92.87 lakh tested. Cumulatively, **25.79 crore Soil Health Cards** generated. A 2025 NITI Aayog evaluation confirmed 68.5% of surveyed farmers reported significant improvement in soil health.
- **Soil Fertility Maps:** SLUSI has undertaken soil fertility mapping in **6,954 identified model villages**; completed in **2,023 model villages** so far.
- **NICRA (National Innovations on Climate Resilient Agriculture, 2011):** Vulnerability assessments in 651 agricultural districts; 310 identified as highly or very highly vulnerable. Climate Resilient Villages established in 448 villages across 151 vulnerable districts in 28 States/UTs.
- **ICAR Research: 2,996 climate-resilient crop varieties** released under NARS during 2014–2025.

NMSA aligns with SDG 2 (Zero Hunger), SDG 6 (Clean Water), and SDG 13 (Climate Action).

### 1.7 Superfood Sweetener — Jaggery

India accounts for over **70% of global jaggery production** — the world's largest producer.

Nearly 20–30% of sugarcane output is diverted towards jaggery, supporting approximately **2.5 million rural livelihoods**.

#### Key Data Points

- Jaggery exports increased by **106.5% in value** between 2015–16 and 2024–25 (from USD 197 million to USD 406.8 million; volume up 61.2%).


## JAGGERY

### THE MEDICINAL SUGAR

Commonly known as **Gur** in India

India accounts for more than **70%** of Global Jaggery Production

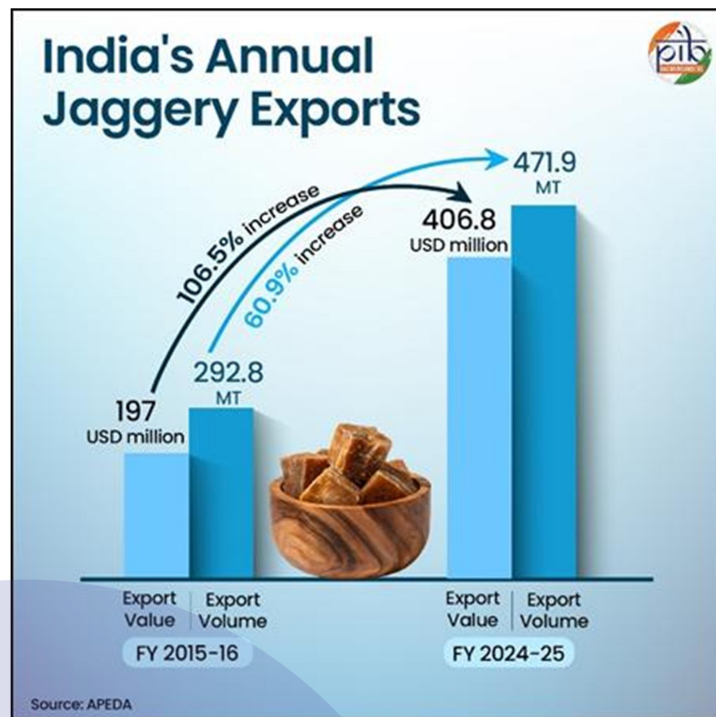
Popularly known as '**Medicinal Sugar**' due to its high nutritional value



Source: Ministry of Commerce and Industry

- In 2024-25, total sugarcane output estimated at **444.9 million tonnes (MT)** — Uttar Pradesh: 48.5%, Maharashtra: 24.1%, Karnataka: 10.5%.
- Domestic CAGR for jaggery and honey in the sweetener segment: **15–20%** during 2021–24.
- April–January (2025-26) exports: 450.1 MT valued at USD 384.4 million — up 16.5% in volume and 15.9% in value over the same period in 2024-25.

**Nutritional Profile:** Jaggery retains minerals like calcium, magnesium, potassium, phosphorus, iron, zinc, copper, and manganese. Iron content (~10–13 mg per 100g) supports haemoglobin levels. Contains trace vitamins including folic acid and B-complex vitamins. Contains more than 70% sucrose, ~5% minerals, low moisture.



**Historical Significance:** Jaggery’s history is linked to Vedic-era sugarcane cultivation (1400–1000 BCE). The word “sugar” derives from the Sanskrit *sarkara*. In 647 AD, a Chinese mission travelled to Magadha to learn sugarcane processing techniques.

**Nutritional Intervention:** Tamil Nadu integrates jaggery into its complementary weaning food (Sathumavu) under ICDS, constituting ~27% of the food mix. The programme provides nutrition to ~32.75 lakh beneficiaries. Cooperatives include ~1,450 members — a significant proportion widows or economically vulnerable women.



**GI-Tagged Varieties:** Kolhapur jaggery (Maharashtra — golden colour, high sucrose); Muzaffarnagar gur (Uttar Pradesh — export-oriented); Marayoor and Central Travancore jaggery (Kerala — purity and medicinal value).

**Health Benefits of Jaggery**

- Sustains Energy
- Aids in Treating Anaemia
- Strengthens Immunity
- Treats Throat and Lung Infections
- Supports Digestion
- Acts as a Natural Detoxifying Agent
- Relieves Fatigue
- Relaxes Muscles and Nerves
- Maintain Blood Pressure

Jaggery, the Ayurvedic therapeutic sweetener, can aid in addressing malnutrition and micronutrient deficiencies in our population.

Source: NIFTEM and APEDA

**Policy Support:** PM Kisan SAMPADA Yojana, PMFME Scheme, ODOF, and AGMARK certification strengthening the sector. Five jaggery processing units approved under PMKSY (total grants: ₹17.07 crore). PMFME supported **3,528 jaggery-based micro food processing units** (subsidies: ₹102.31 crore). Jaggery identified as ODOF in **19 districts**.

**GI-Tagged Jaggery Varieties in India**

- Kolhapur Jaggery** (Maharashtra)
- Muzaffarnagar Gur Jaggery** (Uttar Pradesh)
- Marayoor Jaggery (Marayoor Sharkara)** (Keralam)
- Central Travancore Jaggery** (Keralam)

Source: APEDA

### 1.8 Afsluitdijk Dam

The Prime Minister visited the iconic Dutch **Afsluitdijk** during a state visit to the Netherlands, spotlighting parallels with India's **Kalpasar Project in Gujarat** — a proposed freshwater reservoir across the Gulf of Khambhat integrating tidal power generation, irrigation, and transportation infrastructure. A **Letter of Intent** was signed between India's Ministry of Jal Shakti and the Netherlands' Ministry of Infrastructure and Water Management for technical cooperation on the Kalpasar project.

### 1.9 Water Governance in Rural India

India receives an average annual precipitation of **~3,880 BCM**; average annual water availability estimated at **1,999.20 BCM**. Agriculture accounts for **80–90%** of water use in rural areas. India has 17.5% of global population and 11.6% of the world's livestock.

**Water Budgeting** involves systematic assessment of water availability and demand within a defined geographical unit (village, watershed, block, or district) to balance water use with renewable availability.

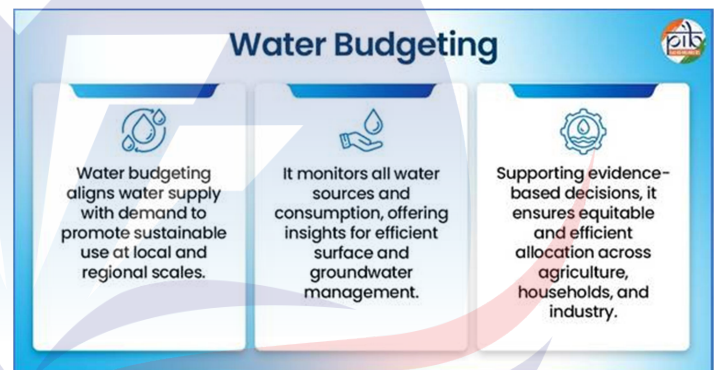
### Key Programmes

- **Atal Bhujal Yojana (2019):** Promotes water budgeting at Gram Panchayat level in 229 blocks across 7 groundwater-stressed states. As of March 2026, ~81,700 water conservation structures created/restored; **8,203 water budgets** completed. 180 out of 229 blocks showed measurable improvement in groundwater levels (2023–25 assessments). Traditional structures revived include Gokatte, Bawdi, Johad, Tanka, Kalyani, and Diggi.



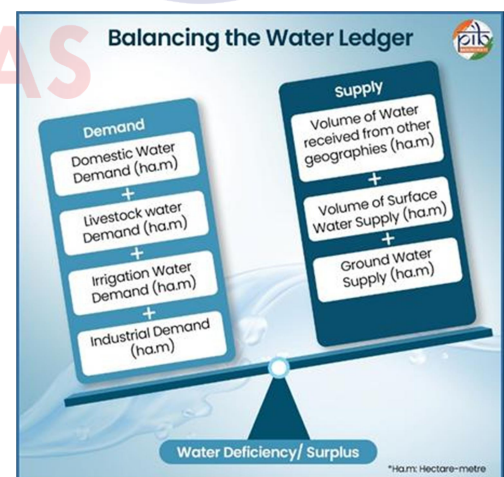
- **Hiware Bazar (Maharashtra):** A model of participatory water governance that transformed drought-prone land through rainwater harvesting, watershed development, and Gram Sabha-level water budgeting. This model informed Maharashtra’s strategy to make 5,000 villages water-secure annually.

- **National Water Mission (NWM):** Recognises water budgeting as foundational to Integrated Water Resources Management. “Nari Shakti se Jal Shakti” emphasises women-led institutions in water conservation. In Udham Singh Nagar (Uttarakhand), ~1,645 women trained under Jal Jeevan Mission; 300 women-led Village Water and Sanitation Committees operational.



- **Rajasthan’s Mukhyamantri Jal Swavlamban Abhiyan (2016):** Based on the “Four Waters Concept.” Key outcomes: groundwater levels increased ~4%; water access enhanced for 4.1 million people and 4.5 million livestock.
- **Varuni Web Application:** Developed under the Indo-German WASCA project (with Ministry of Jal Shakti, Ministry of Rural Development, and NITI Aayog technical support); generates block-level water budgets by auto-sourcing data from government portals. Automated computational framework minimises manual intervention.
- **Jalyukt Shivar Abhiyan (Maharashtra, 2014):** Over **11,000 villages** declared drought-free; groundwater levels rose ~1.5–2 metres; agricultural productivity improved by ~30–50%.

National Commission on Integrated Water Resources Development estimates irrigation water demand could reach **807 BCM** by 2050 under a high-demand scenario.



# SCIENCE TECHNOLOGY

## 2. SCIENCE & TECHNOLOGY

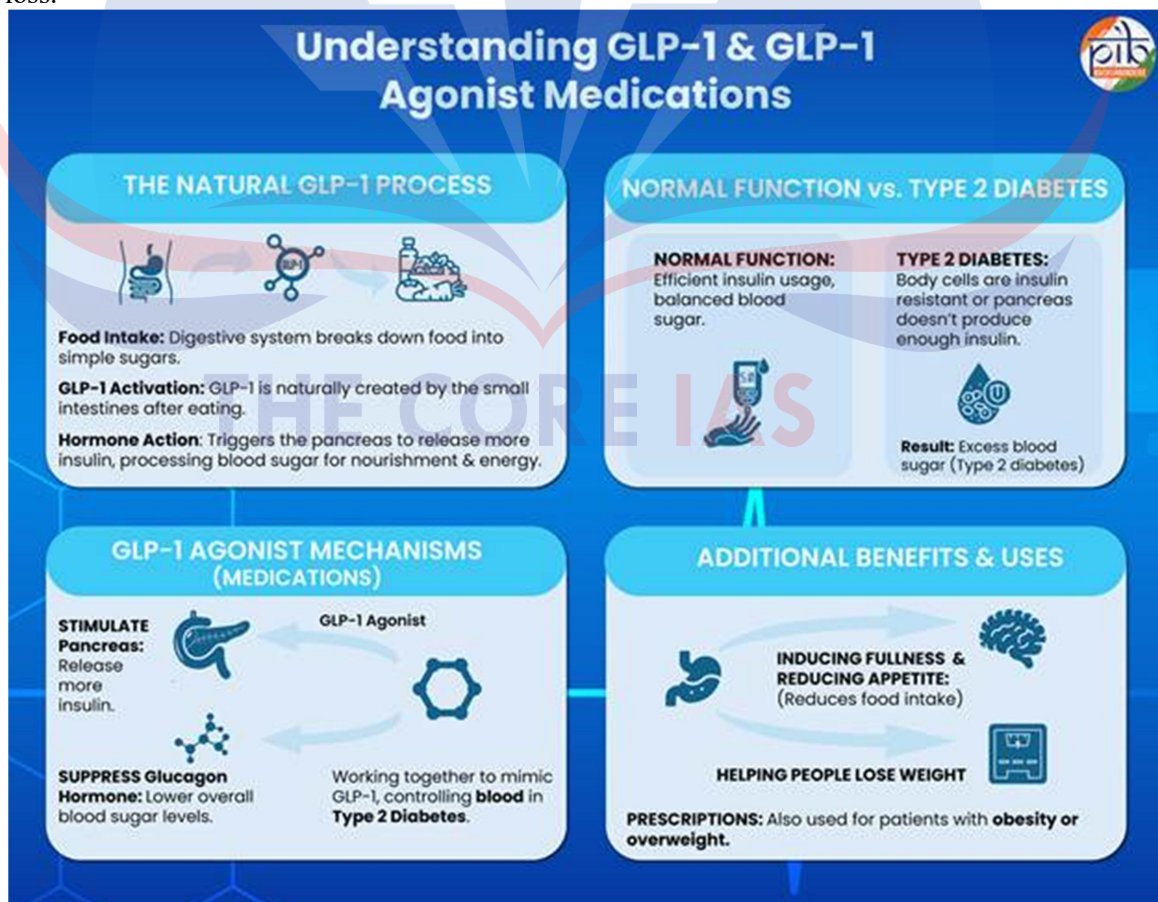
### 2.1 Sagar Vani System

The **Sagar Vani** system is an Integrated Information Dissemination System developed by the **Indian National Centre for Ocean Information Services (INCOIS)** under the Ministry of Earth Sciences. It delivers real-time ocean advisories, disaster warnings, and potential fishing zone alerts to coastal communities and fishermen.

Key information disseminated includes Tsunami Early Warnings; High Wave Alerts and Swell Surges; Ocean State Forecasts (5-day, including wave heights and wind speeds); and Potential Fishing Zone (PFZ) Advisories. INCOIS has also developed the multilingual **SAMUDRA (Smart Access to Marine Users for Ocean Data Resources and Advisories)** mobile application — a one-stop platform for ocean information services. All dissemination channels are operational in Konaseema (Andhra Pradesh) and Jagatsinghpur and Puri (Odisha).

### 2.2 GLP-1 Drugs

**GLP-1 (glucagon-like peptide-1) receptor agonists** are medications developed to treat type 2 diabetes and obesity by correcting hormonal imbalance — stimulating insulin release and suppressing excess glucagon to bring blood sugar back under control. They slow gastric emptying, increase the feeling of fullness, and induce weight loss.



**Background:** In type 2 diabetes, cells become insulin-resistant while glucagon continues to drive blood sugar higher. GLP-1 drugs address this dual dysfunction by mimicking the GLP-1 hormone for longer-lasting effects.

**GLP-1 Drugs Available in India** (including): Semaglutide injection, Semaglutide tablets, Liraglutide, Tirzepatide, Dulaglutide, Exenatide, and Exenatide extended release. The first GLP-1 drug was approved by the US FDA in 2005. Most are administered via pre-filled injection pens; oral semaglutide is available in tablet form.






**Side Effects:** Range from mild nausea and dizziness to severe pancreatitis and medullary thyroid cancer. Other complications include pancreatitis, kidney injury, and bowel obstruction.








## SIDE-EFFECTS OF GLP-1

Take GLP-1 drugs only under medical supervision as they can lead to severe health complications








### MOST COMMON SIDE EFFECTS (Mild)

 Loss of Appetite	 Nausea	 Vomiting	 Diarrhoea	 Constipation
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### OTHER SIDE-EFFECTS

 Dizziness	 Mild Tachycardia (Increased Heart Rate)	 Infections	 Headaches	 Indigestion (Upper Stomach)
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### SEVERE & RARE SIDE EFFECTS (Requires Emergency Attention)

 Pancreatitis	 Medullary Thyroid Cancer	 Acute (Sudden) Kidney Injury	 Worsening Diabetes-Related Retinopathy
 Gastroparesis (Slowed or Stopped Stomach Emptying)	 Bowel Obstruction	 Gallstone Attacks & Bile Duct Blockage	


**Regulation in India:** The Drug Controller General of India has intensified regulatory surveillance. GLP-1 drugs can be prescribed only by endocrinologists, internal medicine specialists, and cardiologists. On 10 March 2026, a comprehensive advisory was issued to all manufacturers to stop misleading advertisements. 49 businesses were audited across the country — notices issued for violations relating to unauthorised sale, improper prescription practices, and misleading marketing.



## POTENTIAL HEALTH COMPLICATIONS OF GLP-1 DRUGS



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### ALLERGIC REACTIONS (ANAPHYLAXIS)

- Shortness of Breath
- Red Rash
- Hives
- Abdominal Pain
- Difficulty Swallowing
- Chest Tightness
- Shortness Breathing
- Feeling of Doom

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### Low Blood Sugar (Hypoglycemia)




- Shaking or Trembling
- Sweating & Chills
- Dizziness
- Weakness
- Faster Heart Rate

- Intense Hunger
- Difficulty Thinking
- Pale Skin
- Nausea

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### Developmental Abnormalities in the Fetus (For Pregnant Women)



**Prevention (Type 2 Diabetes and Obesity):** Maintain healthy weight; 150 minutes of moderate exercise per week; avoid sugar and saturated fats; do not smoke. Obesity defined as BMI greater than or equal to 25 kg/m<sup>2</sup>; overweight as BMI 23.00 to 24.99 kg/m<sup>2</sup>.

### 2.3 BioE3 Policy

The **BioE3 Policy** (Biotechnology for Economy, Environment, and Employment) provides a framework for adopting cutting-edge advanced technologies — genome editing, synthetic biology, metabolic engineering, bioprocess engineering, data science, and AI/ML — to revolutionise biomanufacturing. Six thematic areas of national importance include:

- Biobased chemicals, Biopolymers, Active Pharmaceutical Ingredients (APIs), and Enzymes
- Smart Proteins and Functional Foods
- Precision Biotherapeutics
- Climate-Resilient Agriculture
- Carbon Capture and Utilisation
- Marine and Space Research

**Infrastructure:** The policy aims to set up state-of-the-art shared facilities called “**मूलांकुर BioEnablers**” — Bio-AI Hubs, Biofoundries, and Biomanufacturing Hubs across the country through PPP models. Biofoundries foster innovation through integrated early scaling-up facilities. Biomanufacturing Hubs create shared pilot-scale and pre-commercial-scale facilities bridging laboratory research and full-scale manufacturing.

**Space Research:** Three indigenous microalgal species (*Chlorella sorokiniana*, *Parachlorella kessleri*, *Dysmorphococcus globosus*) were experimented on the International Space Station (ISS) to study the impact of microgravity, CO<sub>2</sub>, and O<sub>2</sub> levels.

**DBT-ICGEB Biofoundry (New Delhi):** A transformative hub for interdisciplinary research, bridging laboratory innovation and industrial-scale biomanufacturing. It uses the Design-Build-Test-Learn (DBTL) cycle with bio-automation and AI, scaling up to 20 litres. “Bench to Bioautomation” workshops were held in March 2026.

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## 2.4 Biotech-KISAN Scheme

The **Biotech-KISAN (Krishi Innovation Science Application Network)** scheme has been implemented by the Department of Biotechnology since 2017. It establishes hubs across diverse agro-climatic zones as demonstration units, training centres, and enterprise incubators. The programme has directly reached **over one lakh farmers**, delivering yield improvements of **15 to 37%** in demonstration plots.

**Status:** Over 50 Biotech-KISAN Hubs across 25 States and UTs; **5 hubs currently operational.**

### Zone-wise Interventions:

- **North East:** Biofertilizers, organic farming technologies, beekeeping, mushroom spawn, bamboo polyhouses, turmeric/ginger processing.
- **Eastern:** Millet tuber complexes, tribal rice landrace conservation, community seed banks.
- **Central:** Dryland pulse technologies (pigeon pea, chickpea, groundnut), community seed hubs, soil health interventions.
- **Western:** Farmer-led varietal innovation (Abu Saunf 440 fennel), arid zone crops (cumin, isabgol, cluster bean), community gene banks.
- **Northern:** Mechanised walnut processing clusters, dairy productivity hubs, fodder biotech inputs.
- **Southern:** Pulse production technologies, shrimp hatcheries, seaweed farming, biofortified maize and millets.

**Women Empowerment:** More than **5,000 women trained** in biofertilizer use, seed production, and mushroom cultivation. Over **1,200 SHGs** formed or strengthened. Nearly **70% of staff** in tissue culture facilities are women. The “Mushroom Mentor” mobile app provides timely guidance to women farmers. **Mahila Biotech Fellowships** promote women-led innovation.

**Measurable Impact:** - 25–30% reduction in chemical fertilizer use in Odisha, Assam, and Andhra Pradesh. - 20–25% increase in soil organic carbon in Odisha demonstration plots. - 20–35% yield increases in pigeon pea, chickpea, and groundnut in Rajasthan and Andhra Pradesh. - Restoration of soil microbial balance in North Eastern states through biocontrol consortia and azolla biofertilizer.

**National Certification System for Tissue Culture Raised Plants (NCS-TCP):** Implemented by DBT; ensures supply of high-quality, virus-free, and genetically uniform planting material to farmers.

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## 2.5 A New Chapter in India’s Nuclear Journey — PFBR

The indigenously designed **Prototype Fast Breeder Reactor (PFBR) at Kalpakkam, Tamil Nadu**, successfully attained its **first criticality on 6 April 2026** — marking the initiation of a sustained nuclear chain reaction. This **500 MWe** reactor was built by **Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI)**. India has officially entered the **Second Stage** of its three-stage nuclear power programme. India will become only the **second country after Russia** to operate a commercial fast breeder reactor.

### Understanding Criticality

Criticality is the point at which a sustained and controlled nuclear fission chain reaction begins. At this stage, neutrons produced by fission equal those lost through absorption and leakage, resulting in a stable power output. It marks the transition from the construction phase to the operational phase and is the essential first step towards generating heat and, ultimately, electricity.

**UPSC 2022**  
**91<sup>st</sup> Rank**



**JATIN JAIN**

I would like to thank the Core IAS team and especially Amit Sir for his continuous support throughout this long journey. His guidance and grasp about each stage of UPSC CSE is just amazing. My answer writing skills are fully developed by Amit Sir constant support, which helped me to get through this exam.

