

DAILY CURRENT AFFAIRS (DCA)

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FINANCIAL ASSISTANCE FOR RARE DISEASE

In News

- The government has announced financial assistance of up to ₹50 lakh for the treatment of patients with **rare diseases identified under the National Policy for Rare Diseases**, covering 63 categories of rare diseases.

About Rare Disease

- A rare disease is a health condition with low prevalence, affecting a small number of people compared to more common diseases in the general population.
- Rare diseases have **no universally accepted definition**, however, they are typically characterized by their low prevalence, severity, and often the lack of alternative treatments.
 - They include genetic diseases, rare cancers, infectious tropical diseases, and degenerative diseases.
- WHO defines rare disease as often debilitating lifelong disease or disorder condition with a **prevalence of 1 or less per 1000 population**.

Issues and Concerns

- Prevalence:** India accounts for one-third of the global rare disease incidence, with over 450 identified diseases, affecting 8-10 crore people, predominantly children.
 - However, rare diseases are largely neglected in India.
- Lack of a Standard Definition:** India lacks a standard definition for rare diseases. This gap persists despite efforts to address the issue.
- Diagnosis Challenges:** On average, rare diseases take seven years to diagnose, with healthcare professionals often unable to interpret symptoms accurately.
- Funding Issues:** The budget for rare diseases remains low.

Initiatives

- The **National Policy for Rare Diseases (NPRD)** was launched by the Ministry of Health & Family Welfare in March 2021.
 - 63 rare diseases** are currently included under the policy, based on recommendations by the Central Technical Committee for Rare Diseases (CTCRD).

- 12 Centres of Excellence (CoEs)** identified as premier government hospitals specializing in diagnosis, prevention, and treatment of rare diseases.
- Exemption from GST and Customs Duty** on drugs imported for rare diseases.
- The **National Consortium for Research and Development on Therapeutics for Rare Diseases (NCRDTRD)** was established for streamlining research activities.
- The ICMR has set up an **Extramural Programme Task Force** on Rare Diseases and initiated 19 projects focused on developing indigenous therapies for rare diseases.

Suggestions and Way Forward

- Time is critical for rare disease patients, and the government must address these issues with urgency to improve the lives of affected individuals.
- The government needs to define rare diseases, enhance drug development, improve Centres of Excellence (CoEs) coordination, and provide dedicated funding.
- State governments should introduce social assistance programs and satellite centres, while private companies can help through CSR initiatives.
- The government should incentivize domestic manufacturers and consider repurposing drugs, reducing clinical trial requirements.

Source :TH

E-NAM TO BE UPGRADED TO ADDRESS LOGISTICAL CHALLENGES

Syllabus: GS3/Agriculture; Role of Technology in Agriculture

Context

- The Union Agriculture Minister has announced plans to upgrade the **National Agricultural Market (e-NAM)** to **e-NAM 2.0** to resolve logistical hurdles in **inter-state and inter-mandi trade**.

About e-NAM (2016)

- e-NAM is a **pan-India electronic trading platform** that connects **Agricultural Produce Market Committee (APMC) mandis** to create

a **unified national market** for agricultural commodities.

- ♦ Implemented by the **Small Farmers Agribusiness Consortium (SFAC)** under the **Ministry of Agriculture & Farmers' Welfare (MoA&FW)**.
- ♦ Provides **digital services** to traders, farmers, **Farmer Producer Organizations (FPOs)**, and **Mandis**.
- ♦ As of **December 31, 2024**, **1.79 crore farmers** and **2.63 lakh traders** have registered on the platform.

Key Challenges in e-NAM

- Despite integrating **1,361 mandis** across **23 states and 4 Union Territories**, and facilitating **₹2.79 lakh crore worth of trade**, several challenges remain:
 - ♦ **Logistical Issues:** Inefficient transportation causes high transit time and limits distribution efficiency.
 - ♦ **Inadequate Warehousing & Storage:** Lack of proper storage facilities leads to post-harvest losses.
 - ♦ **Limited Digital Literacy & Internet Access:** Many farmers struggle with online platforms.
 - ♦ **Interstate Trade Barriers:** Variations in state APMC laws hinder smooth trade.
 - Different state tax and compliance norms create complexity.