Thanks & Regards  
**JATIN JAIN**  
AIR 91 in UPSC 2022

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Dedication  
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Success*

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ANOTHER ACHIEVEMENT!**

**DEVANSH MOHAN DWIVEDI**

ANOTHER FEATHER IN THE CAP  
**UPSC 2024**  
**228 Rank**

I, Devansh Mohan Dwivedi (AIR 333) in UPSC CSE 2023 am grateful to the whole Core IAS team and especially Amit Sir for constant guidance and support. I owe my success to him to a great extent.

Success is the sum of small efforts, repeated day in and day out.

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**118 Rank** **FIRST ATTEMPT**



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Guidance  
Hard Work  
Success*

**GARIMA JAIN**

Dear Team at Core IAS,  
I would like to express my heartfelt gratitude for the guidance provided to me during my UPSC preparation. My special thanks go to Amit Jain Sir for his exceptional mentoring during answer writing sessions and current affairs classes. The answer writing sessions helped me understand the importance of breaking up and brainstorming questions. CSAT classes helped me build confidence in attempting questions. Extending my thanks again to the entire team.

*Garima Jain*  
AIR - 118, UPSC CSE 2024

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**UPPCS 2018**  
**2<sup>nd</sup> Rank**



**SANGEETA RAGHAV**

I am thankful to Amit Jain Sir for unconditional support and guidance via answer writing and current affairs classes and I help me realize my own potential.

*Sangeeta Raghav*  
UPPCS - 2018  
RANK - 02

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## India's Three-Stage Nuclear Power Programme

- **Stage 1 — Pressurised Heavy Water Reactors (PHWRs):** Natural uranium used as fuel; spent fuel produces plutonium for Stage 2.
- **Stage 2 — Fast Breeder Reactors (FBRs):** Plutonium from Stage 1 used as fuel; breeds Uranium-233 from thorium. Breeds more fuel than it consumes. The PFBR marks India's entry into this stage.
- **Stage 3 — Thorium-Based Reactors:** Harnesses India's vast thorium reserves using Uranium-233 bred in Stage 2. India holds one of the largest thorium reserves in the world.

### PFBR Technical Overview

- Uses **Uranium-Plutonium Mixed Oxide (MOX) fuel** from reprocessed PHWR spent fuel.
- Core surrounded by a blanket of **Uranium-238** — fast neutrons convert it into fissile **Plutonium-239**.
- Designed to eventually use **Thorium-232** in the blanket for Stage 3 transition.
- Technology developed by **Indira Gandhi Centre for Atomic Research (IGCAR)**, an R&D centre under the Department of Atomic Energy.

### Current Nuclear Landscape

- Installed capacity: **8.78 GW**. In 2024–25, generated **56,681 Million Units**.
- Share of total electricity generation: **~3.1%**.
- Planned capacity by 2031–32: **22.38 GW**.
- Civil Nuclear Cooperation agreements signed with **18 countries**.

### Long-Term Mission — Nuclear Energy Mission

- Target: **100 GW** nuclear power capacity by **2047**.
- **₹20,000 crore** allocated for Small Modular Reactor (SMR) development.
- **SMR Target:** At least 5 indigenously designed SMRs operational by **2033**.

#### Why India Must Scale Nuclear Power

India's energy demands are growing rapidly and its clean energy commitments are firm. Nuclear power is a base load source of electricity available round the clock, with lifecycle emissions comparable to renewables such as hydro and wind. It is uniquely placed to meet the always-on power needs of data centres, advanced industries, and emerging technologies. Scaling nuclear capacity is therefore not just a strategic choice but a practical necessity for India's long-term energy security and clean power transition.

- **BARC Initiatives:** BSMR-200 (200 MWe), SMR-55 (55 MWe), and a High-Temperature Gas-Cooled Reactor.
- **SHANTI Act, 2025** (Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India): Consolidates India's nuclear legal framework and enables limited private participation.

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## 2.6 Mission Drishti

- Launched on **3 May 2026**, Mission Drishti is the **world's first satellite** to integrate both Optic (Multispectral/MSI) and Synthetic Aperture Radar (SAR) sensors onto a single platform.
- Developed by Bengaluru-based space startup **GalaxEye Space** — a 190 kg spacecraft and India's **largest privately built Earth Observation (EO) satellite**.
- GalaxEye's first satellite mission and the debut of OptoSAR satellites in orbit — delivering all-weather Earth imagery that is inherently analysis-ready.

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## 2.7 BIRSA 101

“**BIRSA 101**” — named after Bhagwan Birsa Munda — is an initiative advancing the Government's efforts towards the elimination of **Sickle Cell Disease**, which disproportionately affects tribal populations.

**Understanding Sickle-Cell Disease (SCD):** SCD is a group of genetically inherited disorders affecting haemoglobin's ability to carry oxygen. A genetic mutation in the *HBB gene* changes haemoglobin's structure, causing red blood cells to become crescent or sickle-shaped — rigid and unable to move easily, impeding oxygen supply. SCD develops when an individual inherits **two mutant copies** of the *HBB gene*. Symptoms include painful crises, anaemia, swelling, frequent infections, stroke, vision problems, and kidney disease. Individuals with one mutant copy typically do not develop symptoms but can pass the trait to their children.



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### 3.1 INS Taragiri

- INS Taragiri is the **fourth platform of the Project 17A class** (Nilgiri-class) frigates.
- Built with **over 75% indigenous content** in significantly reduced timelines — a symbol of India’s shipbuilding prowess and public-private collaboration.
- Features modern radar, sonar, and missile systems including **BrahMos and surface-to-air missiles**.
- Capable of high-speed transit and extended deployment at sea; fits roles from high-intensity combat to maritime security, anti-piracy, coastal surveillance, and humanitarian missions.

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### 3.2 IN-SLN DIVEX 2026

INS Nireekshak (Diving Support and Submarine Rescue Vessel) arrived at Colombo, Sri Lanka, on 21 April 2026 to participate in the **4th edition of IN-SLN DIVEX 2026** — a bilateral diving exercise from 21–27 April 2026.

As part of India’s humanitarian outreach, two **BHISM (Bharat Health Initiative for Sahyog, Hita and Maitri) cubes** — portable medical units capable of handling up to 200 emergency cases — were presented to Sri Lankan authorities under the ‘**Aarogya Maitri**’ initiative. Additionally, **50,000 rounds of 9mm ammunition** were handed over to the Sri Lankan Navy.

The IN-SLN DIVEX exercise affirms India’s vision of **MAHASAGAR** (Mutual and Holistic Advancement for Security and Growth Across Regions) in the Indian Ocean Region.

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### 3.3 Project DANTAK

**Project DANTAK** is an overseas project of the **Border Roads Organisation (BRO)** under the Ministry of Defence. Established on **24 April 1961** through an agreement between Bhutan’s King Jigme Dorji Wangchuck and PM Jawaharlal Nehru, it was created to build motorable roads and critical infrastructure in Bhutan.

Motto: **“Connecting People, Connecting Countries”**. It has been a **cornerstone of Bhutan’s** socio-economic development, linking remote communities, opening up the country to modernisation, and fostering bilateral friendship.

---

### 3.4 Mahendragiri

- *Mahendragiri* (Yard 12654) is the **sixth ship of Nilgiri-class (Project 17A)** and the **fourth ship** of the class built at **Mazagon Dock Shipbuilders Limited (MDL)**.
- A versatile multi-mission platform designed by the **Warship Design Bureau (WDB)**, featuring a generational leap in stealth, firepower, automation, and survivability.
- Fitted with **Combined Diesel or Gas (CODOG) propulsion** and a state-of-the-art **Integrated Platform Management System (IPMS)**.
- Equipped with anti-surface, anti-air, and anti-submarine warfare systems. An admirable symbol of Aatmanirbharta in warship building.

---

### 3.5 Project Deepak

- One of BRO’s **oldest projects**, raised in **May 1961** with HQ at Shimla; first Chief Engineer was Col S N Punj. Primarily constructed the **Hindustan-Tibet (H-T) Road** — one of India’s toughest roads.
- Area of Responsibility covers Manali, Shimla, Kinnaur, Lahaul-Spiti; extended across Punjab, Haryana, Himachal Pradesh, Rajasthan; later included Uttarakhand roads (until 2009 when Project Shivalik was carved out).

- During **Operation Vijay**, earned laurels for clearing and maintaining Road Manali-Sarchu — the alternate axis to Leh.
- Commenced work on the **Rohtang Tunnel** (later known as **Atal Tunnel**); Project Rohtang Tunnel was carved out in March 2010 to supervise its construction.
- Instrumental in socio-economic development of Himachal Pradesh — opening new trade routes and connecting remote areas with the national mainstream.

### 3.6 PRAGATI 2026

- **PRAGATI** (Partnership of Regional Armies for Growth and Transformation in the Indian Ocean Region) is a **multilateral military exercise** held at Umroi Military Station, Meghalaya.
- The 2026 edition saw participation from **12 friendly nations**: Bhutan, Cambodia, Indonesia, Laos, Malaysia, Maldives, Myanmar, Nepal, Philippines, Seychelles, Sri Lanka, and Vietnam.
- Objectives: Enabling seamless coordination in joint operations; sharing expertise and best practices; strengthening defence ties through joint training and cultural exchange; evolving common concepts for intelligence management in a multinational environment.

\*\*\*

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# ECONOMY

## 4.1 Antariksh Venture Fund

- The **Antariksh Venture Capital Fund** is a SEBI-registered Alternative Investment Fund with the key investor being **IN-SPACe (Indian National Space Promotion and Authorization Centre)**, Department of Space.
- Sponsored by **SIDBI Venture Capital Limited (SVCL)** as investment manager.
- Purpose: Provide capital to space sector companies at various stages of development and support commercialisation of new technologies.
- Received SEBI registration on **31 October 2025**; achieved initial closing on **10 November 2025** with a committed corpus of **₹1,005 crore**.

## 4.2 Rare Earth Corridors

**In News:** Union Budget 2026–27 announces **Dedicated Rare Earth Corridors in Odisha, Kerala, Andhra Pradesh, and Tamil Nadu** for mining, processing, research, and manufacturing of **Rare Earth Permanent Magnets (REPMs)**.

REPMs are among the strongest permanent magnets, indispensable for electric vehicle motors, wind turbine generators, consumer and industrial electronics, aerospace systems, defence equipment, and precision sensors.

### India's Resource Base

- India holds **13.15 million tonnes** of monazite, containing an estimated **7.23 million tonnes of rare-earth oxides (REO)**.
- Deposits span Odisha, Kerala, Andhra Pradesh, Tamil Nadu, West Bengal, Gujarat, Maharashtra, and Jharkhand — primarily in coastal beach sands and inland alluvium.
- In Gujarat and Rajasthan, **1.29 million tonnes** of in-situ REO resources identified in hard-rock areas.
- GSI has identified **482.6 million tonnes** of rare-earth ore resources across 34 exploration projects.
- India currently imports 60–80% by value and 85–90% by quantity from China (2022–25), underscoring the urgency of domestic development. Consumption of REPMs expected to double by 2030.

### Policy Measures



- **REPM Manufacturing Scheme (November 2025):** ₹7,280 crore scheme approved to develop **6,000 MTPA** of integrated REPM manufacturing capacity.
- **Union Budget 2026–27:** Dedicated Rare Earth Corridors in four states (Odisha, Kerala, Andhra Pradesh, Tamil Nadu).
- **IREL (India) Limited** — operates a Rare Earth Extraction Plant in Odisha and a Rare Earth Refining Unit at Aluva, Kerala.
- **National Critical Minerals Mission (NCMM, January 2025):** Secures sustainable supply chains for rare earths and strategic minerals.
- **KABIL** (Khanij Bidesh India Limited — JV of NALCO, HCL, and MECL) signed an agreement with CAMYEN in Argentina for 5 lithium brine blocks.

**Global Partnerships:** Bilateral mineral agreements with Australia, Argentina, Zambia, Mozambique, Peru, Zimbabwe, Malawi, and Côte d'Ivoire. Member of the **Minerals Security Partnership (MSP)** and the **Indo-Pacific Economic Framework (IPEF)**.

Aligned with national priorities of Atmanirbhar Bharat, Net Zero 2070, and Viksit Bharat 2047.

#### 4.3 BCGCL and MCL Sign Landmark Land Leasing Agreement

A landmark land leasing agreement was signed between **Bharat Coal Gasification and Chemicals Limited (BCGCL)** and **Mahanadi Coalfields Limited (MCL)** for India's first coal gasification project at Lakhanpur, Odisha. The project is a **Coal to 2000 TPD Ammonium Nitrate facility** and will deploy **indigenously developed gasification technology by BHEL** — India's first such deployment. Spread over approximately **350 acres** of MCL land, it reflects a decisive shift toward indigenous innovation and reduced dependence on imported technologies in the energy and chemical sectors.

#### 4.4 Conditional Concessional Customs Duty for SEZ

In line with Budget 2026, conditional customs duty concessions have been notified on clearance of goods manufactured in **Special Economic Zones (SEZs)** to the **Domestic Tariff Area (DTA)** to improve capacity utilisation impacted by global trade disruptions. Key provisions:

- Eligible SEZ units can clear goods to DTA at concessional duty rates, subject to a limit of **30% of the highest annual FOB export value** in any of the three immediately preceding financial years.
- Minimum **20% value addition** within the SEZ is required.
- Covers a broad range of sectors. Agriculture, marble, granite, gems and jewellery, vehicles, toys, and petroleum are **excluded**.
- Notification effective: **1 April 2026 to 31 March 2027**.
- Approximately **1,200 SEZ manufacturing units** expected to benefit.
- Units must furnish a Development Commissioner's certificate confirming compliance.

#### 4.5 Connectivity and Development in the North East Region

Under India's **Act East Policy**, the following infrastructure progress has been recorded:

- **Road:** National Highways in NER increased from 10,905 km (2014) to **16,207 km** (March 2025). Under PMGSY, 46,296 km of rural roads constructed (₹47,279 crore spent).
- **Railway:** Budget allocation grew from ₹2,122 crore/year (2009–14) to ₹10,440 crore in FY 2025-26. Key ongoing projects: Bhairabi-Sairang New Line (51 km), Agartala-Sabroom New Line (112 km), Jiribam-Imphal New Line (111 km), among others.
- **Telecom:** 6,355 Gram Panchayats made service-ready for high-speed internet; 3,718 mobile towers commissioned covering 5,366 villages.
- **Air:** 90 routes operationalised under UDAN scheme in NE states. Airports/heliports identified include Pasighat, Tezu, Hollongi, Jorhat, Lilabari, Rupsi, Tezpur, Dimapur, Shillong, and Pakyong.
- **Power:** Hydro Electric Projects with **5,796 MW** total installed capacity underway including Subansiri Lower (2,000 MW), Dibang Multi-Purpose (2,880 MW), Teesta Stage VI (500 MW).
- **Inland Waterways:** National Waterways in NER increased from 1 to **20**; ₹1,040 crore spent on waterway projects.

#### 4.6 Share in Space Economy

India's space economy was approximately **\$8.4 billion** (~2% of global space economy) in 2023. It is projected to grow to **\$44 billion by 2033** (~8% global share) and **\$100 billion by 2040** (~10% global share).

Key policy steps include the Indian Space Policy 2023, liberalised FDI policy for the space sector, a **₹1,000 crore Venture Capital Fund**, a **₹500 crore Technology Adoption Fund (TAF)**, IN-SPACE Pre-Incubation Entrepreneurship Program, enabling transfer of technology from ISRO, and opportunity to test space worthiness through the POEM platform.

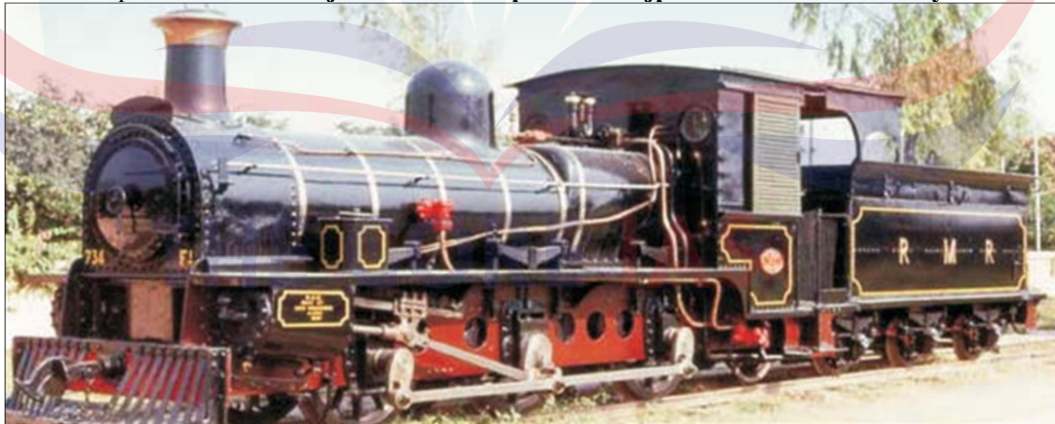
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#### 4.7 From Steam to Speed — The Ever-Evolving Journey of Indian Railways

**Key Highlights:** First passenger train ran between Bombay and Thane on **16 April 1853**. Today, **99.6% electrification** of the broad gauge network. **~25,000 trains run daily**. **741 crore passengers** carried in 2025–26. **Kavach** commissioned over 3,100 route km with 24,400 km underway.

##### Historical Milestones

- **16 April 1853:** First passenger train (Bombay to Thane, ~34–35 km). 400 passengers, 14 carriages, pulled by steam locomotive *Falkland*, accompanied by a 21-gun salute at Bori Bunder station. Operated by the **Great Indian Peninsula Railway (GIPR)**.
- **1871:** Metre gauge officially adopted as the second standard gauge in India.
- **1881: Darjeeling Himalayan Railway** opened — connecting New Jalpaiguri with Darjeeling; demonstrates innovative engineering for mountain transport.
- **1895:** First steam locomotive built in India produced at the **Ajmer Workshop** of the **Rajputana Malwa Railway**.



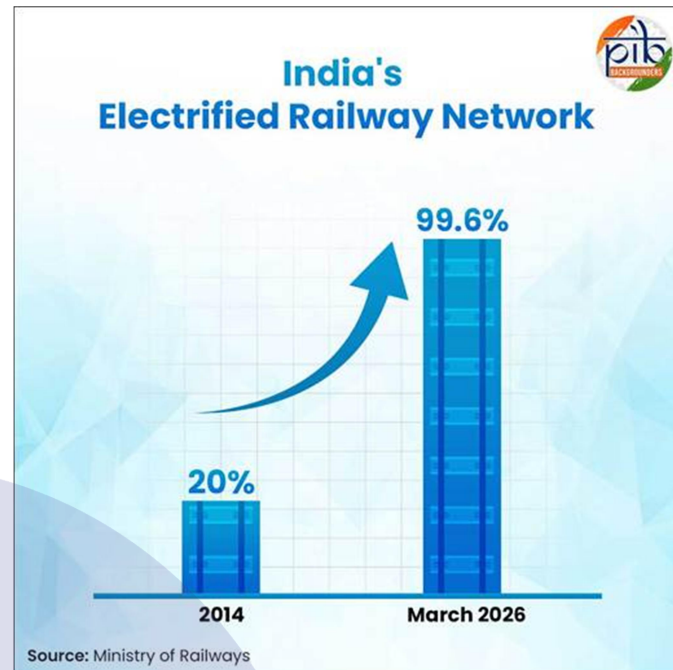
[IMAGE PLACEHOLDER: Insert image of the first steam locomotive No. F-734 of the Rajputana Malwa Railway]

- **1925:** First electric train operated between Bombay Victoria Terminus and Kurla Harbour.
- **1947:** Indian Railways formed by combining **42 railway systems**, including those of former princely states.
- **1952:** Network reorganised into **6 administrative zones**.
- **1985:** Steam locomotives phased out; shift to diesel and electric.

**Railway Gauges:** Broad Gauge (1.6 m), Metre Gauge (1 m), Narrow Gauge (0.76 m and 0.6 m), Standard Gauge (1.43 m).

##### Modern Era — Key Achievements

- **Electrification: 69,873 route km** electrified as of March 2026 (99.6% of 70,142 broad gauge route km), up from 21,801 rkm in 2014. India's electrification exceeds the UK (39%), Russia (52%), and China (82%). Saved ~180 crore litres of diesel in 2024–25; cost savings of ~₹6,000 crore.
- **Track Renewal:** 54,600 km renewed during 2014–26. Track capable of 110+ kmph increased from 31,445 km (40% of network) to over **85,000 km** (over 80% of network).



- **Vande Bharat Express:** ~3.98 crore passengers in FY 2025–26; 9.1 crore passengers total through 1 lakh trips. **Vande Bharat Sleeper** (launched January 2026): 1.21 lakh passengers, 119 trips in first 3 months.

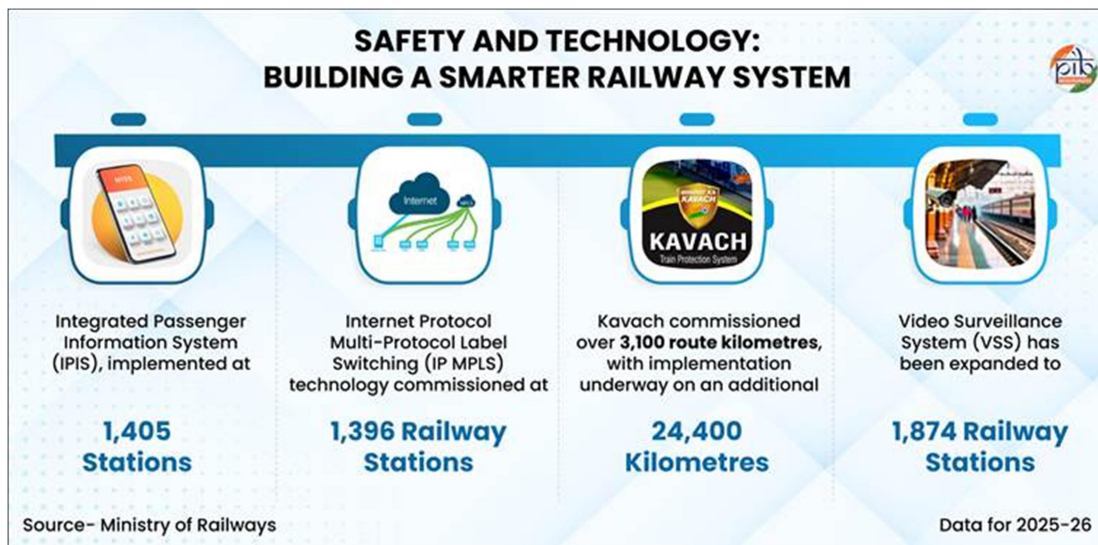
- **Amrit Bharat Express:** 60 services as of 18 March 2026 — designed for low- and middle-income families; 11 General Class coaches, 8 Sleeper Class coaches, 1 Pantry Car, 2 Luggage-cum-Divyangjan coaches.
- **High-Speed Rail:** Union Budget 2026–27 allocated **₹2,78,000 crore** (record). Seven high-speed corridors announced spanning ~4,000 km (Mumbai–Pune, Delhi–Varanasi, Hyderabad–Bengaluru, among others). **Mumbai–Ahmedabad High-Speed Rail Corridor:** 508 km, maximum speed 320 km/h.



### Digital and Safety Infrastructure

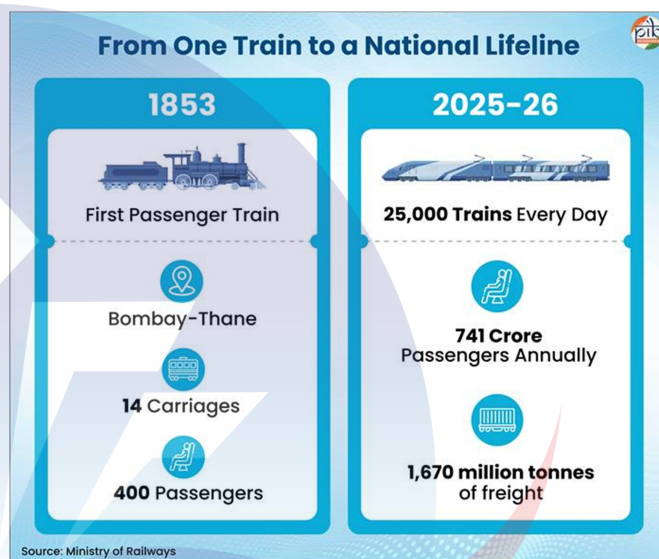
- **KAVACH** automatic train protection system: commissioned over **3,100 route km**; underway on 24,400 km.





- **IP MPLS Telecom Backbone:** Commissioned at 1,396 railway stations.
- **Video Surveillance System (VSS)** with AI-based analytics: expanded to 1,874 stations.
- **Integrated Passenger Information System (IPIS):** Implemented at 1,405 stations.
- **RailOne App** (launched July 2025): Unified platform for ticket booking, enquiries, and grievances.

**FY 2025-26 Highlights:** 25,000 trains daily; 741 crore passengers; total revenue ~₹80,000 crore; freight: record 1,670 MT; 65,000 special trains operated (till December 2025); 1,674 locomotives produced; 35 Gati Shakti Cargo Terminals commissioned; 119 stations redeveloped under Amrit Bharat Station Scheme.

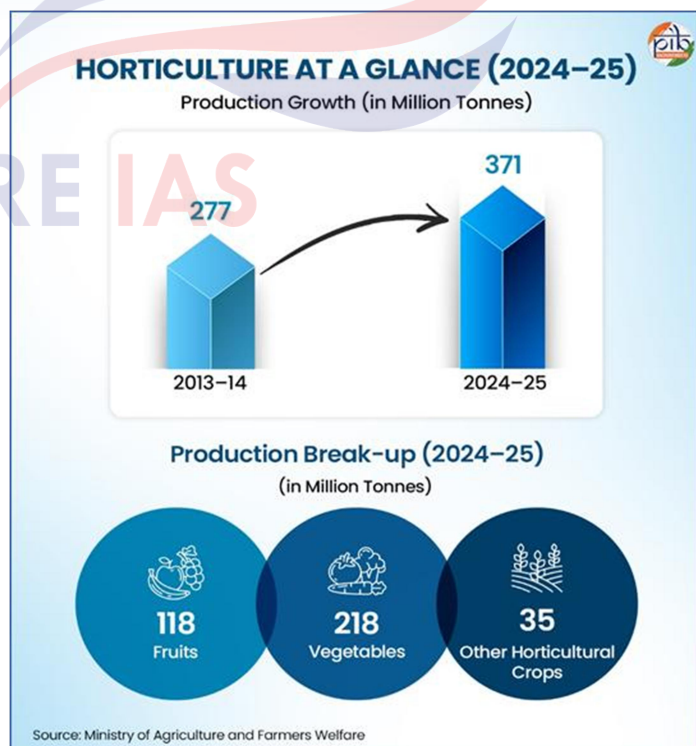


#### 4.8 Accelerating India's High Value Crop Diversification

Agriculture has grown at 4.45% over the past decade. Horticulture accounts for approximately 37% of Gross Value Output within agriculture. Horticultural production rose from 277.35 MT (2013-14) to 370.74 MT (2024-25) — comprising 117.65 MT fruits, 217.80 MT vegetables, and 35.29 MT other horticulture. India ranks **second globally** in vegetables, fruits, and potato production and is the **world's largest producer of onions and shallots** (~22.42% of global production).

#### Budget 2026-27 Crop-Specific Strategy

- **Coastal Crops:** Coconut, sandalwood, cocoa, and cashew.
- **North East:** Agarwood cultivation.
- **Hilly Areas:** Almonds, walnuts, and pine nuts.



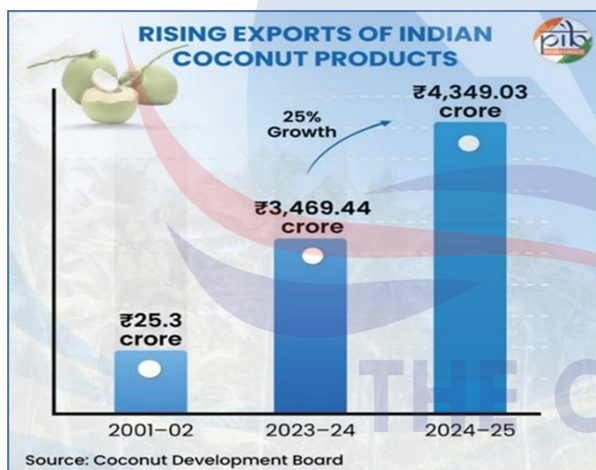
### Key Sector Data

**Coconut:** India ranks **2nd globally** (22.44% of world production). Production: **13.97 MT** from **2.19 million hectares** in 2024-25. Kerala has largest area; Tamil Nadu leads in production; Andhra Pradesh has highest productivity. Exports: ₹4,349.03 crore (USD 513 million) in 2024-25 — up 25% over previous year. A **Coconut Promotion Scheme** proposed in Budget 2026-27.

### India's Coconut Sector at a Glance

- Global Standing**
  - India ranks **second** in the world in coconut production
- Production Snapshot (2024-25)**
  - Production: **13.97 Million Tonnes**
  - Area: **2.19 Million Hectares**
  - Productivity: **6.36 Tonnes Per Hectares**
- State-wise Leadership (Jan 2026)**
  - Keralam** 1st in area under cultivation
  - Tamil Nadu** 1st in production
  - Andhra Pradesh** 1st in productivity

Source: Ministry of Agriculture and Farmers Welfare



# Union Budget (2026-27)

## Regional Focus on High Value crops

Coconut  
Cashew  
Cocoa  
Sandalwood

Coastal Regions

Agarwood (Agar trees)

North Eastern Region

Walnuts  
Almonds  
Pine nuts

Hilly and Himalayan Regions

Source: Union Budget 2026-27

- Cashew:** Cultivated across **12.05 lakh hectares** with production exceeding **8.02 lakh tonnes** annually. Major states: Odisha, Andhra Pradesh, Maharashtra, Tamil Nadu, Karnataka, Kerala. Exports (2024-25): **USD 369.17 million** to UAE, Vietnam, Japan, Netherlands, Saudi Arabia. Cashew is described as the “Gold Mine of Wasteland” for its ability to thrive on degraded lands.

# CASHEW

## The Gold Mine of Wasteland

- Cultivation and Production**
  - ▲ Total Area: 12.05 Lakh Hectares
  - ▲ Annual Production: Over 8.02 Lakh Tonnes
- Export Performance (FY 2024-25)**
  - ▲ Total Export Value: 369.17 USD Million
- Major Export Destinations**
  - ▲ United Arab Emirates, Vietnam, Japan, Netherlands, Saudi Arabia

Source: Ministry of Commerce and Industry

- Cocoa:** Total production in 2024-25: **32.91 thousand MT**. Major states: Andhra Pradesh, Kerala, Karnataka, Tamil Nadu. Exports: **USD 295.58 million**. A dedicated programme for Indian cashew and cocoa proposed in Budget 2026-27.
- Sandalwood (Santalum album):** Over **90%** of India's sandalwood resources in Karnataka and Tamil Nadu. Budget 2026-27 promotes focused cultivation and post-harvest processing.

### Cocoa Cultivation and Export Profile in India

- Major Cocoa Growing States**  
Andhra Pradesh, Keralam, Karnataka, Tamil Nadu
- Export Performance (FY 2024-25)**  
Export Value: 295.58 USD Million
- Production Snapshot (2024-25)**  
Total Production: 32.91 thousand metric tonnes
- Major Export Destinations**  
U.S.A, Netherlands, UAE, Indonesia, Nepal

Source: Ministry of Agriculture and Farmers Welfare

- **Agarwood (Oud):** India hosts ~150 million agarwood trees; 90% in NE states. Tripura's agarwood market estimated at ~₹2,000 crore annual turnover. Export quotas under CITES: 151,080 kg for agarwood chips and 7,050 kg for agarwood oil.
- **Walnuts:** J&K accounts for majority of cultivation. Production: **3.22 lakh tonnes** (2024-25). Exports: **USD 7.80 million**.



- **Almonds:** Production: **13.94 thousand MT** (2024-25). J&K accounts for more than **83%** of production.
- **Pine Nuts (Chilgoza):** “Champion of the Rocky Mountains.” Important for tribal communities in Kinnaur, Himachal Pradesh.

A dedicated programme proposed in Budget 2026-27 to promote high-density cultivation of walnuts, almonds, and pine nuts and rejuvenate old orchards.

#### 4.9 Strengthening India's Food Processing Ecosystem — PLISFPI

**Key Takeaways:** PLISFPI (outlay ₹10,900 crore; 2021-22 to 2026-27) — 165 applications approved across 274 project locations; incentive of ₹2,162.55 crore disbursed; ~3.39 lakh jobs created (surpassing 2.5 lakh target); food processing and preservation capacity grown by 34 lakh MT per annum; export CAGR of 13.23% (2024-25 vs 2019-20).

The food processing sector's GVA increased from ₹1.34 lakh crore (2014-15) to ₹2.24 lakh crore (2023-24). The share of processed food exports in agricultural exports grew from 13.7% (2014-15) to **20.4% (2024-25)**.



# PLI SCHEME: KEY SECTORS



## ELECTRONICS & TECHNOLOGY MANUFACTURING

1. Mobile Manufacturing and Specified Electronic Components
2. Electronic/Technology Products
3. Telecom & Networking Products
4. Drones and Drone Components



## CONSUMER GOODS & LIFESTYLE INDUSTRIES

5. White Goods (ACs and LEDs)
6. Textile Products: MMF segments and Technical textiles
7. Food Products



## CORE MANUFACTURING & INDUSTRIAL MATERIALS

8. Specialty Steel
9. Advanced Chemistry Cell (ACC) Battery
10. Critical Key Starting Materials / Drug Intermediate & Active Pharmaceutical Ingredients



## AUTOMOTIVE & MOBILITY

11. Automobiles and Auto Components



## RENEWABLE ENERGY & SUSTAINABILITY

12. High-efficiency Solar PV Modules



## PHARMACEUTICALS & HEALTHCARE

13. Pharmaceutical Drugs
14. Manufacturing of Medical Devices

Source: Ministry of Commerce and Industry

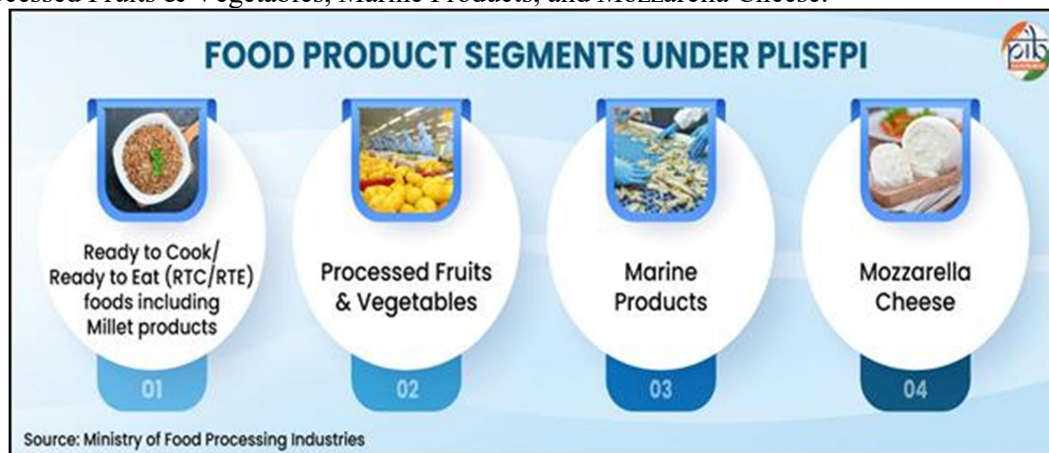
### PLISFPI Structure (Three Components)

# THE CORE IAS STRATEGIC FOCUS OF PLISFPI



Source: Ministry of Food Processing Industries

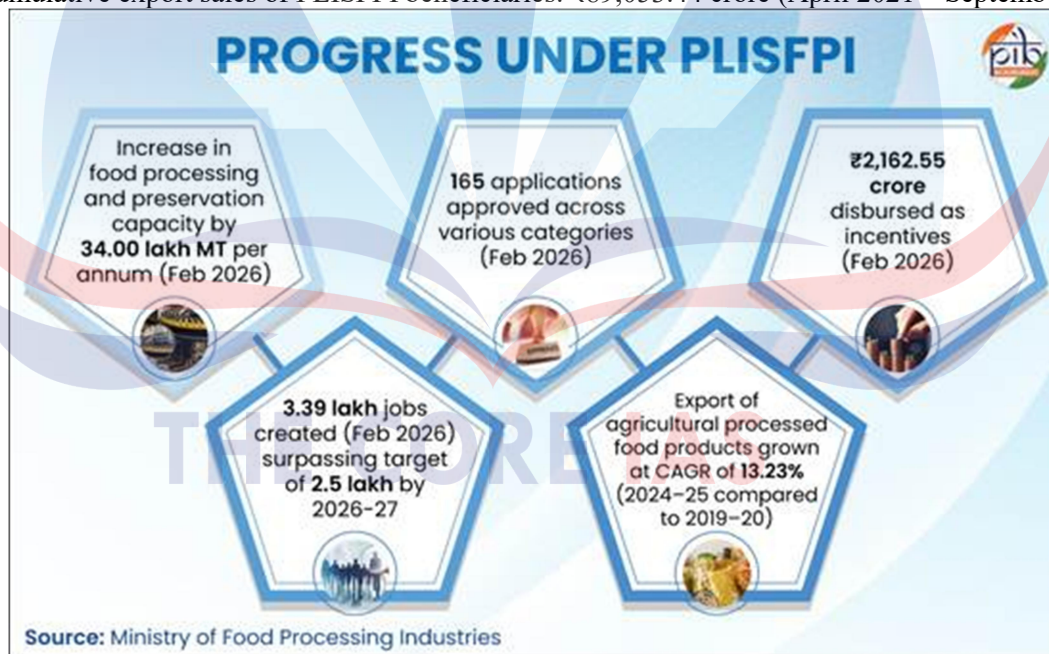
- **Category I:** Incentivises manufacturing of Ready-to-Cook/Ready-to-Eat foods (including millet-based), Processed Fruits & Vegetables, Marine Products, and Mozzarella Cheese.



- **Category II:** Incentivises innovative/organic SME products across all four segments plus Free Range Eggs, Poultry Meat, and Egg Products.
- **Category III:** Supports branding and marketing abroad — reimburses 50% of branding/marketing expenses, capped at 3% of annual food product sales or ₹50 crore per year. Minimum spend of ₹5 crore over 5 years required.
- **PLISMBP (carved out in FY 2022-23, outlay ₹800 crore):** Incentivises use of millets in RTC/RTE products.

**Implementation:** Project Management Agency — **IFCI Limited**. Online portal: [plimofpi.ifcilt.com](http://plimofpi.ifcilt.com).

**Impact (as of February 2026):** 165 approved applications; 274 project locations; ₹9,207 crore investments; ₹2,162.55 crore incentives disbursed; 3.39 lakh jobs created (target was 2.5 lakh); 69 out of 165 approvals are MSMEs; cumulative export sales of PLISFPI beneficiaries: ₹89,053.44 crore (April 2021 – September 2025).



#### 4.10 Small Hydro Power Development Scheme

The Union Cabinet approved the **Small Hydro Power (SHP) Development Scheme** for FY 2026–27 to FY 2030–31, with a total outlay of **₹2,584.60 crore**. The scheme targets approximately **1,500 MW** of new SHP capacity (1–25 MW projects), particularly in hilly and North Eastern states.

## SMALL HYDRO POWER DEVELOPMENT SCHEME



(At a Glance)

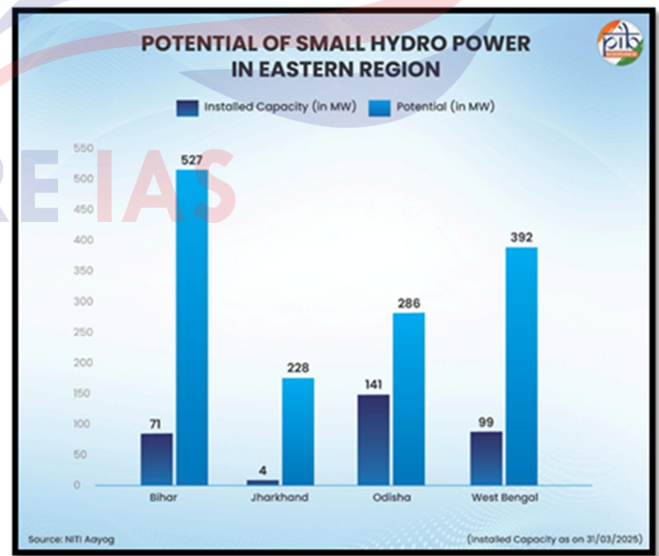
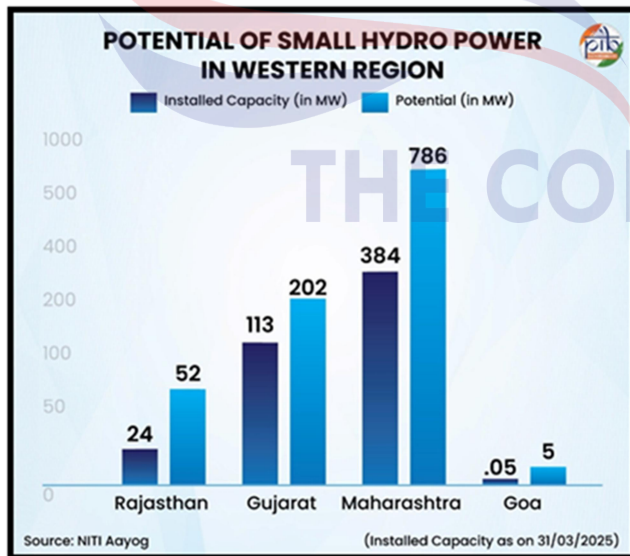
- ₹ 2,584.60 crore outlay to develop approximately 1500 MW of capacity (FY 2026–31).
- Targets small hydro projects (1–25 MW), with a focus on hilly & North Eastern regions.
- Higher financial support: Up to ₹ 3.6 crore/MW (30%) for NE & border areas (cap: ₹ 30 crore).
- Standard support: Up to ₹ 2.4 crore/MW (20%) for other states (cap: ₹ 20 crore).
- The scheme is expected to generate 51 lakh person-days of employment.

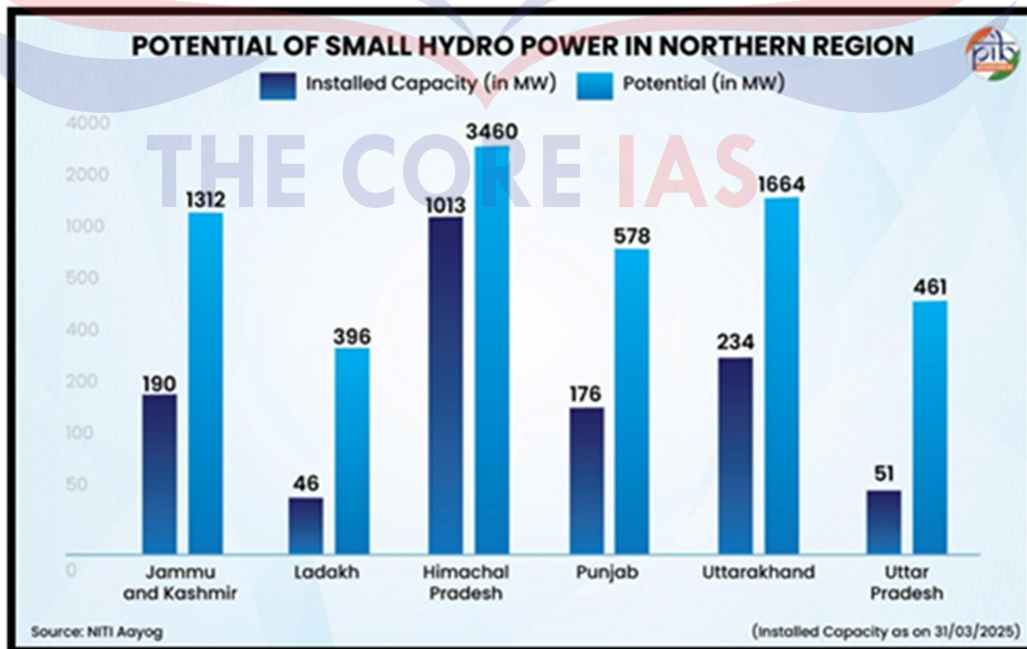
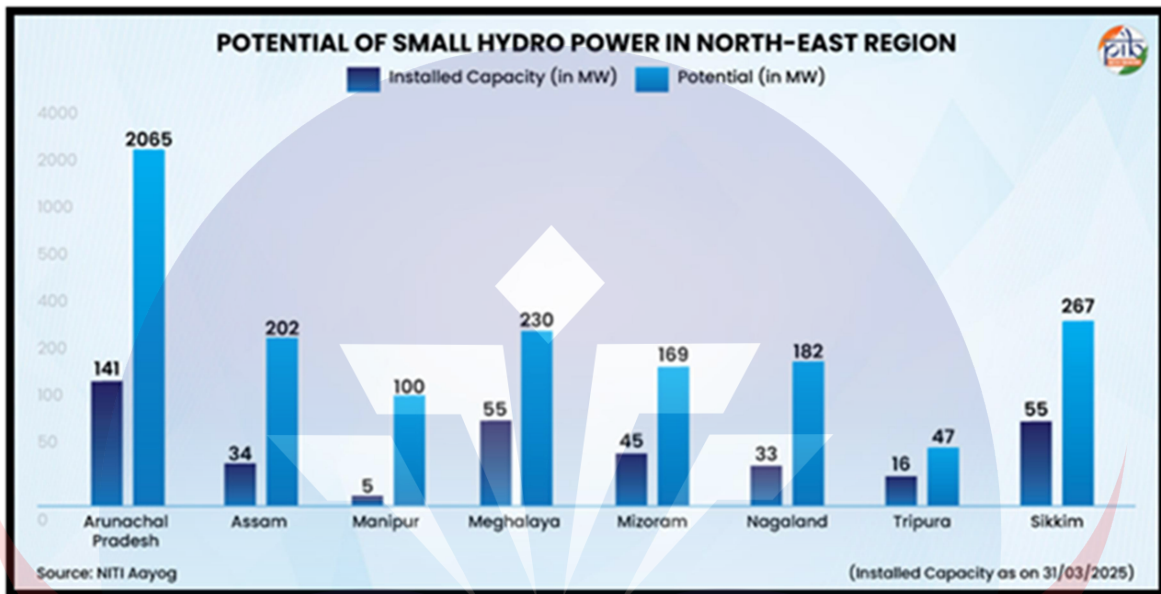
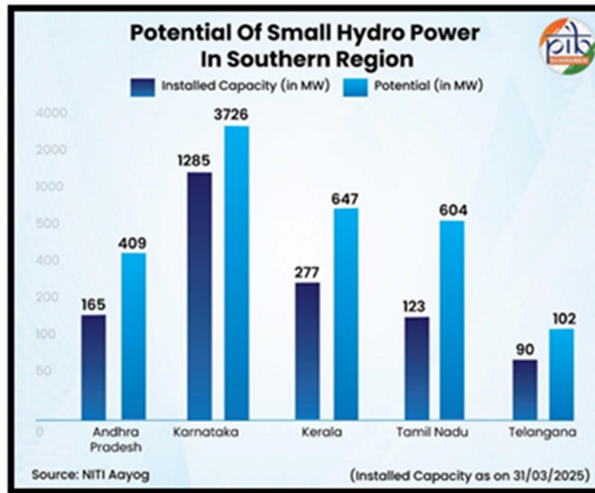
Source: MNRE