Key Features of e-NAM 2.0

- **Integrated Logistics and Transportation Support:** **Unified Logistics Interface Platform (ULIP)** integration for **real-time tracking of produce**.
 - ♦ **Optimized freight options** to **reduce transit times** and improve delivery efficiency.
- **Expanded Warehousing and Cold Storage Infrastructure:** The **Agricultural Infrastructure Fund (AIF)** will offer **subsidized loans** to promote private investment in storage facilities.
- **AI-Driven Price Discovery & Quality Assessment:** **AI and Machine Learning (ML)** to suggest **fair market prices**.
 - ♦ **Automated quality testing** to minimize disputes over product grading.

- **Faster Digital Payments & Financial Support:** **Direct bank transfers** and **e-wallets** for quick settlements.
 - ♦ **Fintech partnerships** to provide **micro-loans** based on transaction history.
- **Simplified Interstate Trade:** Introduction of a **unified digital pass** to ease regulatory compliance.
 - ♦ **Standardized tax & compliance framework** to facilitate free movement of produce.
- **Mobile Accessibility & Vernacular Support:** **Voice-based commands** and **local language options** on the e-NAM app.
 - ♦ **Digital literacy campaigns** to help farmers navigate the platform.

Expected Impact of e-NAM Upgrades

- **Increased Farmer Participation:** Easier access and better incentives will attract more farmers.
- **Higher Price Realization:** Direct market access will reduce middlemen, ensuring fair prices.
- **Reduced Wastage:** Improved storage and transport infrastructure will cut post-harvest losses.
- **Investment in Logistics Sectors:** Investments in supply chain solutions will drive economic growth.

Note: For other government initiatives to reform agricultural marketing in India, please follow the link:

<https://www.nextias.com/ca/current-affairs/05-12-2024/agricultural-marketing-draft-national-policy-framework>

Source: IE

INDIA'S GOLD INVESTMENTS SURGE 60% TO RS 1.5 LAKH CRORE IN 2024

Context

- Gold investments in India surged by 60% in 2024, reaching **\$18 billion** (approx Rs 1.5 lakh crore), compared to 2023, according to the **World Gold Council (WGC)** report.

Key highlights of the report

- India's gold investment demand stood at **239 tonnes in 2024**, the highest level since **2013**.
 - This represents a **29% rise** from the **185 tonnes** recorded in **2023**.
- Global gold demand also witnessed an increase of **25%**, compared to **945.5 tonnes in 2023**.
- The demand is expected to expand further into **gold exchange-traded funds (ETFs) and mutual funds**.

Key facts related to Gold

- Gold accounts for over **5%** of **India's** total imports.
- Reserves in India:** Bihar (44%) followed by Rajasthan (25%), Karnataka (21%), West Bengal (3%), Andhra Pradesh (3%), and Jharkhand (2%).
- Reserves in the world:** United States of America, Germany, Italy, and France.

Reasons Behind the Surge

- Steady Rise in Gold Prices:** The primary factor driving this surge is the consistent increase in gold prices throughout the year.
 - Investors turned to gold as a hedge against inflation and economic volatility.
- Cultural Demand:** Traditional preferences for gold during auspicious occasions like weddings led to higher retail demand and significantly boosted gold purchases.
- Urban Buying Trends:** Metropolitan cities experienced increased buying activity.
 - E-commerce platforms offering rapid delivery of small gold investment bars and coins facilitated ease of investment.
- Weaker Performance of Other Asset Classes:** The domestic stock markets recorded average returns, prompting investors to shift towards gold.

Implications for the Indian Economy

- Current Account Deficit (CAD):** Higher gold imports can widen India's CAD, affecting foreign exchange reserves.
- Higher Inflationary Pressures:** A surge in gold demand drives up its price, leading to inflationary pressures in the economy.
- Financial Market Disruptions:** A shift of investment towards gold can lead to reduced

liquidity in equity markets, affecting stock market performance.