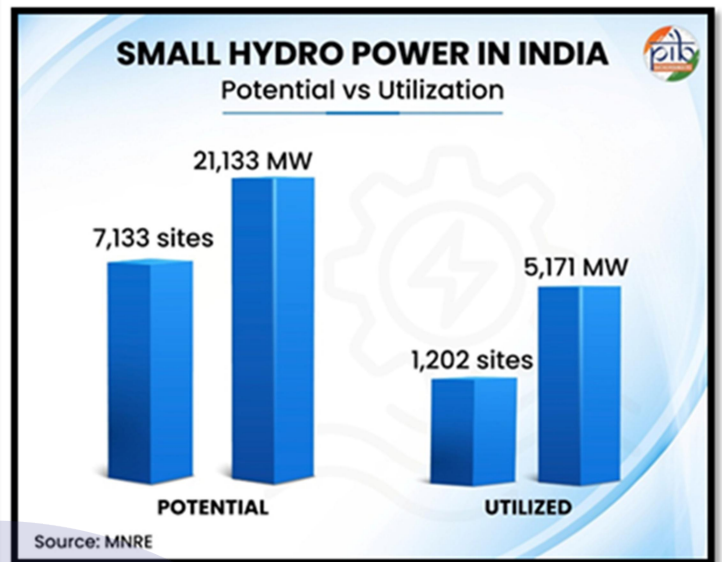
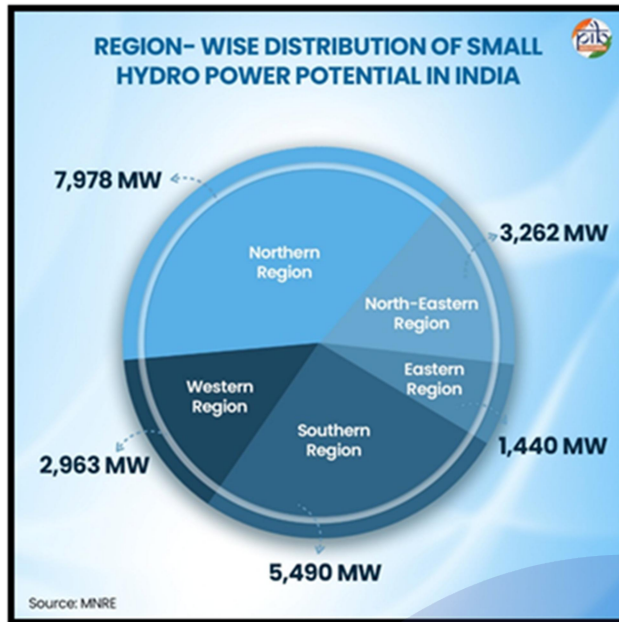
**Financial Support:** ₹3.6 crore/MW (or 30% of cost, whichever is lower, up to ₹30 crore) for NE states and international border districts; ₹2.4 crore/MW (or 20%, up to ₹20 crore) for other locations.

**Expected Impact:** Attract ~₹15,000 crore investment; generate ~51 lakh person-days of employment during construction; support for preparation of DPRs for at least 200 projects (₹30 crore allocated separately).

**India's SHP Potential:** 21,133.61 MW across 7,133 identified sites; ~5,171 MW (24.5%) already harnessed. Regional breakdown: Northern (7,978 MW, 38%), Southern (5,490 MW, 26%), North-Eastern (3,262 MW, 15%), Western (2,963 MW, 14%), Eastern (1,440 MW, 7%). Arunachal Pradesh leads in NE with 2,064.92 MW; Karnataka leads in South with 3,726.49 MW.







SHP (up to 25 MW) is administered by the **Ministry of New and Renewable Energy (MNRE)**. Large hydro (>25 MW) falls under the Ministry of Power.

Run-of-the-river projects generate electricity using the natural flow of water without large dams, ensuring minimal ecological disruption. SHP projects on canal falls or dam-toe utilise drops in water levels in irrigation canals or below dams to generate electricity.

#### 4.11 India – New Zealand Free Trade Agreement

**Key Features:** Eliminates duty on 100% of Indian exports; USD 20 billion investment commitment; emphasis on MSMEs and women-led enterprises; India protects dairy and agriculture; large win for textiles and leather; New Zealand facilitates AYUSH and Traditional Medicine Services for the first time; Student Mobility and Post Study Work Visa for STEM graduates; new visa pathway for 5,000 skilled occupations.

India and New Zealand announced FTA negotiations on **16 March 2025** and concluded in a record **9 months** — the fastest concluded free trade agreement. In the past few years, 9 Free Trade Agreements have been signed spanning 38 developed countries.



#### Bilateral Trade Context

- New Zealand is India's **second-largest trading partner in Oceania**.
- Merchandise trade: USD 873 million (2023–24) to **USD 1.3 billion (2024–25)** — a 49% jump.
- India's services exports to New Zealand grew 13% in 2024, reaching USD 634 million.
- India maintained a **positive trade balance** in 2024-25; exports increased by 130% over 10 years while imports increased only 7.21%.

- ~300,000 persons of Indian origin live in New Zealand (~5% of population).

### Salient Features

- **100% duty-free access** for all Indian exports to New Zealand.
- **USD 20 billion investment** commitment over 15 years; rebalancing clause incorporated to address any shortfall.
- India offered market access in **70.03% of tariff lines**; 29.97% in exclusion (covering 95% of New Zealand's bilateral trade).
- **30%** of tariff lines: immediate duty elimination (wood, wool, sheep meat, leather).
- **35.60%**: phased elimination over 3, 5, 7, and 10 years.
- **4.37%**: tariff reductions (wine, pharmaceutical drugs, polymers, aluminium).
- **0.06%**: tariff rate quotas (Manuka honey, apples, kiwi fruit, albumins).
- Exclusions include dairy (milk, cream, whey, yoghurt, cheese), vegetable products (onions, chana, peas), sugar, gems and jewellery, copper, aluminium.
- **Joint Agriculture Productivity Council** monitors TRQ delivery.
- **AYUSH/Traditional Medicine**: New Zealand facilitates trade in Ayurveda, Yoga, and other AYUSH services for the first time with any country.
- **Student Mobility Annex**: Indian students can work up to 20 hours/week while studying; post-study work visas (STEM Bachelor: 3 yrs; Master's: up to 3 yrs; Doctorate: up to 4 yrs).
- **TEE Visa**: 5,000 skilled Indian professionals per year; stay up to 3 years — sectors include AYUSH, IT, Engineering, Healthcare, Education, Construction.
- **Working Holiday Visa**: 1,000 young Indians annually; 12 months, multiple entry.
- **GI Protection**: New Zealand committed to amend its laws within 18 months to provide EU-level GI protection for Indian products.



**INDIA NEW ZEALAND FTA**

**UNLOCKING NEW OPPORTUNITIES IN SERVICES SECTOR**

- Market access in 118 services sectors/sub-sectors, Most Favoured Nation in 139 services sectors/sub-sectors
- Multiple entry 12-month Working Holiday visas for 1,000 young Indians yearly to promote global exposure, skill development, and international experience

Source: Ministry of commerce and industry

- **Organic Products Mutual Recognition Arrangement:** Basmati rice, Flax seeds, Isabgol, Soyabean oil cake, Organic Black Tea.
- **Customs Clearance:** Standard cargo within 48 hours; express/perishable within 24 hours.



- **Cultural Chapter:** Dedicated cooperation on traditional knowledge, AYUSH, audio-visual industries, tourism, sports, and engagement with Maori communities.

#### 4.12 Inland Waterways of India

**Overview:** India has a network of **111 National Waterways** (total length 20,187 km) across 23 States and 4 Union Territories. **32 National Waterways** are currently operational. Budget 2026-27 announced operationalisation of **20 new NWs** over 5 years. Cargo on NWs reached **145.84 MMT** in FY 2024-25.



Inland waterways use 3–6 times less energy than road transport and up to 2 times less than rail. A standard inland vessel carrying ~2,000 tonnes can replace nearly 125 trucks of 16-tonne capacity.

#### Key Developments — Budget 2026-27

- Operationalise 20 new NWs over 5 years; launch **Coastal Cargo Promotion Scheme** to raise combined inland waterways and coastal shipping share from 6% to **12% by 2047**.
- Operationalise **NW-5 in Odisha** connecting Talcher-Angul with Kalinga Nagar, Paradip, and Dhamra ports; establish Regional Centres of Excellence along the NW-5 stretch.
- Establish **ship repair ecosystem in Varanasi and Patna**.

**Target by 2030:** IWT modal share: 2% to 5%; cargo volumes: >200 MMT. **Target by 2047 (Maritime Amrit Kaal Vision):** Cargo volumes >500 MMT.



Dredging means **removing sand, silt, and debris from the bottom of lakes, rivers, harbors, and other waterways**.

Dredging helps maintain or increase the depth of navigation channels, anchorages, and berthing areas in waterways so boats and ships can move safely.

Vessels need enough water to float without touching the bottom. This required depth keeps rising as larger ships are used. Since big vessels carry most imported goods in the country, dredging in waterways becomes very important for the economy.

The Economic Survey 2025-26 notes the **Kochi Water Metro** as a major achievement in India's Inland Water Transport sector. It has been operational since 2023 and marks a significant shift in urban mobility by reviving inland waterways as a sustainable mass transit system.

The project includes a planned network of 15 routes covering about 78 km in Kochi. It is proposed to connect 10 islands through 38 modern terminals and jetties. The total project cost is approximately **₹819 crore**.

#### Cargo and Passenger Growth

- Cargo on NWs: **145.84 MMT (FY 2024-25)** and 198 MMT (till February 2026 in FY 2025-26).
- Passenger traffic: 1.61 crore (2023-24) to **7.6 crore (2024-25)**.
- Combined cargo handling capacity of major ports: 555 MTPA (2013-14) to **1,681 MTPA (2024-25)**.

#### Key Legislation and Schemes

The Inland Waterways Authority of India (IWAI), is an autonomous organization under the Ministry of Ports, Shipping & Waterways constituted on 27th October, 1986.

The National Waterways Act, 2016 declared 111 (5 pre-existing and 106 new) waterways across the country.

- **Inland Waterways Authority of India Act, 1985:** Established IWAI.
- **National Waterways Act, 2016:** Declares 111 NWs.

The Jalvahak-Cargo Promotion Scheme, 2024 has a budget of ₹95.42 crore for a period of 3 years, covering the financial years 2024-25 to 2026-27.

The Jal Samridhi portal was launched under the National Waterways (Construction of Jetties/Terminals) Regulations, 2025.

- **Jalvahak Cargo Promotion Scheme (December 2024):** Reimburses up to 35% of actual operating cost; expected to shift 800 million tonne-km of cargo (~17% of total NW cargo). Operational on NW-1, NW-2, and NW-16 via Indo-Bangladesh Protocol (IBP) route.
- **Inland Vessels Act, 2021:** Uniform rules for inland waterways.

The Inland Vessels Act, 2021 applies to all inland vessels, including mechanically propelled, non-mechanically propelled, special-category vessels, and vessels registered under other laws.

The strategic plan under the Coastal Shipping Act, 2025, proposes measures that promote the building, registration and participation of Indian vessels in coastal shipping and recommends the conditions under which vessels registered under the Inland Vessels Act, 2021 may engage in India's coasting trade.

- **Coastal Shipping Act, 2025:** Central Government to publish National Coastal and Inland Shipping Strategic Plan within 2 years.

- **Harit Nauka Green Transition Guidelines (January 2024):** Target 30% reduction in carbon intensity of passenger transport by 2030; 70% by 2047; 1,000 inland vessels greened over 10 years; 50% green fleet by 2033 and 100% by 2045.

**River Cruise Tourism (Roadmap 2047):** 371 voyages (2023-24) to 443 (2024-25) — a 19.4% rise. Cruise vessels: 3 (2013-14) to **25 (2024-25)**.

**Jal Marg Vikas Project (NW-1, Varanasi-Haldia):** ₹5,061.15 crore project. Cargo growth: **220%** (5.05 MMT in 2014-15 to 16.38 MMT in 2024-25). Quick Pontoon Opening Mechanism (QPOM) enables vessels to pass in just 5 minutes. **Arth Ganga**

**(JMVP-II):** 66 community jetties operational; serving ~1.22 lakh users daily.

**Digital Platforms:** CAR-D (Cargo Data portal), LADIS (water depth information), River Information Services (RIS), IWAI Vessel Tracker and PANI Portal, Jal Samridhhi Portal (for jetty/terminal applications — promotes NOC process), JALYAN and NAVIC Portal.

RIS combines vessel tracking technologies, weather and water sensors, and information technology systems to provide real-time data to vessel operators and authorities.

An investment of ₹45,000 crore has been committed for the development of river cruise tourism in the country.

Of this, around ₹35,000 crore is earmarked for cruise vessels and ₹10,000 crore for cruise terminal infrastructure, to be achieved by the end of Amrit Kaal in 2047.

- Key features of JALYAN and NAVIC Portal**
- Vessel registration and certification, including vessel survey, and crew-related services
  - Support for navigation and vessel operations, including simulator-based training through the National Inland Navigation Institute
  - Information on terminal facilities, developed under the National Waterways (Construction of Jetties/Terminals) Regulations, 2025
  - A grievance redressal system designed to promote transparency, accountability, and user support by allowing stakeholders to submit complaints and feedback

- Current usage highlights, as in April, 2026**
- 9,296 vessel registrations recorded
  - 233 survey applications processed
  - 189 certificates issued

The Jal Samridhhi Portal supports infrastructure development by streamlining approvals, improving procedural efficiency, and helping reduce logistics costs.

- Key features of IWAI Vessel Tracker and PANI Portal**
- Real-time information on river depth, water currents, and navigation hazards
  - Route planning tools for vessel operators and skippers
  - SMS alerts and notifications for obstructions and low water depth
  - Geo-fencing, electronic navigation charts, virtual buoys, and traffic updates
  - Mobile application with GPS-based tracking

- Key benefits of IWAI Vessel Tracker and PANI Portal**
- Improved safety and reliability of navigation
  - Reduction in accidents and vessel grounding incidents
  - Faster voyage planning and reduced turnaround time
  - Better support for traffic management and regulatory decisions
  - A strong digital foundation for future autonomous inland water transport systems

LADIS ensures that real-time information on the least available depths is shared with ship, barge, and cargo owners, enabling better planning of transportation on NWs.

#### Key features of CAR-D

- Information on cargo traffic across National Waterways in India
- Commodity-wise cargo movement details
- Cargo data by National Waterway and terminal
- Traffic information on major shippers
- Access for internal stakeholders, external users, and the general public

#### Key benefits of CAR-D

- Helps understand traffic patterns, key commodities, and major logistics players
- Supports cargo consolidation and promotes the potential of inland water transport
- Provides near real-time tracking through an interactive dashboard covering cargo and cruise traffic across all National Waterways
- Offers public access to data, highlighting IWAI's capabilities and the potential of inland water transport

### 4.13 Manufacturing Hubs: Building Integrated Industrial Ecosystems

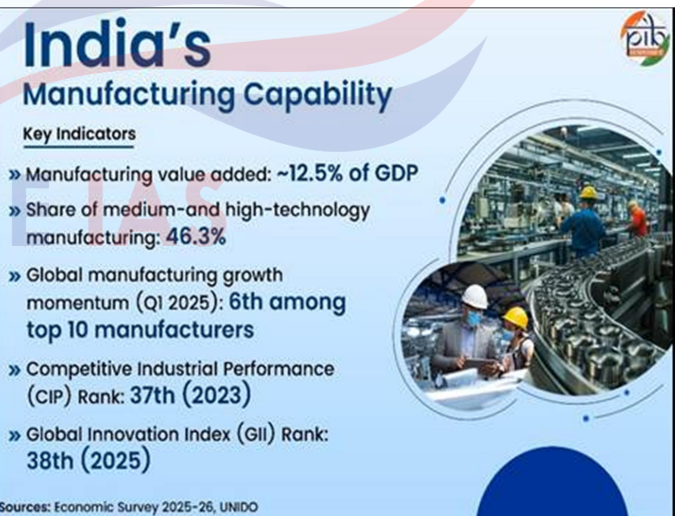
**Highlights:** Manufacturing policy shifted to infrastructure-led, integrated hub development. Budget 2026-27 proposed 3 chemical parks, 7 PM MITRA parks, MSME clusters, and ₹10,000-crore Biopharma SHAKTI. Public capex expanded from ₹2 lakh crore (2014-15) to ₹12.2 lakh crore (2026-27). MSMEs — 7.47 crore enterprises — account for 35.4% of manufacturing output.

Manufacturing contributes ~16–17% of GDP and employs over 27 million workers. India aims to raise manufacturing's GDP share to at least **25% by 2047**. India currently ranks **third globally** as a manufacturing destination; medium- and high-technology activities account for **46.3%** of total manufacturing value added.



#### Hub Types

- **Large Integrated Manufacturing Hubs (NICDP):** 20 industrial smart cities approved across 7 industrial corridors and 13 states; 4 completed: Dholera (Gujarat), Shendra-Bidkin (Maharashtra), Integrated Industrial Township at Greater Noida (UP), and Vikram Udyogpuri near Ujjain (MP).
- **PM MITRA Parks:** Mega Integrated Textile Region and Apparel parks announced in Tamil Nadu, Telangana, Gujarat, Karnataka, MP, UP, and Maharashtra.
- **Sector-Specific Ecosystems:** Bulk Drug Parks (Gujarat, Himachal Pradesh, Andhra Pradesh); Semicon India Programme (ECMS 2.0); **Biopharma SHAKTI** (₹10,000 crore, 5 years — includes 3 new NIPERs and 1,000+ accredited clinical trial sites).
- **MSME Clusters (MSE-CDP):** 580 projects approved — 227 CFCs and 353 Infrastructure Development projects. IILB maps industrial estates, clusters, parks, and zones.
- **Industrial Corridors:** DMIC, CBIC (Chennai-Bengaluru), AKIC (Amritsar-Kolkata), VCIC (Vizag-Chennai).



**Budget 2026-27 Key Announcements:** 3 new Chemical Parks; continued PM MITRA implementation; MSME cluster strengthening; tool rooms and testing/calibration facilities; PM GatiShakti for multimodal planning; Biopharma SHAKTI at ₹10,000 crore.

**Institutional Enablers:** PM Gati Shakti National Master Plan (44 central ministries and 36 States/UTs); public capex at ₹12.2 lakh crore BE 2026-27; India Infrastructure Project Development Fund (IIPDF); National Infrastructure Enablement Index (NIEI).

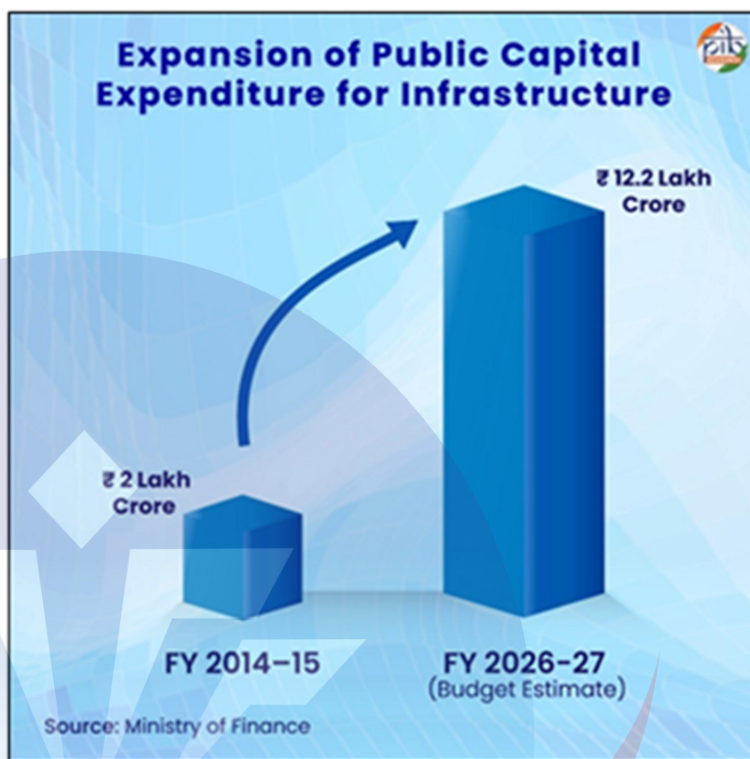
**State Examples:** UP developing Defence Industrial Corridor (Aligarh, Agra, Chitrakoot, Jhansi, Kanpur, Lucknow); Tamil Nadu (the “Detroit of Asia”) expanding electronics and automobile clusters; Gujarat leveraging port-linked manufacturing hubs.

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#### 4.14 Cabinet Approves Two More Semiconductor Manufacturing Units

Two more projects approved under the **India Semiconductor Mission (ISM)**:

- **Crystal Matrix Limited (CML):** Integrated compound semiconductor fabrication and ATMP facility in **Dholera, Gujarat** for Mini/Micro-LED display modules. Includes GaN foundry services with epitaxy on 6” wafers — country’s first commercial Mini/Micro-LED display facility based on GaN Technology.
- **Suchi Semicon Private Limited (SSPL):** OSAT (Outsourced Semiconductor Assembly and Test) facility in **Surat, Gujarat** for manufacturing discrete semiconductors.



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#### 4.15 Vadinar Ship Repair Facility

The Cabinet Committee on Economic Affairs approved a state-of-the-art **Ship Repair Facility at Vadinar, Gujarat** — jointly implemented by **Deendayal Port Authority (DPA)** and **Cochin Shipyard Limited (CSL)** with a combined investment of **₹1,570 crore**.

The facility will enable repair of vessels up to **300 m** in length (India currently lacks capacity for vessels over 230 m), significantly reducing dependence on foreign shipyards and curbing foreign exchange outflow. Expected to create **~290 direct** and **~1,100 indirect jobs**.

The initiative supports Maritime India Vision 2030 and Maritime Amrit Kaal Vision 2047.

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#### 4.16 AI-Powered Financial Inclusion in India

**Key Takeaways:** Digital Public Infrastructure (DPI) and Artificial Intelligence provide the backbone for scalable and secure AI-led financial services. ULI enables digital access to multiple data sources. UPI allows instant money transfers. “Banking BHASHINI” model to be developed. Enabling Framework for Regulatory Sandbox fosters responsible fintech innovation. AI-powered solutions reduce reliance on informal lending by MSMEs.



### Digital Foundation — JAM Trinity

- **Jan Dhan–Aadhaar–Mobile:** Over 144 crore Aadhaar numbers generated; Jan Dhan accounts grown to **58.16 crore** (from 14.72 crore in 2015) with cumulative deposits of **₹3.02 lakh crore** (as of 29 April 2026); **125.87 crore wireless subscribers**; 5G covering 99.9% of districts.
- **UPI:** In March 2026, ₹29.53 lakh crore worth of **2,264.11 crore transactions** processed; 691 banks on platform; accounts for **81%** of total retail payment volume.



- **DBT:** Cumulative transfer of **₹49.09 lakh crore** to citizens (as of January 2026); saved **₹4.31 lakh crore** by eliminating duplicates and fake beneficiaries.

### AI and Policy Initiatives

- **BHASHINI (February 2026 MoU with RBI):** Integrates language AI models for multilingual banking access across 22 scheduled Indian languages. “**Banking BHASHINI**” — a domain-specific language model for banking — to be jointly developed by DIBD and RBI.
- **RBI Regulatory Sandbox:** Provides a controlled environment for testing fintech products like APIs, digital KYC, and cybersecurity tools; based on FinTech Working Group recommendations.
- **MuleHunter.AI (December 2024, RBIH):** AI/ML tool to identify and mitigate “mule” bank accounts used in cybercrimes; successful pilots with large public sector banks.
- **Mission Digital ShramSetu (October 2025):** AI-driven ecosystem for India’s **490 million informal workers** using AI, Blockchain, and Immersive Learning; empowers workers with digital platforms and social protection.

### AI-Based Credit Scoring

AI leverages alternative data (digital payments, GST filings, bank statements, utility payments) for creditworthiness assessment. AI-driven credit models could unlock an estimated credit gap of **USD 130–170 billion**.

- **ULI (Unified Lending Interface):** As of December 2025, **64 lenders** (41 banks, 23 NBFCs) onboarded; utilising **136 data services across 12 loan journeys**; being expanded to RRBs and DCCBs.
- **Account Aggregator (AA) Framework:** Consent-based financial data sharing. 17 companies granted Certificates of Registration. **2.6 billion accounts enabled; 252.9 million users** linked accounts (as of 31 December 2025). Facilitates faster loan approvals by reducing documentation requirements.

### 4.17 Empowering the Grassroots Economy — MSMEs

**Highlights:** MSMEs contribute 31.1% to GDP, 48.58% to exports, support livelihoods for ~32.8 crore people. Over 7.9 crore enterprises registered through Udyam and Udyam Assist platforms.

MSMEs comprise **7.47 crore enterprises** and employ **32.82 crore persons** — second-largest source of employment after agriculture. Account for **35.4%** of manufacturing output.



### Credit and Financial Support

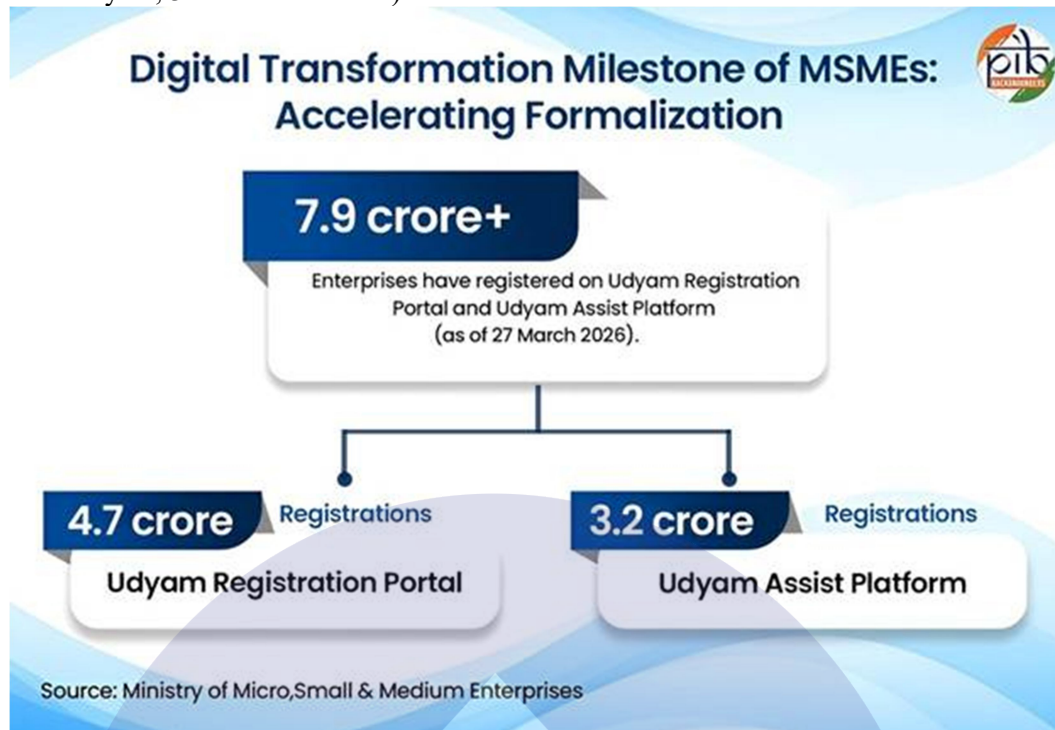
- **CGTMSE (Credit Guarantee Scheme):** Ceiling enhanced from ₹5 crore to **₹10 crore** for banks (from 1 April 2025). Transgender-owned enterprises: 10% concession in guarantee fees + up to **85%** guarantee coverage.
- **Self-Reliant India (SRI) Fund:** ₹50,000 crore equity fund through Fund of Funds mechanism (₹10,000 crore from Government, ₹40,000 crore from PE/VC). As of November 2025, supported **682 MSMEs** with ₹15,442 crore. Budget 2026-27 added **₹2,000 crore**.
- **ECLGS (2020):** ₹3.61 lakh crore in guarantees; 1.19 crore borrowers benefited; ~14.6 lakh MSME accounts saved from NPA classification; extended till March 2023.

### Legal and Institutional Support

- **MSMED Act, 2006:** Payment mandatory within 45 days. **161 MSEFCs** set up across States/UTs.
- **SAMADHAAN Portal:** Online filing and monitoring of delayed payment cases; as of December 2022, ₹1,65,034 crore dues paid.
- **Online Dispute Resolution (ODR) Portal (June 2025):** End-to-end digitised resolution of delayed payment cases.

### Formalisation

- **Udyam Portal + Udyam Assist Platform:** As of March 2026, **7.9 crore enterprises registered** (4.72 crore on Udyam; 3.21 crore on UAP).

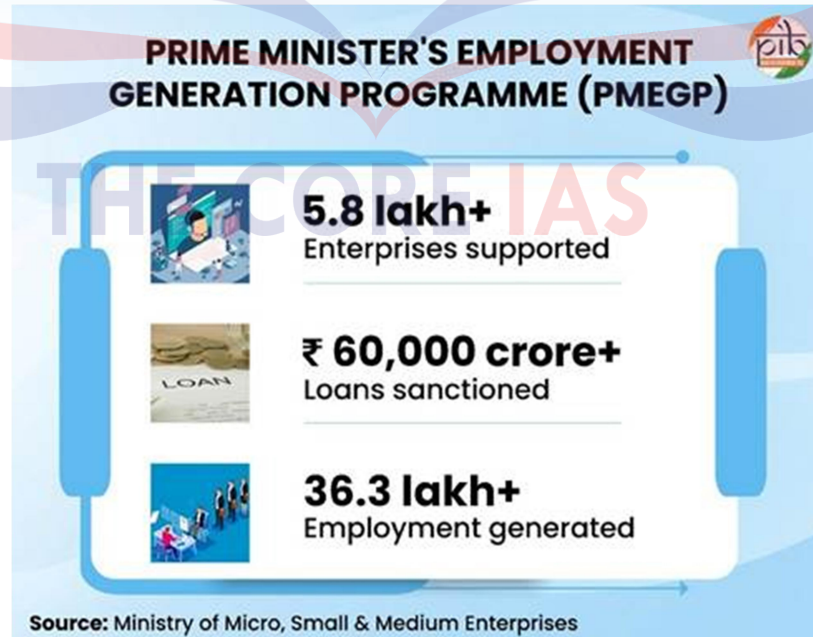


- Retail and wholesale traders included under MSMEs from July 2021.
- Non-tax benefits continue for **3 years** when an MSME graduates to a higher classification — removes disincentive to scale.

**Digital Platforms:** GeM, TReDS, MSME SAMBANDH, PMEGP Portal, PM Vishwakarma Portal, MSME Champions Portal, Online Dispute Resolution portal.

**Entrepreneurship Schemes**

- **PMEGP:** FY 2021–22 to 2025–26: **5.8 lakh+ projects** supported; loans >₹60,000 crore sanctioned; margin money subsidy >₹13,450 crore to >4 lakh units; **~36.3 lakh employment** generated. Maximum project cost: ₹50 lakh (manufacturing), ₹20 lakh (services). Special category subsidy: 35% in rural, 25% in urban areas.



- **PM Vishwakarma Scheme (2023):** Supports 18 traditional trades. As of March 2026: **30 lakh+ artisans registered**; 26.7 lakh completed skill verification; 23.7 lakh undergone basic training; 5.9 lakh loans of

~₹5,050 crore approved; 25.8 lakh e-vouchers issued. Collateral-free loans at **5% concessional rate** (Government provides 8% interest subvention).



**Budget 2026-27:** ₹10,000 crore SME Growth Fund; TReDS mandated across Central PSEs; additional ₹2,000 crore to SRI Fund.

#### 4.18 FAQs on New IIP Series with Base Year 2022-23

The **Index of Industrial Production (IIP)** is a composite indicator measuring changes in the volume of production over time relative to a base year. Compiled and released by the **National Statistics Office (NSO)**, **MoSPI** — released monthly with a 28-day lag from the reference month.

- This is the **10th revision** of the IIP base year. Previous base years: 1937, 1946, 1951, 1956, 1960, 1970, 1980-81, 1993-94, 2004-05, 2011-12.
- **New base year: FY 2022-23** — selected for representing a relatively stable economic period, aligned with the base years of GDP and WPI.
- New series **expands sectors** to include Gas Supply and Water Supply, Sewerage & Waste Management (in addition to existing Mining, Manufacturing, and Electricity). Mining sector now also includes minor minerals and rare earth minerals.
- **Item basket based on ASI 2021-22 and ASI 2022-23 data.** Items covering up to 90% of output in each industry group (NIC 3-digit) form the core basket; emerging products contributing more than 2% of output also included. **Laspeyres fixed-based index formula** used.

#### Item Basket Comparison:

Sector	Old (2011-12)	New (2022-23)
Mining and Quarrying	1 group (29 items)	3 groups (44 items)
Manufacturing	405	455
Electricity & Gas Supply	1	3
Water Supply/Sewerage/Waste	—	2
<b>Total Item Groups</b>	<b>407</b>	<b>463</b>

# POLITY & GOVERNANCE

## 5.1 Mooshahary Committee

The Government constituted a **Review Committee headed by Shri R.S. Mooshahary** to review recommendations of earlier Commissions/Committees on police reforms. The Committee shortlisted **49 recommendations**, which were communicated to State Governments and UT Administrations for appropriate action. “Police” is a State subject; implementation status varies across states.

## 5.2 Juvenile Justice Act, 2015

The Ministry of Women and Child Development administers the **Juvenile Justice (Care and Protection of Children) Act, 2015**. Key statutory structures include State Child Protection Society, Child Welfare Committees (CWCs), Juvenile Justice Boards (JJBs), and District Child Protection Units. Child Care Institutions (CCIs) are also established under the Act.

- **JJ Act 2015 (Sections 27–30):** CWCs empowered to take decisions for children in need of care and protection.
- **Section 54:** Inspection Committees mandated to visit facilities housing children. District Magistrates are nodal authorities.
- **Section 41:** States/UTs empowered to cancel or withhold registration of CCIs failing to provide rehabilitation and reintegration services.
- **Section 109:** National/State Commissions for Protection of Child Rights monitor Act implementation.
- **Mission Vatsalya:** Implemented through District Child Protection Units under District Magistrate supervision. Ministry holds zonal conferences and sensitisation workshops for effective implementation.

## 5.3 Government Deploys Multi-Tier Mechanism to Curb Fake News

A **Fact Check Unit (FCU)** under the Press Information Bureau (PIB), Ministry of Information and Broadcasting, identifies misinformation and fake news relating to the Central Government. During **Operation Sindoor**, the FCU actively fact-checked false claims; the Ministry issued directions for blocking over **1,400 URLs** — including false, misleading, anti-India content, communally sensitive material, and inciteful content against the Indian Armed Forces primarily from Pakistan-based social media accounts.

Under Section 69A of the IT Act, 2000, the Government issues orders to block websites, social media handles, and posts in the interest of sovereignty and integrity of India, defence, security, and public order.

### Regulatory Mechanisms Across Media

- **Print Media:** Press Council of India (PCI) “Norms of Journalistic Conduct” — violations may lead to warning, admonition, or censure under Section 14 of the PCI Act.
- **Television:** Cable Television Networks (Regulation) Act, 1995 (Programme Code); Cable TV Network (Amendment) Rules 2021 — three-tier grievance redressal mechanism.
- **Digital Media:** IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 — Code of Ethics with a three-level institutional mechanism.
- **Community Radio Stations (CRSs):** Programmes must be of immediate local relevance; Advisory and Content Committee from local community; preferred broadcast in local languages and dialects.

## 5.4 Anubhav Initiative

The **Anubhav Initiative** was launched in March 2015 by the Department of Pension and Pensioners’ Welfare (DoPPW) to document the administrative history of the country through knowledge-sharing and best practices by retired and retiring government employees. The **National Anubhav Awards Scheme** incentivises outstanding

contributions — **63 National Anubhav Awards and 29 Jury Certificates** conferred to date. During the recent awareness campaign, **2,141 write-ups** were published at an all-time high — 15 outstanding entries will be selected for the upcoming National Anubhav Awards Ceremony, 2026.

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### 5.5 Sādhana Saptah

**Sādhana Saptah** (Strengthening Adaptive Development and Humane Aptitude for National Advancement) 2026 was organised from **2 to 8 April 2026** by the Department of Personnel and Training (DoPT), Capacity Building Commission, and Karmayogi Bharat. Tagline: *“Ham Bane Karmayogi”*. Marks the Foundation Day of the Capacity Building Commission and five years of **Mission Karmayogi**.

#### Mission Karmayogi Framework

- Moves from a rule-based to a **role-based, competency-driven** civil service approach.
- Supported by the **Capacity Building Commission (CBC, 2021)** and **Karmayogi Bharat SPV (2022)**.
- **iGOT Karmayogi Platform**: 1.5 crore+ learners; **8 crore+ course completions**; 4,600+ courses in multiple languages; 130+ capacity building plans; learning outcomes integrated with performance appraisal.

#### Three Themes of Sādhana Saptah

- **Technology (3–4 April)**: AI in governance, Digital Public Infrastructure, data-informed decision-making, prompt engineering, automation.
- **Tradition (5–6 April)**: Indian Knowledge Systems, ethical frameworks from Indian philosophy, historical community-based governance.
- **Tangible Outcomes (7–8 April)**: Measuring public value, monitoring frameworks, citizen impact tracking, dashboard-based monitoring.



**Expected Outcome:** Each Ministry/Department to produce 2 priority technology interventions, 2 traditional/indigenous models, and 3 measurable outcome commitments for FY 2026–27, compiled into a cross-sectoral compendium under 10 sectors.

**Key Initiatives Launched:** Karmayogi Kshamata Connect; Rashtriya Jan Sewa Programme; UNNATI Portal; iGOT Learning Assessment Framework; Karmayogi Gaan; AI Powered Amrit Gyaan Kosh Suite; Capacity Building for Viksit Panchayat; Administrative Capacity Building for Scientists.

Scale: Over 100 Central Ministries/Departments, 36 States/UTs, and 250+ Civil Services Training Institutions.

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### 5.6 Jan Vishwas (Amendment of Provisions) Bill, 2026

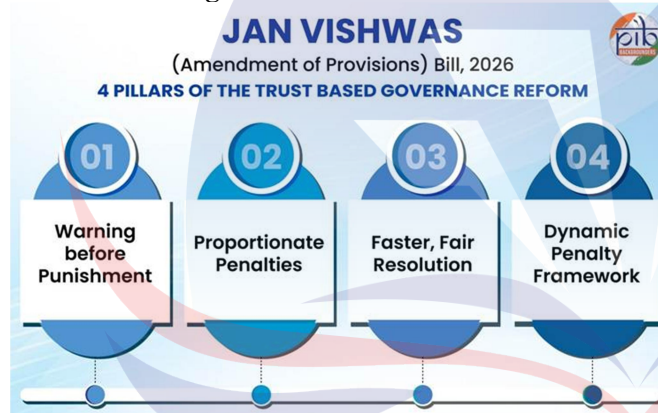
**Key Takeaways:** Proposes amendments in **79 Central Acts** administered by **23 Ministries**, covering **784 provisions** (717 for decriminalisation; 67 for ease of living). Removes criminal penalties for minor procedural lapses. Introduces graded enforcement. Reduces compliance burden for MSMEs.

**Background:** The **Jan Vishwas Act, 2023** amended 42 Central Acts and decriminalised 183 provisions. The **Jan Vishwas Bill, 2025** (introduced 18 August 2025 in Lok Sabha) was referred to a Select Committee that held 49 sittings and submitted its report on 13 March 2026. The expanded **Jan Vishwas Bill, 2026** follows.



#### Four Pillars

- **Warning before Punishment:** First-time/minor lapses addressed through warnings.



- **Proportionate Penalties:** Calibrated to severity.
- **Faster and Fair Resolution:** Dedicated adjudicating officers and appellate authorities.
- **Dynamic Penalty Framework:** Periodic revision of penalties to remain relevant.

#### Citizen-Centric Reforms

- Railways Act, 1989: Refusing to vacate reserved berth — criminal fine converted to civil penalty of up to ₹1,000.
- Clinical Establishments Act, 2010: Minor deficiencies — civil penalty of up to ₹10,000 (instead of criminal prosecution).
- Calcutta Metro Railway Act: Smoking in metro — civil penalty of ₹2,000.

## JAN VISHWAS

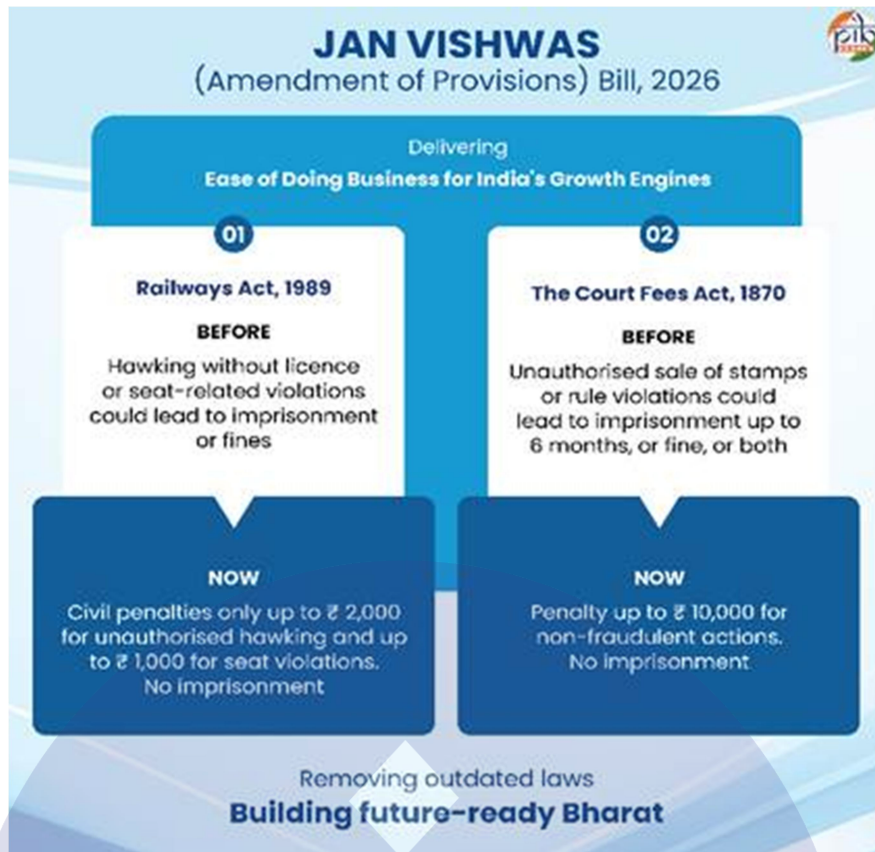
(Amendment of Provisions) Bill, 2026

### Delivering

### Ease of Living & Ease of Doing Business for Every Citizen

- 317 provisions Fine converted into civil penalty
- 158 provisions Fine removed entirely
- 113 provisions Jail & fine converted into civil penalty
- 57 provisions Jail & fine removed
- 63 provisions Warning/notice for first-time default
- 17 provisions Jail term reduced
- 17 provisions Compounding of offences introduced
- 29 provisions Imprisonment removed
- 2 provisions Imprisonment converted into civil penalty
- 1 provision Nature of imprisonment rationalised
- 6 provisions Scope of offence limited

Criminal provisions replaced with smarter, citizen-friendly alternatives



- **Delhi Police Act, 1978 (Section 102(c)):** Being outdoors at night without “satisfactory explanation” — **offence abolished entirely** (colonial-era provision incompatible with modern principles of liberty and the Bharatiya Nyaya Sanhita).