Way Ahead

- Gold Monetization Schemes:** Encouraging gold deposits in banks to reduce import dependence.
- Strengthening Gold ETFs and Mutual Funds:** Providing tax incentives for digital gold investments.
- E-Gold Infrastructure:** Expanding the accessibility of digital gold investments through fintech platforms.

World Gold Council (WGC)

- WGC is an **international trade association** for the gold industry **formed in 1987** by some of the world's most forward-thinking mining companies.
- Governance:** The World Gold Council is governed by the Board of Directors, composed of member company representatives (Chairperson or Chief Executive Officer) and the World Gold Council's Chief Executive Officer.
- Members:** The World Gold Council's **32 Members**.
- It is **headquartered in London** and has offices in India, China, Singapore, the UAE and the United States.

Source: DDNews

FACIAL RECOGNITION SYSTEM (FRS)

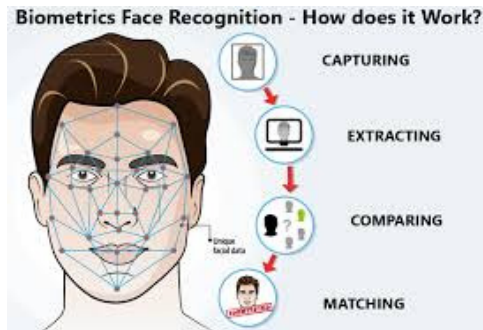
Context

- The Maharashtra government has introduced Facial Recognition System technology for entry into Mantralaya, to improve security and efficiency in government operations.

What is Facial Recognition System?

- A facial recognition system is a technology potentially capable of matching a human face from a digital image or a video frame against a database of faces.
- Core Technologies** of FRS are as;
 - Artificial Intelligence (AI):** Machine learning and deep learning enable systems to improve accuracy over time.

- **Computer Vision:** It extracts, analyzes, and interprets visual data from images and videos.
- **Biometric Analysis:** It identifies unique facial features for authentication.
- **Neural Networks (CNNs):** It is essential for image recognition and feature extraction.



Examples of facial recognition systems

- **Amazon Rekognition:** A cloud-based service that uses facial recognition to analyze images and videos.
- **Microsoft Azure Face API:** A facial recognition API that's part of Microsoft's cloud computing services.
- **DeepFace:** A facial recognition program developed by Facebook.

Applications of Facial Recognition System

- **Security & Surveillance:** It is used in law enforcement, border control, and public space monitoring to enhance security.
- **Access Control & Authentication:** It unlocks devices, secures workplaces, and replaces passwords for digital logins.
- **Financial Services:** It enables secure banking, fraud detection, and contactless payments.
- **Healthcare:** It is used to identify patients, assist in diagnosis, and monitor mental health.
- **Retail & Marketing:** It enhances customer experience, enables targeted ads, and prevents shoplifting.

Concerns of FRS

- **Privacy Violations:** Unauthorized surveillance and data collection infringe on individuals' privacy without consent.
- **Data Security Risks:** Facial recognition databases are vulnerable to hacking, leading to identity theft and data misuse.
- **Bias and Inaccuracy:** Studies have shown

that facial recognition systems have higher error rates for people of color, women, and non-binary individuals, leading to wrongful arrests and misidentifications.

- **Misuse for Profiling:** Governments and corporations exploit the technology for racial profiling and intrusive advertising.
- **Deepfake:** AI-generated deepfakes can manipulate identities, undermining biometric security.

Way Ahead

- Governments should establish clear laws to prevent mass surveillance and misuse of facial recognition technology.
- Strict cybersecurity measures must be enforced to protect facial recognition databases from breaches and identity theft.

Source: IE

INDIA ACHIEVES HISTORIC MILESTONE OF 100 GW SOLAR POWER CAPACITY

In News

- India has reached a significant milestone in its renewable energy journey by surpassing 100 gigawatts (GW) of installed solar power capacity.