- Motor Vehicles Act: Driving licence valid for **30 days after expiry** (grace period introduced).
- Motor Vehicles Act (Section 166): Accident victims can approach Claims Tribunal up to **12 months beyond** the prescribed period on showing sufficient cause.
- NDMC Act: **Unit Area Method** standardised across the board for property taxation.
- Motor Vehicles Act (Section 178): Travelling without a ticket reclassified as civil violation (up to ₹500).

#### MSME Benefits

- Legal Metrology Act, 2009: **Improvement notice** for first lapse (instead of direct penalty) for MSME importers.
- Private Security Agencies Act: Provision for not displaying licence at premises — removed.

**JAN VISHWAS**  
(Amendment of Provisions) Bill, 2026

Delivering  
**Ease of Doing Business for India's Growth Engines**

<b>01</b>	<b>02</b>
<b>Legal Metrology Act, 2009</b>	<b>Central Silk Board Act, 1948</b>
<b>BEFORE</b> Non-registration, false information, or record lapses attracted fines and imprisonment, with immediate penalties	<b>BEFORE</b> False statements, obstruction, or failure to produce records could lead to imprisonment up to 1 year or fine
<b>NOW</b> Improvement notice for first offence, penalty for second, and no imprisonment for repeat offences; fines retained for continued non-compliance. Rule violations now attract higher, structured penalties.	<b>NOW</b> Warning for first instance, penalty of ₹ 25,000- ₹ 1 lakh for repeat offences; obstruction provision removed

Removing outdated laws  
**Building future-ready Bharat**

- MMDR Act: Imprisonment replaced with monetary penalty of up to ₹50 lakh.
- Tea Act, 1953: Warning for first contravention; penalties only for subsequent violations.

**JAN VISHWAS**  
(Amendment of Provisions) Bill, 2026

Delivering  
**Ease of Doing Business for India's Growth Engines**

**Tea Act, 1953**  
**Before:** False returns or failure to furnish returns attracted a fine up to ₹1,000  
**Now:** Warning for first instance, penalty up to ₹1 lakh for subsequent contraventions

**Copyright Act, 1957**  
**Before:** Errors in Copyright Register record led to imprisonment  
**Now:** Provision removed

Removing outdated laws  
**Building future-ready Bharat**

- Copyright Act, 1957: False entry in Register of Copyrights — imprisonment provision removed.
- Central Silk Board Act, 1948: Warning for first contravention; graduated monetary penalties for repeats.

## 5.7 Rashtriya Panchayati Raj Diwas

**National Panchayati Raj Day** is observed every year on **24 April**, commemorating the implementation of the **73rd Constitutional Amendment Act, 1992** (in force from 1993), which granted constitutional status to Panchayati Raj Institutions (PRIs).

**On this occasion, the Panchayat Advancement Index (PAI) 2.0 was launched** at Vigyan Bhawan, New Delhi, along with three illustrated publications under the Panchayat Dharohar Initiative — monographs on rural heritage of Tripura, Tirupati, and Uttarkashi.

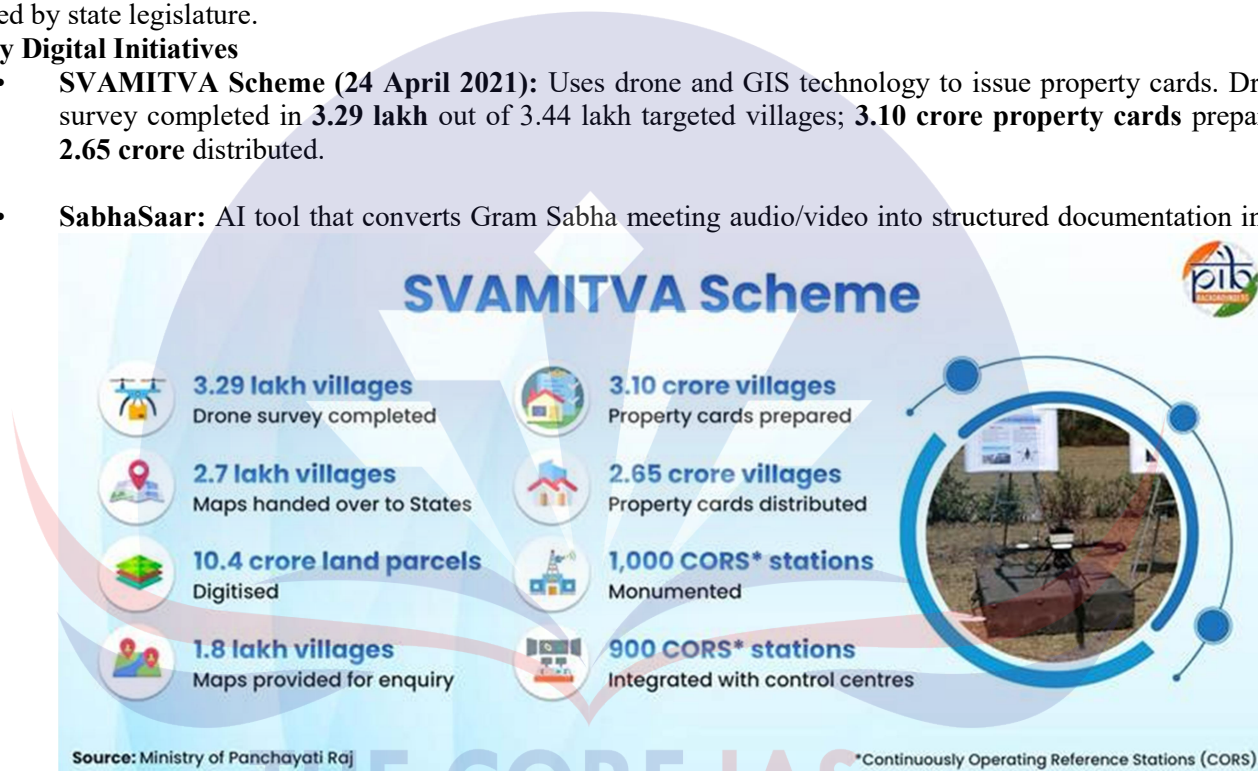
India has more than **2.5 lakh Panchayats** and **24.04 lakh elected representatives**, of whom approximately **49.75% are women**.

**Historical Background:** Balwant Rai Mehta Committee (1957) proposed a three-tier structure; Rajasthan was the first state to implement it in 1959. The 73rd Constitutional Amendment made PRIs mandatory.

**Three-Tier Structure:** Gram Panchayat (village level) → Block Panchayat (intermediate) → District Panchayat (district level). The Gram Sabha is the foundational permanent unit — not among the three tiers; its powers are fixed by state legislature.

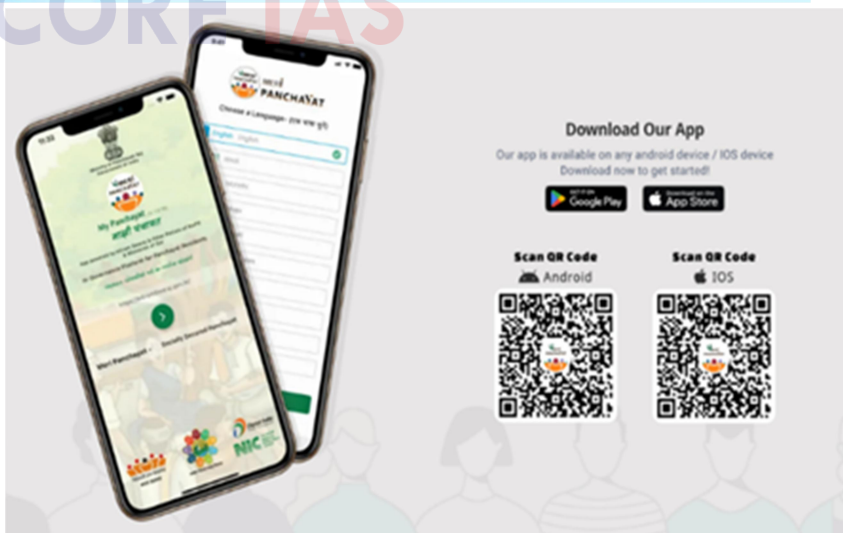
### Key Digital Initiatives

- **SVAMITVA Scheme (24 April 2021):** Uses drone and GIS technology to issue property cards. Drone survey completed in **3.29 lakh** out of 3.44 lakh targeted villages; **3.10 crore property cards** prepared; **2.65 crore** distributed.
- **SabhaSaar:** AI tool that converts Gram Sabha meeting audio/video into structured documentation in **23**



regional languages via Bhashini. Used by **1 lakh+ Gram Panchayats** (as of January 2026).

- **eGramSwaraj:** Linked with PFMS in 22 Indian languages. In 2025–26: 2.55 lakh GPs uploaded development plans; 2.59 lakh GPs onboarded PFMS; **₹53,342 crore transferred** through eGramSwaraj-PFMS interface; 1.6 crore vendors registered.
- **Gram Urja Swaraj:** Tracks renewable energy assets at GP



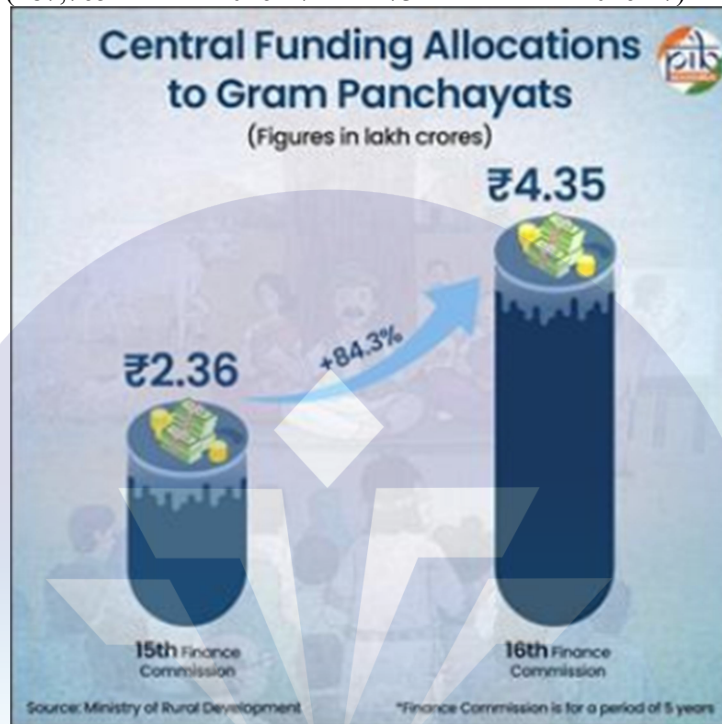
level — covers 2,080 GPs (2,020 solar, 60 hydel, 69 wind, 106 biogas).

- **Meri Panchayat App:** m-Governance platform by NIC aligned with SDG 2030 localisation.

**RGSA (Rashtriya Gram Swaraj Abhiyan) — 2025-26:** 45 lakh+ participants trained; 33,142 on exposure visits; 632 Panchayat Learning Centres set up; 1,087 GP Bhawans constructed.

**PESA Act:** Applicable to Fifth Schedule areas of 10 states — 77,564 villages, 22,040 Panchayats, 664 blocks covered. Centre of Excellence on PESA at IGNTU, Amarkantak. In FY 2025-26: 12,500+ personnel engaged in PESA implementation; 1,03,384 participants trained.

**Financial Empowerment:** 15th Finance Commission (2021–26): ~₹2.36 lakh crore recommended for Rural Local Bodies. 16th Finance Commission (2026–31): ~₹4.35 lakh crore. Rural development budget: increased over 211% in last decade (₹87,765 crore in 2016-17 to ₹2.73 lakh crore in 2026-27).



**Women’s Empowerment:** Model Women-Friendly Gram Panchayat (MWFGP) — one model GP per district under SDG Theme 9. “Sashakt Panchayat–Netri Abhiyan” — **1,48,904 Women Elected Representatives** trained.

**Model Youth Gram Sabha (MYGS):** Implemented with DoSEL and MoTA; involves Class 9 and 10 students from JNVs and EMRSs in mock Gram Sabha and Panchayat meetings.

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### 5.8 Panchayat Advancement Index (PAI 2.0)

Released on **24 April 2026** for FY 2023–24. PAI 2.0 evaluates more than **2.5 lakh Gram Panchayats** against **150 indicators and 230 data points** across 9 thematic areas (SDG localisation) — Poverty, Health, Child Welfare, Water, Environment, Infrastructure, Social Justice, Good Governance, and Women’s Empowerment.

National participation: **97.30%** (2,59,867 GPs across 33 States/UTs) — up from 80.79% in PAI 1.0.

**Performance Categories:** Achiever (A+: ≥90), Front Runner (A: 75–90), Performer (B: 60–75), Aspirant (C: 40–60), Beginner (D: <40).

- **3,635 Gram Panchayats** in the Front Runner category.
- **1,18,824 GPs** (~45.72%) in the Performer category.
- Theme 1 (Poverty Free and Enhanced Livelihoods): 3,313 A+ GPs.
- Theme 2 (Healthy Panchayats): 1,015 A+ GPs.

Improvements over PAI 1.0: Reduced from 516 indicators/794 data points to 150/230; single integrated data entry form; mandatory Gram Sabha validation; enhanced auto-porting of data; real-time dashboards; vernacular language support.

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### 5.9 Judges Strength of the Supreme Court

The Union Cabinet approved introduction of **The Supreme Court (Number of Judges) Amendment Bill, 2026** to increase the number of Supreme Court judges by **4** — from **33 to 37** (excluding the Chief Justice of India).

**Historical evolution of judge strength (excluding CJI):** 1956 Act: 10; 1960: 13; 1977: 17; 1986: 25; 2008: 30; 2019: 33; 2026 (proposed): 37.

Constitutional basis: **Article 124(1)** of the Constitution of India.

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### 5.10 Central Prabhari Officer (CPO) Portal

Launched by **NITI Aayog**, the CPO Portal strengthens real-time governance and accelerates last-mile delivery under the **Aspirational Districts and Blocks Programme (ADP/ABP)**. Central Prabhari Officers submit field observations via mobile in real time → Districts view suggestions and submit responses → State Planning Secretaries get a bird's-eye view → NITI Aayog and Line Ministries monitor inputs. Serves as a unified digital interface bridging field observations and administrative action.

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### 5.11 UMMID

**UMMID (Unique Methods of Management and treatment of Inherited Disorders)** is a Government of India programme led by the **Department of Biotechnology (DBT)** focused on prevention, early diagnosis, and management of rare and inherited genetic disorders in newborns and pregnant women. Based on the principle “Prevention is better than cure.”

**Key Pillars:** - **NIDAN Kendras:** National Inherited Diseases Administration Kendras in government hospitals for genetic counseling, prenatal testing, and comprehensive care. - **Outreach in Aspirational Districts:** Targeted screening of thousands of pregnant women and newborns annually. - **Specialised Training Centres:** Funding training in clinical genetics, molecular genetics, and cytogenetics to build a skilled workforce.

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### 5.12 JEEVAN App and SHATAYU

- **JEEVAN (Joint Elderly Empowerment and Virtual Assistance Network):** Mobile application launched by the Ministry of Social Justice and Empowerment for senior citizens.
  - **SHATAYU (Senior Holistic Care Assistance and Training For Your Utility):** A Geriatric Caregiver Dashboard to support and strengthen caregiving services for senior citizens across the country. Launched during the National Workshop on “Creating a Well-Functioning Care Economy.”
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### 5.13 BHAVYA

- **BHAVYA** is a scheme designed to strengthen India's manufacturing ecosystem through development of **100 integrated industrial parks** over 6 years (2026-27 to 2031-32) with a total financial outlay of approximately **₹33,660 crore**.
  - In the first phase, up to **50 industrial parks** will be taken up through a challenge-based competitive selection process.
  - Focus on “investment-ready” industrial ecosystems with plug-and-play infrastructure, multimodal logistics connectivity, reliable utility systems, worker-support infrastructure, digital governance systems, and sustainable development features.
  - Minimum land: **100 acres** (non-hilly states); **25 acres** (hilly/NE states, UTs, smaller states). Larger parks up to 1,000 acres also considered.
  - Aligned with Make in India, PM Gati Shakti, and Viksit Bharat 2047.
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# HISTORY, ART & CULTURE

## 6.1 Protection and Conservation of Monuments in India

### Legislative Framework

- **Article 49:** Constitutional duty on the State to protect monuments, places, and objects of artistic or historic interest declared of national importance.
- **Seventh Schedule:** Union List (Entry 67) — monuments of national importance under the Central Government; State List (Entry 12) — all other monuments under State Governments.
- **Article 51A(f):** Fundamental duty of every citizen to value and preserve India's composite cultural heritage.
- **Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958:** Empowers ASI to declare protected monuments, regulate construction in surrounding areas, and ensure conservation.
- **National Policy for Conservation of Ancient Monuments (2014):** Guides scientific preservation — minimal intervention, use of traditional materials and skills, authentication, integrity, and longevity.

Tangible Cultural Heritage includes physical structures of outstanding universal value (Taj Mahal, Sanchi Stupa). Intangible Cultural Heritage includes living traditions like Yoga, Vedic chanting, and Buddhist chanting of Ladakh — safeguarded under the UNESCO Convention for the Safeguarding of ICH, 2003.

### Archaeological Survey of India (ASI)

- Established in **1861** under the Ministry of Culture.
- Safeguards **3,686 centrally protected monuments** through a network of **~38 Circles**.
- Undertakes structural and chemical conservation, archaeological exploration and excavation, epigraphy, and site museum management.
- Conservation expenditure in 2024-25: **₹374 crore**.

**National Mission on Monuments and Antiquities (NMMA, 2007):** Documented **11,406 Built Heritage and Sites** and **12.48 lakh antiquities**.



After: Varah Statue, Eran, Sagar, M.P



Before: Varah Statue, Eran, Sagar, M.P.

## Ancient Monuments & Archaeological Sites and Remains Act, 1958



### Purpose

Protect and preserve monuments & archaeological sites of national importance

### Covers

- ✓ Immovable Heritage
  - Monuments
  - Sites
  - Structures

### Key Provisions

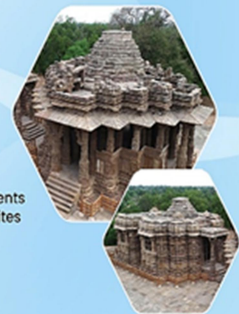
- Declaration of protected monuments
- Regulation of construction near sites
- Control over excavations

### Protection Zones

- 100 m → Prohibited Area
- 200 m → Regulated Area

### Implemented by

- Archaeological Survey of India (ASI)
- National Monuments Authority (NMA)



## Antiquities & Art Treasures Act, 1972

**Purpose**  
Prevent smuggling, illegal trade & export of antiquities

**Covers**  
 Movable Heritage  
 • Artefacts  
 • Sculptures  
 • Antiquities

**Key Provisions**  
 • Mandatory registration of antiquities  
 • Licensing of dealers  
 • Regulation of ownership & trade

**Focus**  
 • Prevent illegal export  
 • Safeguard cultural property

**Implemented by**  
 • Archaeological Survey of India (ASI)

### Emerging Conservation Practices

- **Technology Tools:** LiDAR scanning, GIS mapping, drone-based surveys, 3D laser scanning, photogrammetry, AI-enabled documentation platforms. Drone surveys conducted in collaboration with institutions like NISER.
- **Adopt a Heritage 2.0 Programme:** CSR-based framework where “Monument Mitras” develop visitor amenities. Sites benefiting include Agra Fort, Qutub Minar, Ajanta Caves, Red Fort, and Mehrauli Archaeological Park.
- **Heritage-Linked Festivals:** Konark Dance Festival (Odisha — Sun Temple), Khajuraho Dance Festival (Madhya Pradesh), Modhera Dance Festival (Gujarat), Natyanjali festivals at Chidambaram.
- **Museum Grant Scheme:** Supports establishment, modernisation, and digitisation of museums; capacity building through training; digitisation of collections and online catalogues.

**Kedarnath Temple Restoration:** Following the 2013 disaster, ASI collaborated with **IIT Chennai** — geotechnical assessment using **Multi-Channel Analysis of Spectral Waves**



(MASW) — enabling non-invasive foundation analysis and science-backed restoration combining modern diagnostics with traditional craftsmanship.

## Key Laboratory Techniques Explained

- LiDAR Scanning (Light Detection and Ranging)**
  - Used to create high-resolution 3D models.
  - Supports structural analysis.
  - Useful for monitoring physical changes over time.
- Microscopy**
  - Useful for identifying deterioration and surface damage.
  - Detects biological growth such as fungi, mold, or microorganisms.
  - Supports targeted conservation and restoration efforts.
- Raman Spectroscopy**
  - Non-destructive analytical technique.
  - Analyzes how light interacts with a substance.
  - Useful for detecting pigments, minerals, and chemical compounds.
- FTIR (Fourier Transform Infrared)**
  - Used to analyse organic and inorganic materials.
  - Based on infrared absorption patterns.
  - Helps identify binders, and degradation products in conservation studies.
- XRF (X-ray Fluorescence)**
  - Non-invasive method to determine elemental composition of materials.
  - Widely used to analyse metals, stones, and pigments without causing damage to heritage structures.
- Thermogravimetric Analysis (TGA)**
  - Measures changes in material weight.
  - Useful for studying degradation behaviour of materials like mortars.

### UNESCO World Heritage Sites

India's most recent addition — **Maratha Military Landscapes** (inscribed July 2024) — is India's **44th UNESCO World Heritage Site**. India's footprint: **36 Cultural, 7 Natural, and 1 Mixed** sites.

## Maratha Military Landscapes of India

- Gingee Fort
- Pratapgarh Fort
- Sindhudurg Fort
- Raigad Fort
- Shivneri Fort
- Khanderi Fort

**Indian Culture Portal:** [indianculture.gov.in/3d-explorations](http://indianculture.gov.in/3d-explorations) — aggregates content from museums, libraries, archives. Features:

- **Virtual Walkthroughs** (guided, step-by-step): Katarmal Sun Temple (Almora, Uttarakhand); Shaniwarwada (Pune, Maharashtra).
- **360-degree Virtual Tours** (panoramic, interactive): Qutub Minar Complex.

## 6.2 International Film Festival of India (IFFI)

Born in 1952, IFFI is **South Asia's oldest and most enduring celebration of cinema**. Jointly hosted by the **National Film Development Corporation (NFDC)** under the Ministry of Information and Broadcasting and the Entertainment Society of Goa. The **57th edition** will be held in **November 2026** in Goa. Features international competitions, curated country focuses, masterclasses, tributes, and the vibrant **WAVES Film Bazaar**, where creative collaborations take shape.

## 6.3 India's Evolving Metrology Ecosystem

**World Metrology Day:** Observed annually on **20 May** since 1999, commemorating the signing of the **Metre Convention on 20 May 1875**. This convention laid the institutional and scientific foundation for a globally uniform metric measurement system. 2026 Theme: *"Metrology: Building Trust in Policy Making."* Coordinated by **BIPM (Bureau International des Poids et Mesures)** and **OIML (International Organization of Legal Metrology)**.