Growth and Achievements

- India's solar power capacity **increased 35 times over the past decade**, rising from 2.82 GW in 2014 to 100 GW in 2025.
- As of January 31, 2025, India's **total installed solar capacity stands at 100.33 GW**, with 84.10 GW under implementation and 47.49 GW under tendering.
- The **rooftop solar sector** saw remarkable growth, with 4.59 GW of new capacity installed in 2024, reflecting a 53% increase compared to 2023.
- **Rajasthan, Gujarat, Tamil Nadu, Maharashtra, and Madhya Pradesh** are among the top-performing states contributing significantly to utility-scale solar installations.
- **India's solar manufacturing capacity surged from 2 GW in 2014 to 60 GW in 2024**, positioning the country as a global leader in solar

module production, with an ambitious target of **100 GW by 2030**.

Significance of Solar Energy for India

- **Energy Security:** Solar energy helps reduce dependence on fossil fuels and imports, making India more self-reliant in power generation.
- **Environmental Benefits:** Solar power is a clean and sustainable energy source, reducing greenhouse gas emissions and combating climate change.
- **Economic Growth:** The solar industry has created millions of jobs in installation, maintenance, and manufacturing, boosting employment opportunities.
- **Cost-Effectiveness:** The falling costs of solar photovoltaic (PV) panels have made solar power an affordable alternative to conventional energy sources.
- **Rural Electrification:** Solar power provides an effective solution for electrifying remote and off-grid areas, improving the quality of life for millions of Indians.

Key Government Initiatives to Promote Solar Energy

- **National Solar Mission (NSM):** Launched in 2010, this mission aims to achieve 280 GW of installed solar capacity by 2030.
- **PM SuryaGhar Muft Bijli Yojana:** A transformative scheme making rooftop solar a household reality, empowering homes with clean energy.
- **PM-KUSUM Scheme:** Designed to support farmers by promoting solar irrigation pumps and grid-connected renewable energy solutions.
- **Solar Parks Scheme:** Facilitates the development of large-scale solar parks to boost capacity expansion.
- **Production-Linked Incentive (PLI) Scheme:** Encourages domestic manufacturing of solar photovoltaic modules, reducing reliance on imports.
- **Net Metering Policy:** Allows residential and commercial consumers to generate their own solar power and sell surplus electricity to the grid.
- **International Solar Alliance (ISA):** A global initiative led by India to promote solar energy cooperation among solar-rich countries.

Challenges and the Way Ahead

- **Land Acquisition:** Availability of land for large-scale solar projects remains a constraint.
- **Grid Integration:** Ensuring stability and efficiency while integrating intermittent solar energy into the power grid.
- **Financial Constraints:** Investment in infrastructure and technological advancements is needed to sustain long-term growth.
- **Storage Solutions:** Development of cost-effective energy storage solutions is crucial for ensuring a stable power supply.

Source: PIB

NEWS IN SHORT

INFORMING ACCUSED GROUNDS OF ARREST CONSTITUTIONAL REQUIREMENT

Context

- The Supreme Court of India has ruled that informing an accused of the grounds of arrest is not a mere formality but a mandatory constitutional requirement.

Supreme court ruling

- The Court held that failing to inform the accused of the reasons for arrest amounts to a **violation of fundamental rights** enshrined under **Article 22, Part III** of the Constitution.
 - ♦ The information must be conveyed in a manner that effectively communicates the grounds of arrest to the accused in a language they understand.
- The court also referred to **Article 21** and said no person could be deprived of their liberty except in accordance with the legal procedure.

Constitutional Provisions

- **Article 22(1)** of the Indian Constitution states; No person who is arrested shall be detained in custody without being informed, as soon as possible, of the grounds for such arrest.
 - ♦ The arrested person shall not be denied the right to consult and be defended by a legal practitioner of their choice.

Significance

- **Burden of Proof on Law Enforcement:** If an accused alleges a violation of Article 22(1), the police must prove compliance with the mandate.
- **Judicial Oversight:** Judicial magistrates, when granting remand, are required to ascertain whether compliance with Article 22(1) and other legal safeguards has been met.

Source: TH

NATIONAL COMMISSION FOR SAFAI KARAMCHARIS

In News

- The Union Cabinet has approved the extension of the **National Commission for Safai Karamcharis (NCSK)** tenure until March 31, 2028, with a financial implication of around Rs 51 crore.

About the National Commission for Safai Karamcharis (NCSK)

- It was established on 12th August 1994 under the National Commission for Safai Karamcharis Act, 1993, initially for a period of 3 years as a statutory body.
- The Act was extended until 2004, after which the Commission became a **non-statutory body** under the Ministry of Social Justice and Empowerment.
 - ♦ The Commission takes suo-motu notice of issues affecting Safai Karamcharis based on media reports or observations.
- **Composition :** The Commission consists of a Chairperson (Union Minister of State rank), a Vice-Chairperson (Secretary rank), five members (including one woman member), and a Secretary (Joint Secretary rank).
- **Mandate of the Commission:** Recommend programs for the elimination of inequalities for Safai Karamcharis (sanitation workers).
 - ♦ Evaluate and study social and economic rehabilitation programs for Safai Karamcharis and scavengers.
 - ♦ Monitor working conditions (health, safety, wages) of Safai Karamcharis employed by various employers, including government bodies.

Expanded Mandate (Post-2013):

Following the enactment of "The Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act, 2013", the Commission's scope expanded to Monitor implementation of the Act.

- Take suo-motu notice of non-implementation of the Act.
- ♦ **Supreme Court Judgment (2023):** The Commission monitors the implementation of Supreme Court directives to eliminate manual scavenging.
 - Directive involves the compensation, rehabilitation measures and establishment of accountability mechanisms related to manual scavenging.

Source :IE

SHATAVARI (ASPARAGUS RACEMOSUS)

Context

- The Ministry of Ayush has launched a campaign titled "Shatavari – For Better Health" to promote the medicinal and health benefits of Asparagus racemosus.

About

- **Shatavari (Asparagus racemosus)** is a **medicinal plant** widely used in **Ayurveda**, the traditional system of Indian medicine.
- **Characteristics:** Shatavari is a **climbing plant** with stems that can grow up to 4 meters long.
 - ♦ It has an adventitious root system with both **fibrous and tuberous roots**, which can reach about one meter in length and taper at both ends.
- **Distribution:** It extends from **Africa through southern Asia**, including the Indian subcontinent, to northern Australia.
- **Use:** The plant is known for its **adaptogenic** (help to regulate the body's systems and improve resistance to stress) and **rejuvenating properties**, especially in women's health and overall immunity.

Source: PIB

UNITED STATES AGENCY OF INTERNATIONAL DEVELOPMENT (USAID)

Context

- The Donald Trump administration is set to reduce the **US Agency for International Development (USAID)** workforce as part of a government reorganisation effort.

About: USAID

- History:** Established in **1961** by U.S. President John F. Kennedy at the height of the United States' **Cold War struggle** with the Soviet Union.
- Significance:** USAID is a **crucial arm of U.S. foreign policy**, used to **strengthen alliances, exert diplomatic influence, and support global development** by assisting countries recovering from disasters, fighting poverty, and promoting democratic reforms.
- Aid Recipients (2023):** The agency provided **assistance to over 130 countries**, with **Ukraine, Ethiopia, Jordan, Somalia, and Afghanistan** being the top beneficiaries.
- Workforce:** It employs over 10,000 people worldwide, **two-thirds** of whom work outside the U.S. However, Trump's overhaul aims to **slash staff from 10,000 to just 300**.

Do you know?

- USAID in 1965 gave **India a \$67 million loan** to build a chemical fertiliser factory in Madras (now Chennai) **on the condition** that a private American company be in charge of distribution, rather than the Indian government, and **no additional fertiliser plants** be built in the region.

Source: IE

ALGO TRADING FRAMEWORK

In News

- The Securities and Exchange Board of India (SEBI) has recently introduced a framework to facilitate safe participation of retail investors in algorithmic (algo) trading.