**Metrology** establishes common standards for units and measuring instruments. **Legal Metrology** ensures accuracy and reliability in weights and measurements for public protection and fair trade.

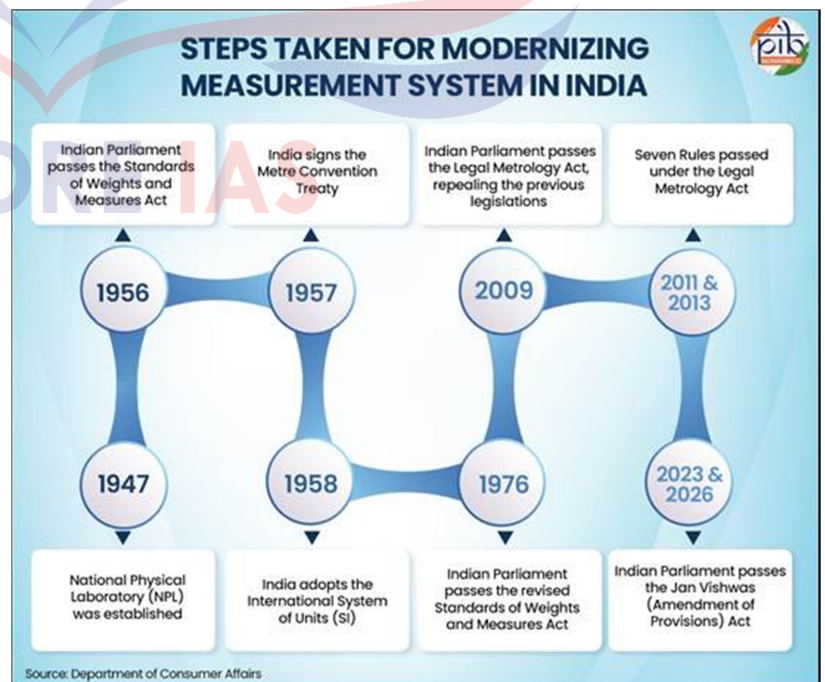
### Ancient India's Measurement Heritage

Standardised units in ancient India: Rati (gold/gemstones), Masha, Tola (commercial transactions/precious metals), Seer (trade), Maund and Candy (bulk trade). Ancient systems also included body-based measurements (cubits, hand spans) and binary, decimal, and octonary numerical systems.

The **Indus Valley Civilisation** had highly standardised measurement systems reflecting advanced urban planning. The **Maurya Empire** (322–185 BCE) introduced organised systems for administration, taxation, and trade. **Sher Shah Suri** standardised weights and measures and introduced the **Rupiya coin** — precursor to the modern rupee.

### Evolution of India's Legal Metrology Framework

- **1947:** National Physical Laboratory (NPL) established as India's National Measurement Institute and custodian of national prototypes of the metre and kilogram. Regional Reference Standard Laboratories (RRSLs) established to strengthen state-level standardisation.
- **1956:** Standards of Weights and Measures Act, 1956 — established nationwide uniformity based on the metric system; India signed the Metre Convention and adopted SI units during 1957-58.
- **1976:** Standards of Weights and Measures Act, 1976 — introduced standardised numeration; regulated



inter-state trade and commerce; facilitated establishment of the **Indian Institute of Legal Metrology (IILM)** for training.

- **2009: Legal Metrology Act, 2009** (effective from **1 April 2011**) — repealed 1976 Act and its Enforcement Act. Regulates trade and commerce of goods sold by weight, measure, or number.

**Key Features of Legal Metrology Act, 2009:** Mandatory adoption of metric system; regulates weighing/measuring instruments; mandatory verification and stamping; mandatory declarations on pre-packaged commodities; registration for manufacturers/dealers/repairers/importers; empowers Legal Metrology Officers for inspections and seizures; penalties for non-standard weights and measures.

**7 Rules Framed under the Act:** - Legal Metrology (General) Rules — covers ~40 types of weighing and measuring instruments. - Legal Metrology (Packaged Commodities) Rules — sale of pre-packaged goods. - Legal Metrology (Approval of Models) Rules — model approval before manufacturing/importing. - Legal Metrology (National Standards) Rules — national prototypes maintained at NPL. - Legal Metrology (Numeration) Rules — standardised numeration. - Indian Institute of Legal Metrology Rules — training for Legal Metrology Officers. - Legal Metrology (Government Approved Test Centre) Rules — approval of GATCs.



In **October 2025**, GATC scope expanded to include **18 categories** including water meters, gas meters, energy meters, and sphygmomanometers.

#### Key Initiatives

- **NPL Achievements:** Founding member of APMP (Asia Pacific Metrology Program); developed globally recognised **indelible ink** (used in elections in 37 countries); established India's first certification facility for environmental monitoring equipment and a world-class solar cell calibration facility.
- **eMaap Portal:** Launched by Dept of Consumer Affairs; integrates Legal Metrology systems of all States with central platform; provides online registration for manufacturers, dealers, repairers, importers, packers, and producers.
- **One Nation, One Time Initiative:** Disseminates Indian Standard Time (IST) with millisecond-to-microsecond accuracy



through 5 Legal Metrology laboratories across India. Implemented by Dept of Consumer Affairs in collaboration with **NPL** and **ISRO**. Aims for uniform precise time synchronisation across telecom, banking, navigation, power grids, 5G, AI, and IoT.

- **OIML Certification:** India became OIML member in **1956**. In **2023**, became the **13th country globally** authorised to issue internationally accepted OIML approval certificates — enabling Indian manufacturers to export instruments worldwide without additional international testing costs.

**Jan Vishwas Reforms for Metrology:** The 2023 Act decriminalised 7 sections of the Legal Metrology Act. The 2026 Bill introduces an “improvement notice” mechanism for first-time MSME lapses before penalties are imposed.

**Metrology and SDGs:** Metrology supports SDG 1 (fair trade/consumer protection), SDG 3 (healthcare), SDG 7 (energy monitoring), SDG 9 (industrial quality), and SDG 13 (climate monitoring).



# SCHEME

## 7.1 YUVIKA

**YUVIKA (YUva VIgyani KAryakram)** — Young Scientist Programme — is a flagship **summer residential programme by ISRO** designed to impart basic knowledge on space technology, space science, and space applications to young students.

- **Target:** Class 9 students — to encourage STEM-based careers and foster scientific curiosity.
- **Duration:** 2-week residential summer programme during school vacations.
- **Eligibility:** Class 9 students; selection based on academic performance in Class 8, science fairs, extracurricular activities, and an online quiz; special weightage and **15% reserved quota** for students from rural and remote areas.
- **Organiser:** Indian Space Research Organisation (ISRO), Department of Space.

## 7.2 Semicon India Programme

To develop a complete semiconductor ecosystem — covering design, fabrication, assembly, testing, packaging, and module manufacturing — the Government launched the **Semicon India Programme in January 2022**.

In four years, **10 projects approved** with investment commitments of approximately **₹1.6 lakh crore**. Commercial production has commenced from two plants (Micon and Kaynes), with 2 more plants to start commercial production this year.

### Chip Design Ecosystem Development

- Cutting-edge chip design tools from 8 companies provided to **315 universities at no cost**; usage exceeded **200 lakh hours**.
- **24 chip design projects** approved for semiconductors and SoCs addressing critical sectors: video surveillance, drone detection, energy metering, microprocessors, satellite communications, broadband, and IoT SoCs.
- 14 companies have raised venture capital funding of more than ₹650 crore to scale and productise.
- **7 chips** successfully fabricated at various nodes including advanced **12 nm** node.
- MoUs for bilateral collaboration signed with USA, Japan, EU, Singapore, and Netherlands.

**Employment:** Electronics manufacturing sector supports ~25 lakh jobs; mobile phone manufacturing alone supports ~12 lakh jobs.

**India Semiconductor Mission 2.0 (Budget 2026-27):** Announced to enhance capabilities in semiconductor equipment, materials, full-stack design, Indian IP, and supply chain fortification.

### Approved Projects:

Company	Location	Investment	Capacity / Technology
Micon Technology Inc.	Gujarat	₹22,516 crore	DRAM and NAND — 14 million units/week
Tata Electronics (TEPL)	Gujarat	₹91,526 crore	Fab with PSMC, Taiwan — 50,000 WSPM
Tata Electronics (TEPL)	Assam	₹27,120 crore	Semiconductor packaging — 48 million units/day
CG Power and Industrial Solutions	Gujarat	₹7,584 crore	JV with Renesas and STARS — 15.07 million units/day

Company	Location	Investment	Capacity / Technology
Kaynes Technology India	Gujarat	₹3,307 crore	Wire bond packages — 6.33 million chips/day
Vama Sundari Investments	Uttar Pradesh	₹3,706 crore	Display driver ICs (GaN technology) — 20K wafers/month
3D Glass Solutions Inc.	Odisha	₹1,943 crore	FCBGA assembly, RF SiP, glass interposers
SiCSem Private Limited	Odisha	₹2,066 crore	SiC fab — 5,000 wafers/month
Continental Device India (CDIL)	Punjab	₹117 crore	MOSFETs, IGBTs, Schottky Diodes — 158.38 million units/annum
Advanced System in Package Technologies (ASIP)	Andhra Pradesh	₹480 crore	96 million units/annum

### 7.3 Skill India Digital Hub (SIDH)

Launched in **September 2023** as a **Digital Public Infrastructure (DPI)** to bring together the entire skilling ecosystem on a single platform.

**Key Objectives:** Seamless access to skilling, certification, and other skill development opportunities; end-to-end digital services for candidates, training providers, assessment agencies, and employers; digitally verifiable and portable credentials; integration with government platforms via interoperable APIs.

**Key Features:** Discovery of skilling courses across multiple schemes; complete digital training lifecycle management (enrolment to certification); tamper-proof portable certificates; integration with NCS, eShram, GSTN, and BHASHINI; real-time monitoring dashboards with analytics for all stakeholders.

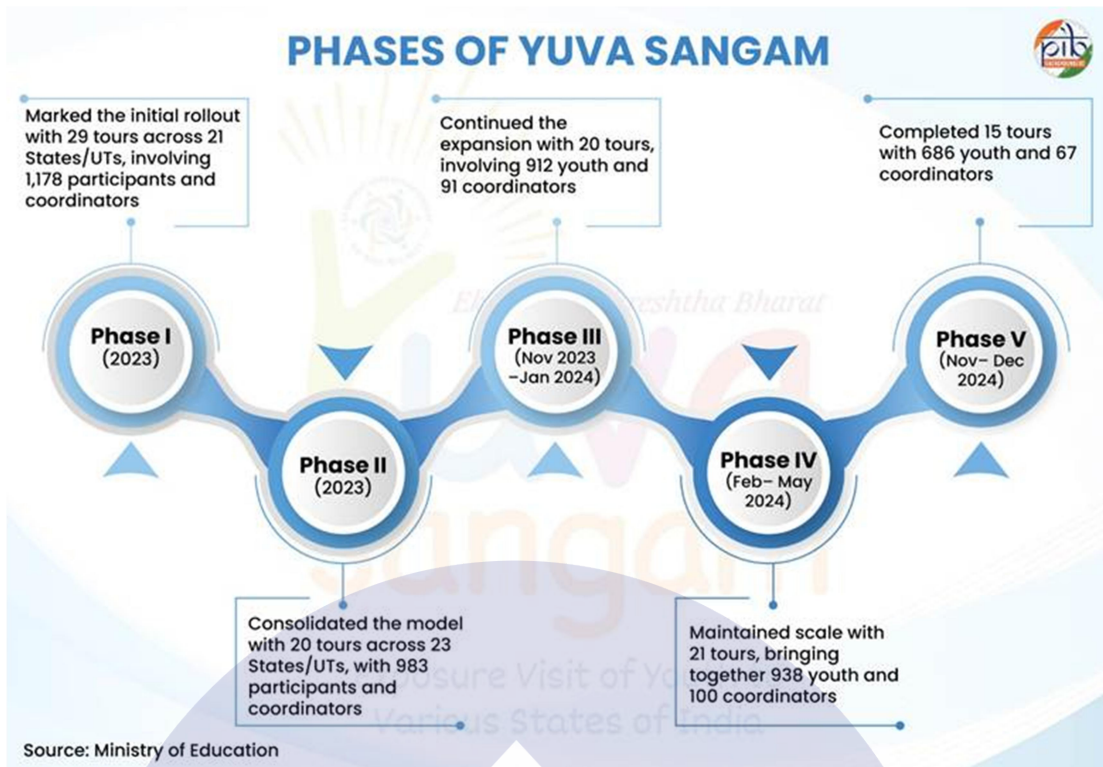
**Job Exchange Page:** Aggregates vacancies from **JobX (NSDC)** and the **National Career Service (NCS) portal** — facilitates seamless connect between certified candidates and prospective employers.

### 7.4 Ministry of Tribal Affairs — Major Schemes

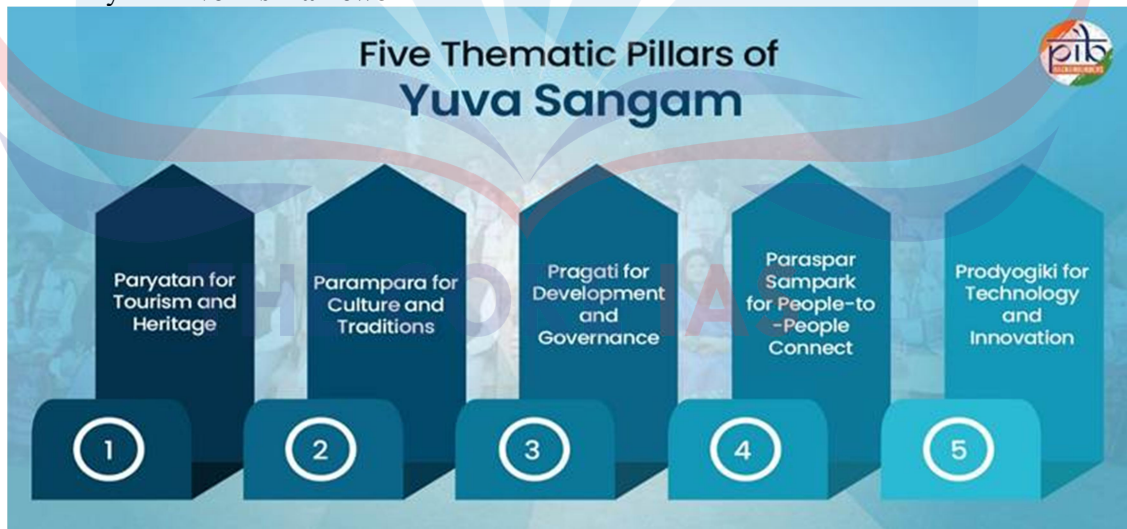
- **DhartiAaba Janjatiya Gram Utkarsh Abhiyan (DAJGUA, 2 October 2024):** 25 interventions by 17 Ministries; targeting 63,843 villages across 549 districts in 30 States/UTs over 5 years; benefiting 5 crore+ tribals. Total outlay: **₹79,156 crore** (Central: ₹56,333 crore; State: ₹22,823 crore).
- **PM-JANMAN (15 November 2023):** Targets Particularly Vulnerable Tribal Groups (PVTGs) — housing, clean drinking water, sanitation, education, roads, telecom connectivity, electrification, and sustainable livelihoods. Outlay: **~₹24,000 crore** (3 years).
- **PMJVM (Pradhan Mantri Janjatiya Vikas Mission):** Promotes tribal livelihood — Minimum Support Price (MSP) for Minor Forest Produce (MFP) and institutional support for tribal products/produce. Procurement at pre-fixed MSP when market price falls below the stipulated MSP.
- **EMRS (Eklavya Model Residential Schools):** Quality education for tribal children on par with Navodaya Vidyalayas. Target: **728 EMRS** benefiting **~3.5 lakh ST students** across the country.
- **Scholarship Schemes:** Pre-Matric Scholarships (Classes IX–X); Post-Matric Scholarships; National Overseas Scholarship for ST students (20 awards/year for top 1000 QS-ranked institutes abroad); National Scholarship (Top class, Graduate level) for 265 institutions; National Fellowship for ST students (750 fellowships/year for MPhil and PhD).
- **Support to Tribal Research Institutes (TRIs):** Preserves tribal art and culture through research, documentation, museum maintenance, exchange visits, and tribal festivals. 100% grant-in-aid by Ministry of Tribal Affairs.

### 7.5 Yuva Sangam

**Yuva Sangam** is a youth exchange programme under the **Ek Bharat Shreshtha Bharat (EBSB)** initiative, anchored by the Ministry of Education and implemented through Higher Education Institutions.



- Target group: **Ages 18–30 years** — including students, NSS and NYKS volunteers, and young professionals.
- EBSB launched on **31 October 2015** (Rashtriya Ekta Diwas) to commemorate the birth anniversary of Sardar Vallabhbhai Patel; it pairs States and UTs for sustained engagement across language, culture, traditions, tourism, cuisine, sports, and best practices.
- Participants travel to paired States/UTs for structured tours experiencing new cultural settings, institutions, and innovation centres.
- Guided by the **Five P’s framework**.



- Aligns with the experiential learning approach of **NEP 2020**.
- Implemented since early 2023 through multi-ministerial effort.

### 7.6 Jiyo Parsi

**Jiyo Parsi** is a flagship Central Sector Scheme of the Government of India aimed at **arresting the declining population of the Parsi community**, launched in **2013-14**.

The scheme provides: - **Medical Assistance** for fertility treatment and pregnancy-related care. - **Health of Community** support including financial assistance for childcare and care of dependent elderly. - **Advocacy initiatives** including counselling, awareness campaigns, and outreach programmes.

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### 7.7 National Quantum Mission

The Union Cabinet approved the **National Quantum Mission (NQM)** on **19 April 2023** with a total cost of **₹6,003.65 crore** from 2023-24 to 2030-31, to seed, nurture, and scale up quantum technology R&D and create a vibrant quantum innovation ecosystem.

**Recent Milestone:** A **1,000-km quantum communication network** — one of the longest in the world — was successfully demonstrated within less than 2 years of launch (mission target: 2,000 km over 8 years). Achieved using indigenous technology by **QNu Labs** (a mission-supported startup) using Quantum Key Distribution (QKD). The demonstration used fibre optics and represents one of the longest QKD deployments globally since the mission's October 2024 launch.

#### Key Deliverables (across 3, 5, and 8-year timelines):

- Quantum computers with 20–50 qubits (3 yrs), 50–100 qubits (5 yrs), 50–1,000 qubits (8 yrs); platforms include superconducting and photonic technology.
- Satellite-based secure quantum communications between ground stations over **2,000 km** within India, and with other countries.
- Inter-city QKD over **2,000 km** with trusted nodes using Wavelength Division Multiplexing.
- Multi-node quantum network with quantum memories, entanglement swapping, and synchronised quantum repeaters (2-3 nodes).
- Magnetometers with **1 femto-Tesla/√Hz** sensitivity in atomic systems; gravity measurements using atoms; atomic clocks with **10<sup>-19</sup> fractional instability**.
- Design and synthesis of quantum materials — superconductors, novel semiconductor structures, topological materials.

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### 7.8 Womaniya

**Womaniya** is an inclusion-focused initiative on the **Government e-Marketplace (GeM)** introduced in **2019** to encourage participation of **women-led micro and small enterprises (MSEs) and Self-Help Groups (SHGs)** in public procurement. Under the Ministry of Commerce and Industry.

It provides a dedicated digital interface through which women MSEs and SHGs can register and list products — handloom, jute, coir, home décor items, etc. — for direct purchase by Central Ministries and PSUs anywhere in India.

**Womaniya aligns with:** Expanding supplier diversity; strengthening women-led entrepreneurship; integrating under-represented groups into organised procurement channels; reducing dependence on intermediaries.

**GeM:** Launched in 2016 under “Minimum Government, Maximum Governance” — a paperless, cashless, contactless platform enabling government buyers to procure directly from pan-India sellers online.



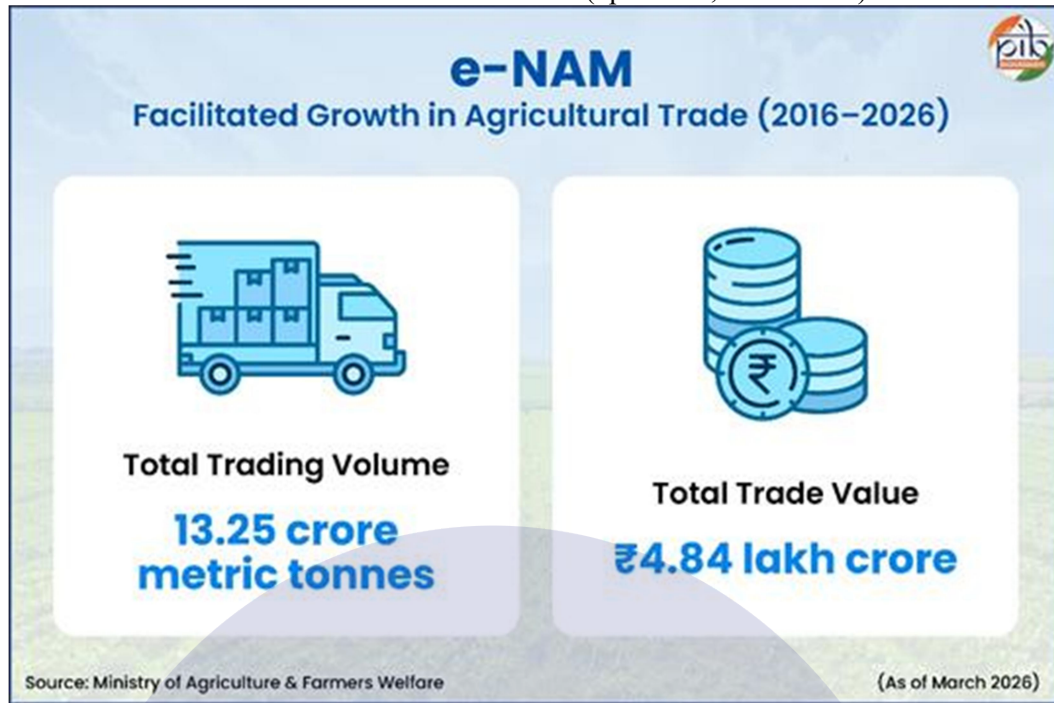
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### 7.9 National Agriculture Market (e-NAM)

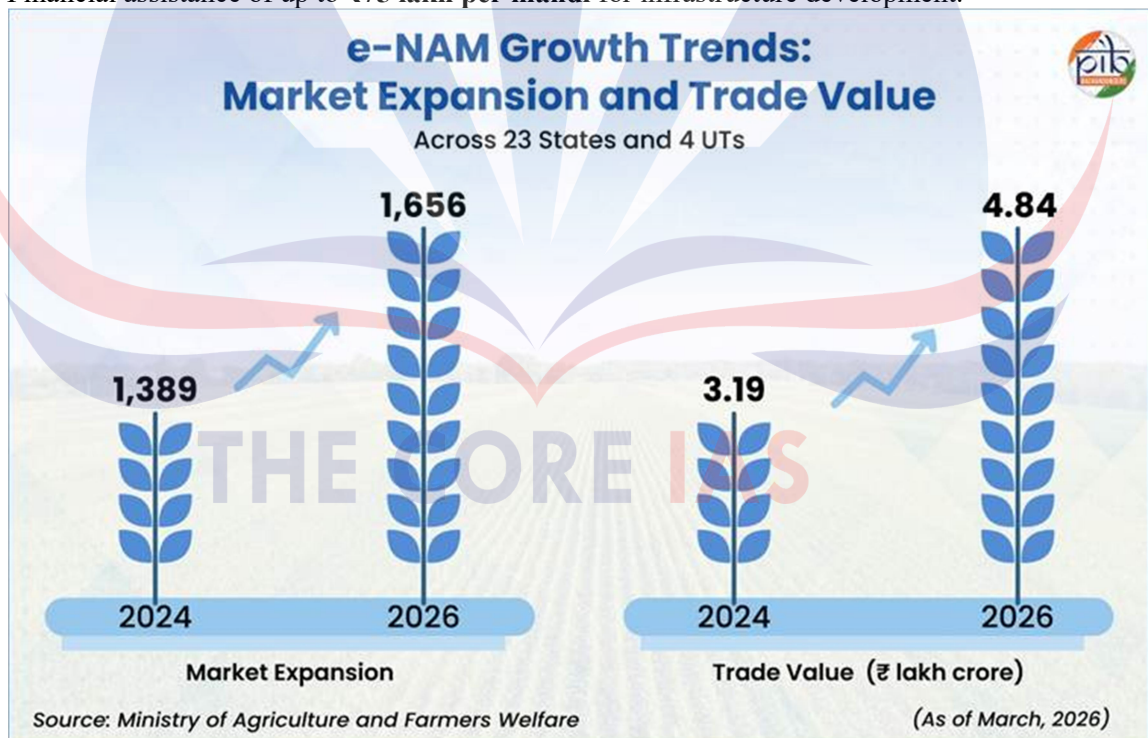
Launched in **April 2016** as a pan-India electronic trading platform to create a **unified national market** for agricultural commodities by digitally integrating existing mandis — enabling online trading, transparent price discovery, and broader market access.