Need

- The move aims to democratize access to advanced trading strategies traditionally dominated by institutional investors.

About Algorithmic Trading

- Algorithmic trading involves the use of computer algorithms to execute trades based on predefined strategies, enabling rapid processing of large data volumes and swift order execution.

SEBI's Framework for Retail Participation

- SEBI's new framework permits retail investors to engage in algo trading through registered brokers.
- Brokers must obtain approval from stock exchanges for each algorithmic strategy they offer to retail clients.
- All algo orders will be tagged with a unique identifier provided by stock exchanges to ensure transparency and maintain an audit trail.
- Brokers are required to implement secure Application Programming Interfaces (APIs) with measures like two-factor authentication and static IPs.

White-Box vs. Black-Box Algorithms

- White-Box Algos:** These are transparent and replicable algorithms. Retail investors can use them freely, provided they meet necessary requirements and are registered with brokers and exchanges.
- Black-Box Algos:** Proprietary systems where the underlying logic is not disclosed. Providers of such algos must register as research analysts with exchanges and submit detailed research reports for each algo they offer.

Source: LM

RESTRUCTURED NATIONAL BAMBOO MISSION (NBM)

Context

- The Restructured National Bamboo Mission (NBM), has helped to boost the rural economy and reduce import dependency.

Restructured National Bamboo Mission (NBM)

- The Restructured National Bamboo Mission (NBM) was launched in **2018-19** as a **Centrally Sponsored Scheme (CSS)** to boost bamboo cultivation, value addition, and market integration.
- Objective:** It provides assistance for the propagation and cultivation of bamboo in non-

forest land, bamboo treatment, establishment of markets, incubation centers, value added product development & processing and development of tools & equipment.

- The funding pattern follows a **60:40 ratio** between the Centre and States (except **90:10** for NE & Hilly States, and 100% for UTs).

Evolution of NBM

- **The National Bamboo Mission (NBM)** was initially launched in **2006** under the Ministry of Agriculture & Farmers' Welfare.
 - ♦ It was later subsumed under the **Mission for Development of Horticulture (2014-16)**.
- In 2018, it was restructured under the **National Mission for Sustainable Agriculture (NMSA)** with an enhanced focus on market linkages, value addition, and R&D.
- **In 2018** the **Indian Forest Act, 1927**, was amended to remove bamboo grown outside forests from the definition of trees, thereby easing its cultivation and trade.

Source: PIB

INDIA'S SINGLE LARGEST SOLAR CELL MAKING UNIT

Context

- The CM of Tamil Nadu inaugurated India's single largest solar cell and module manufacturing unit at the Gangaikondan SIPCOT Industrial Growth Centre.

About

- The Gangaikondan SIPCOT Industrial Growth Centre is an industrial park in the village of Gangaikondan, **Tirunelveli, Tamil Nadu**.
 - ♦ It was set up by Tata Power's solar energy manufacturing arm, TP Solar Limited.

- **Capacity:** The facility would produce photovoltaic cells and modules for solar power generating units having an annual capacity of around **4 GW**.
- **Production:** The unit will produce mono of 182mm and multi-crystalline cells of 158.25mm sizes.

Source: TH

TROPEX EXERCISE

In News

- The 2025 edition of Indian Navy's Theatre Level Operational Exercise (TROPEX) is currently underway in the Indian Ocean Region.

About exercise

- The exercise is conducted biennially and spans three months (January-March 2025).
- **Participants:** All operational Indian Naval units, along with Indian Army, Air Force, and Coast Guard assets.
 - ♦ Approximately 65 Indian Naval Ships, 9 Submarines, and over 80 Aircraft of various types are participating.
- **Objective:** The exercise has grown in scope and complexity over the years.
 - ♦ It focuses on coordinated planning, precise targeting, combat effectiveness, and credible joint operations.
 - ♦ It aims to validate the Indian Navy's core warfighting skills.
 - ♦ It also aims to ensure a synchronized, integrated response for national maritime security against conventional, asymmetric, and hybrid threats.

Source :TH