**Key Data (as of March 2026):**

- **1,656 mandis** connected across 23 States and 4 UTs (up from 1,389 in 2024).



- Cumulative trade (2016–March 2026): **13.25 crore metric tonnes** of commodities; total trade value: **₹4.84 lakh crore**.
- **1.80 crore farmers**, 2.73 lakh traders, and 4,724 FPOs registered.
- Financial assistance of up to **₹75 lakh per mandi** for infrastructure development.



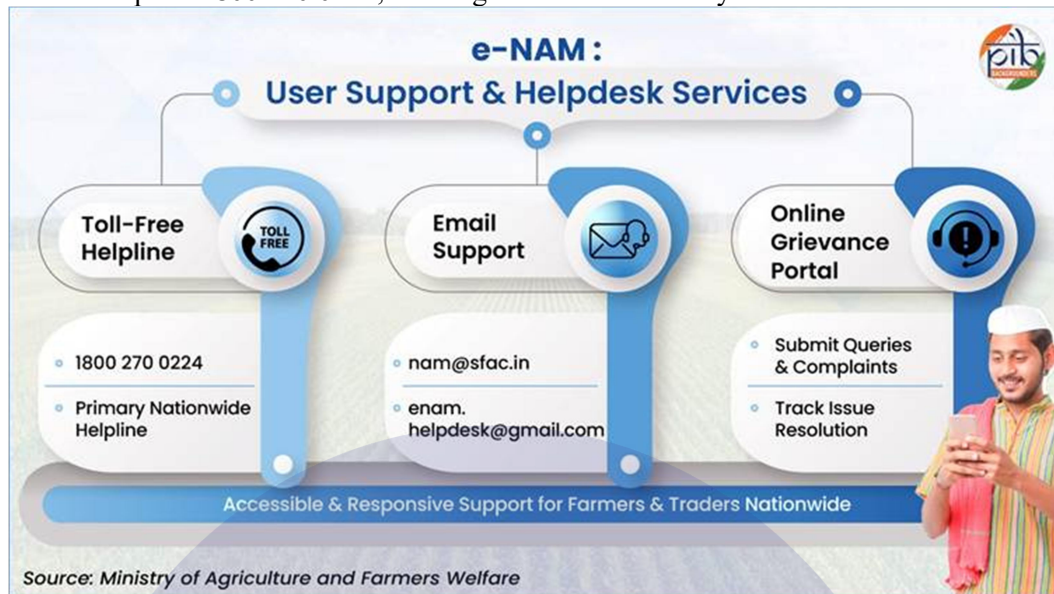
- Portal supports 12 Indian languages.

**Digital Architecture:** End-to-end online trading (digital gate entry, lot creation, quality assaying, competitive online bidding, real-time bid tracking, price discovery, direct e-payment to farmers' bank accounts). Live dashboard offers real-time commodity-wise trade volumes, mandi-level price trends, and inter-state trade flows.

**e-NAM Mobile App (October 2016):** Free price information for **247 notified commodities** as of December 2025.

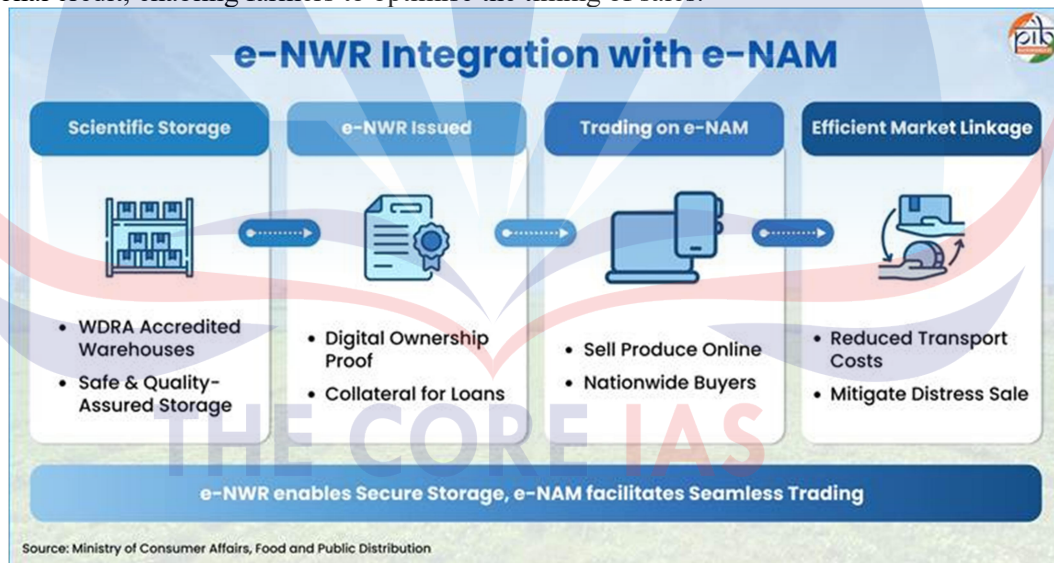
**Platform of Platforms (PoP, 14 July 2022):** Integrates logistics, warehousing, quality assurance, agri-inputs, financial/insurance services, weather updates, and crop forecasting via the e-NAM mobile app. Also integrates e-commerce platforms and private agri-market players.

**Support:** Toll-free helpline **1800 270 0224**; online grievance redressal system.



**e-Payment:** Payments via NEFT, RTGS, internet banking, and UPI directly to farmers' registered bank accounts.

**e-NWR Integration:** Electronic Negotiable Warehouse Receipt (under Warehousing Development and Regulatory Authority) integrated with e-NAM. Farmers store produce in WDR A-accredited warehouses, obtain e-NWRs, and sell directly on e-NAM without physical transport to mandis. e-NWRs can also serve as collateral for institutional credit, enabling farmers to optimise the timing of sales.



### 7.10 Mission Poshan (POSHAN Abhiyaan)

Launched on **8 March 2018**, POSHAN Abhiyaan (Prime Minister's Overarching Scheme for Holistic Nourishment) is a flagship multi-ministerial mission placing nutrition at the centre of national development. Brings together **26+ ministries and departments** under a unified nutrition framework.

#### Policy Evolution

- **ICDS (1975):** Foundational supplementary nutrition platform through Anganwadi Centres.
- **PMMVY (2017):** Maternity benefits through direct cash transfers to pregnant and lactating mothers.
- **POSHAN Abhiyaan (2018):** Unified framework, time-bound targets, digital monitoring, Jan Andolan approach.

- **Mission Poshan 2.0 (Budget 2021–22):** Consolidated Anganwadi Services, Scheme for Adolescent Girls, and POSHAN Abhiyaan into three verticals — Nutrition Support; ECCE (Early Childhood Care and Education); Saksham Anganwadi upgradation.

### Key Mission Components

**Nutrition Support (Revised January 2023):** New norms are more comprehensive — cover quality protein, healthy fats, and micronutrients (Calcium, Zinc, Iron, Folic acid, B-vitamins). Extra nutrition provided for SAM (Severely Acutely Malnourished) children. **Poshan Vatikas** (nutri-gardens) set up at Anganwadi Centres, schools, and Gram Panchayat lands.

**ECCE Integration:** - NEP 2020's 5+3+3+4 framework integrates ECCE (3–6 years) into the 5-year Foundational Stage. - **Poshan Bhi Padhai Bhi (PBPB):** As of 31 March 2026, **41,645 SLMTs** and **10,58,317 AWWs** trained in Round-1. Round-2 started November 2025. - **Navchetana (March 2024):** National Framework for Early Childhood Stimulation (0–3 years); 140 age-appropriate stimulating activities in a 36-month calendar; available in 12 languages. Based on three principles: Serve and Return; Caregivers' Three Acts (Love, Talk, Play); Positive Guidance. - **Aadharshila:** National Curriculum for ECCE (3–6 years); 130+ activities; available in 12 languages. Aligned with NEP 2020's National Curriculum Framework for Foundational Stage (NCF-FS). - **Vidyarambh (August 2025):** ECCE Certificate for smooth transition to Grade 1; over **22 lakh certificates** issued as of March 2026. - Over 2.9 lakh AWCs co-located within government primary school premises.

**Saksham Anganwadi:** 2 lakh AWCs sanctioned for upgradation with LED screens, water purifiers, smart learning aids, and Poshan Vatikas.

### Technology: Poshan Tracker

Launched **1 March 2021**. Monitors **~14,03,170 Anganwadi Centres** and **~8,95,29,425 eligible beneficiaries** (as of March 2026). Includes Facial Recognition System (FRS) and Aadhaar-based tracking to prevent leakages and ghost entries. Received PM's Award for Excellence in Public Administration 2024.

Daily learning prompts delivered to AWWs through Poshan Tracker: 249 videos, 190 voice notes, and 159 unique ECCE activity PDFs (3–6 year children); 14 videos comprising 140 stimulation activities (0–3 year children).

**Home Visit Scheduler (April 2026):** 23 structured home visits auto-scheduled for pregnant women and children 0–3 years (4 during pregnancy, 4 in first month postpartum, 7 from 2 months to 1 year, 5 from 1–2 years, 3 from 2–3 years). Auto-selects relevant videos and counselling tips.

**Poshan Pakhwada (2026):** 8th edition, **9–23 April 2026**. Theme: **“Maximizing Brain Development in the First Six Years of Life.”** More than 85% of brain development occurs by age 6; most rapid growth in first 1,000 days. Focus: Mother and Child Nutrition; Early Stimulation; Play-based Education; Minimizing Screen Time; Community Support for Anganwadis.

**Rashtriya Poshan Maah:** Celebrated every September as Jan Andolan. 8th edition launched by PM on **17 September 2025 from Dhar, Madhya Pradesh** — jointly with Ministry of Health and Family Welfare.

**Poshan Helpline:** Originally 14408 (operationalised November 2022); from **November 2025**, active number is **1515**. Available in 17 languages.

### 7.11 PM SVANidhi

- **PM SVANidhi** is a Central Sector Scheme providing affordable working capital loans to street vendors, launched in **June 2020** during the COVID-19 pandemic.
- The **first dedicated micro-credit scheme for street vendors** — promotes financial inclusion and social protection for a significant segment of the informal workforce with limited access to formal credit.
- Joint responsibility of the **Ministry of Housing and Urban Affairs (MoHUA)** and the **Department of Financial Services (DFS)**.
- Building on strong achievements, the Government approved restructuring and extension of the scheme. The lending period has been extended until **March 2030**.

### 7.12 India Skills Accelerator

The **India Skills Accelerator** is part of the **World Economic Forum's Global Accelerators Network**, hosted by the **Ministry of Skill Development and Entrepreneurship**.

- A multi-stakeholder platform to facilitate identification, scaling, and acceleration of innovative solutions and PPPs to address skill gaps and strengthen the TVET ecosystem.
- Involves Government, industry, academia, training providers, and relevant stakeholders.

- Aligns skill training and reskilling with industry requirements; promotes innovative financing mechanisms; aligned with NEP 2020's **Academic Bank of Credits** framework; leverages HEIs and regulatory bodies like AICTE and UGC.
- Supports India's **Vision 2047**.

### 7.13 SEHAT Mission

**Mission SEHAT** (Science Excellence for Health through Agricultural Transformation) is a **joint national initiative by ICAR and ICMR** that shifts India's healthcare strategy from treating illnesses to proactive wellness by bridging the agriculture and nutrition sectors.

#### Key Pillars:

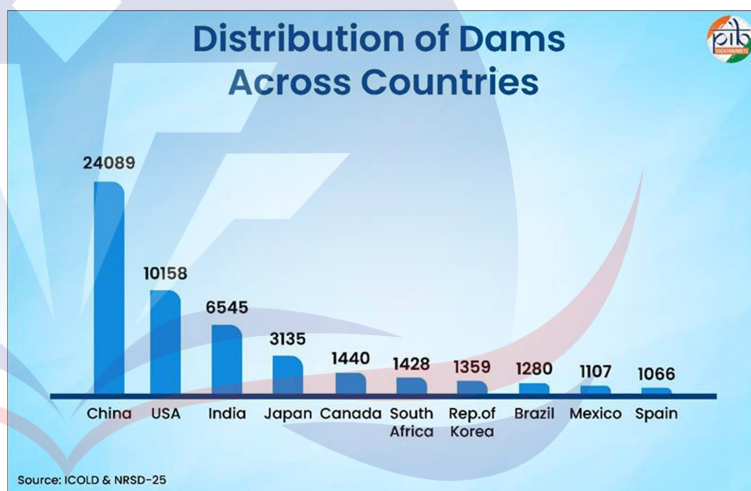
- **Crop Biofortification:** Developing and distributing crop varieties naturally enriched with iron, zinc, and other essential micronutrients to combat malnutrition.
- **Nutritional Diets:** Promoting cultivation and consumption of climate-resilient, nutrient-dense traditional grains like millets (Ragi, Bajra, Jowar) to prevent lifestyle diseases.
- **One Health Approach:** Aligning medical and agricultural research to protect against zoonotic diseases and antimicrobial resistance by evaluating human, animal, and environmental health together.
- **Farmer Health and Safety:** Introducing scientific programmes to reduce farmers' exposure to pesticides and hazardous chemicals.

### 7.14 Dam Rehabilitation: Strengthening Infrastructure

**Key Facts:** India ranks **3rd globally** in large dams — **6,628 specified dams** (6,545 operational, 83 under construction). Over **26%** are more than 50 years old. DRIP is among the largest dam rehabilitation programmes globally. Dam Safety Act, 2021 provides the statutory framework. DHARMA digital platform enables real-time monitoring.

Gross water storage capacity: **~330 billion cubic metres**. About 26% (1,681 dams) are more than 50 years old; **291 are over 100 years old**. India's oldest functioning dam is the **Kallanai (Grand Anicut) in Tamil Nadu** — approximately 2,000 years old. Maharashtra has the highest number of specified dams.

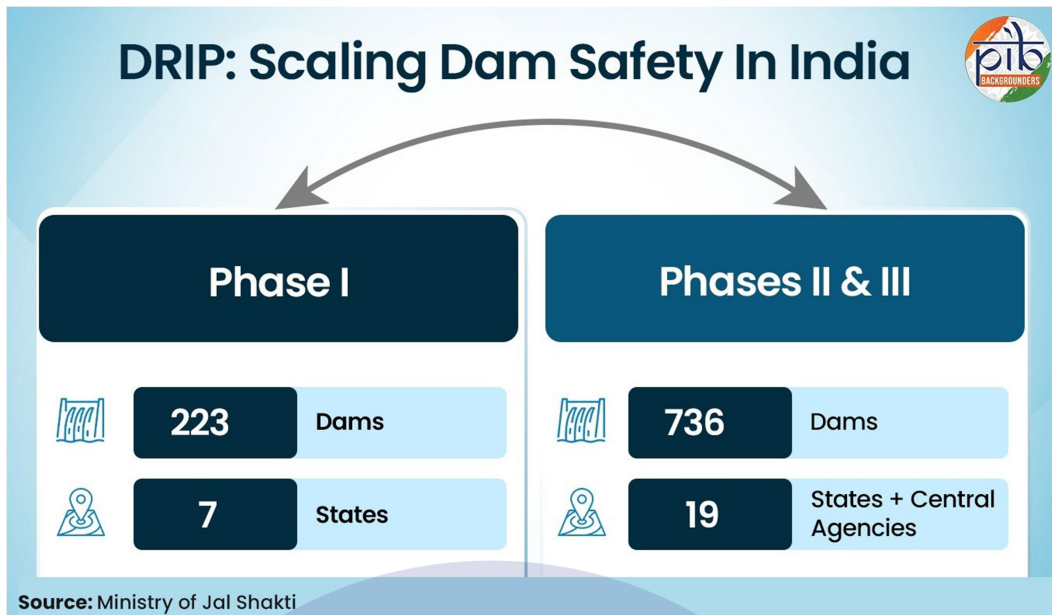
98.5% of dams are owned by State Governments. Analysis of 439 reservoirs shows an average **19% loss of gross storage capacity** with an average reservoir age of 42 years.



#### Dam Rehabilitation and Improvement Project (DRIP)

- **Phase I (2012–2021):** Covered **223 dams** across 7 states (Jharkhand, Karnataka, Kerala, MP, Odisha, Tamil Nadu, Uttarakhand) with World Bank support. Introduced **DHARMA (Dam Health and Rehabilitation Monitoring Application)**.
- **Phase II and III (from October 2021):** Co-financed by World Bank and AIIB. Total outlay: **₹10,211 crore** (Phase II: ₹5,107 crore; Phase III: ₹5,104 crore) — ₹7,000 crore external loan, ₹3,211 crore from participating states and central agencies. Covers **736 dams across 19 states** and 3 central agencies (CWC, Bhakra Beas Management Board, Damodar Valley Corporation). Rehabilitation proposals for **191 dams** (₹5,053 crore) approved; expenditure up to March 2025: ₹2,225 crore; rehabilitation completed at 43 dams. Major dams include Bhakra Dam (HP), Ranjit Sagar Dam (Punjab), Nagarjuna Sagar Dam (Telangana), Gandhi Sagar Dam (MP), Kadana (Gujarat).

# DRIP: Scaling Dam Safety In India



## Dam Safety Act, 2021 (in force from 30 December 2021)

A specified dam is one that is more than 15 metres in height, or between 10 and 15 metres if it satisfies prescribed technical criteria. The Act establishes a **four-tier institutional mechanism**:



- **NCDS** (National Committee on Dam Safety) — apex policy body; formulates policies and recommends regulations. 11 meetings held since constitution in February 2022.
- **NDSA** (National Dam Safety Authority) — regulatory and implementing arm.
- **SCDS** (State Committees on Dam Safety).
- **SDSO** (State Dam Safety Organisations) — responsible for surveillance, inspection, and compliance. All 31 dam-owning States have constituted SDSOs.

### Key Achievements under Dam Safety Act:

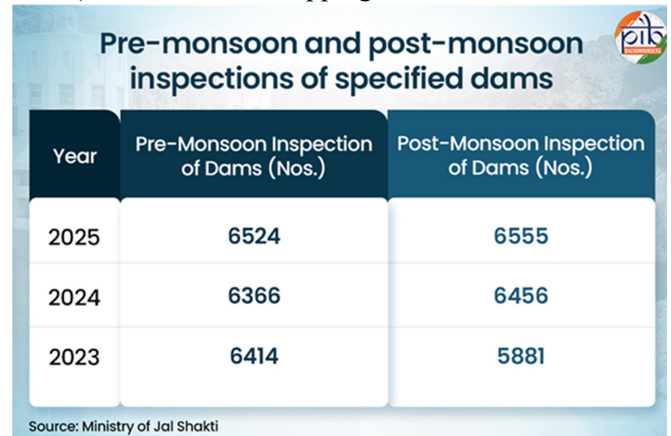
- All **6,628 dams** registered on **DHARMA** platform.
- ~**13,000 dam inspections** conducted annually.
- Rapid Risk Screening completed for **5,553 specified dams**.
- **20 regulations published** in Official Gazette.
- National Centre for Earthquake Safety of Dams established at **MNIT Jaipur**.
- Post-monsoon inspections 2025: **3 dams** under Category I (critical deficiencies); **188 dams** under Category II (major deficiencies).

**Dam Classification Based on Inspection:** - **Category I:** Critical deficiencies that may lead to failure if not addressed. - **Category II:** Major deficiencies requiring prompt remedial action. - **Category III:** Minor or no deficiencies.

**Capacity Building:** Centres of Excellence at **IIT Roorkee** (seismic hazard mapping, reservoir sedimentation) and **IISc Bangalore** (comprehensive risk assessment, advanced rehabilitation testing). M.Tech programme on Dam Safety at both institutions from 2021-22.

**Dam Owners' Obligations:** Establish dam safety units; conduct pre-monsoon and post-monsoon inspections; earmark funds for maintenance; prepare Emergency Action Plans; conduct Comprehensive Dam Safety Evaluations through expert panels; establish Early Warning Systems; install hydro-meteorological and seismological stations.

**Penalties:** Obstruction or refusal to comply — imprisonment up to **1 year** or fine. If loss of lives results — imprisonment up to **2 years**.



Year	Pre-Monsoon Inspection of Dams (Nos.)	Post-Monsoon Inspection of Dams (Nos.)
2025	6524	6555
2024	6366	6456
2023	6414	5881

Source: Ministry of Jal Shakti

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**SHRUTI**



AIR 435

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AIR 152

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AIR 67

**VASU JAIN**



AIR 94

**AKASH SHRISHRIMAL**



AIR 138

**DARSHAN**



AIR 269

**SHREYANSH SURANA**



AIR 279

**ARPIT JAIN**



AIR 329

**SANDHI JAIN**



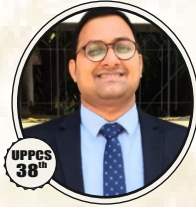
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