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SHIFTING WORLD ORDER: FIVE PRINCIPLES SHOULD GUIDE INDIA'S DIPLOMACY

Context

- In foreign policy, there is **no substitute for nurturing trusted partnerships even while seeking new opportunities.**

About

- PM Modi's brief stop in the United Arab Emirates en route to Europe this week comes **amid growing uncertainty over the fragile ceasefire** between the United States and Iran.
- His presence in Abu Dhabi underlines an enduring **principle of sound diplomacy:** Stand by your partners when they need you.

Five Principles that should Guide India in a Period of Extraordinary International Turbulence:

- **Reciprocity:** The UAE has been a consistent partner on issues of central importance to India, including **Kashmir and cross-border terrorism.**
 - ♦ PM's visit signals that India, in turn, stands with the Emirates at a time of heightened threat to its security.
- **Diversification:** PM's European tour underlines how far India's engagement with Europe has evolved.
 - ♦ During the Cold War, India's view of Europe was often filtered through its close ties with the Soviet Union.
 - ♦ Europe is now central to India's search for export markets, capital, advanced technology, and green-energy partnerships.
 - ♦ The conclusion of trade agreements with the European Union and the European Free Trade Association was a reflection of India's new strategic appreciation of Europe.
- **Strategic Flexibility:** India's outreach to Europe unfolds amid the return of great-power politics and a rapid restructuring of relations among the United States, Europe, Russia, and China.
 - ♦ For India, the challenge is to secure its own interests, limit the negative fallout, and seize new possibilities.
 - ♦ For India, the emphasis must remain on pragmatic pursuit of interests.
- **Strategic Expansion:** The India-Africa summit at the end of the month highlights a region whose importance to India will grow steadily in the decades ahead.

- ♦ Africa is central to the future of the global economy, its youthful population, expanding markets, and rich endowment of critical minerals are attracting increasing attention from all major powers.
- ♦ Parts of the continent are also emerging as important theatres of geopolitical competition.
- ♦ The relationship now requires **greater strategic focus on trade, investment, connectivity, and security cooperation.**
- **Domestic Renewal:** Managing the consequences of geopolitical turbulence, the restructuring of global trade, and the rise of disruptive technologies requires **rapid internal reform.**
 - ♦ Bureaucratic resistance to change and the political comfort with the status quo remain formidable obstacles.

Conclusion

- In an era marked by geopolitical rivalries, economic uncertainty, technological disruption, and shifting global alignments, India's foreign policy must be guided by a pragmatic and multidimensional approach.
- Ultimately, India's ability to shape and benefit from the evolving international order will depend not only on diplomatic outreach abroad but also on continuous economic and institutional transformation at home.

Source: IE

IMD LAUNCHES BLOCK-LEVEL MONSOON FORECAST SYSTEM

Context

- The India Meteorological Department has launched a new forecasting system capable of providing **block-level forecasts of the southwest monsoon** across **15 States and one Union Territory.**

Weather forecasting in India

- India, at present, depends on **satellite data and computer models** for weather prediction. The **Indian Meteorological Department (IMD)** uses the **INSAT** series of satellites and supercomputers.
- In India three satellites, **INSAT-3D, INSAT-3DR and INSAT-3DS** are used mainly for meteorological observations.
- Forecasters use satellite data around **cloud motion, cloud top temperature, and water vapor content** that help in rainfall estimation, weather forecasting, and tracking cyclones.

About the New Forecast System

- The new forecasting system has been developed by the **Indian Institute of Tropical Meteorology** under the **Ministry of Earth Sciences**.
- The system combines **artificial intelligence-based analysis, historical meteorological records, and global weather models** to improve the accuracy of monsoon forecasts.
- The forecasting system currently covers **3,196 blocks across 15 States** and one Union Territory.
 - ♦ The system has mainly been designed for regions falling within the **monsoon core zone**, which are highly dependent on rainfall.
- The system provides probabilistic forecasts for the **next four weeks** and tracks the movement of the monsoon from its onset over **Kerala** to different parts of the country.

Significance of the Initiative

- **Strengthening Agricultural Resilience:** The initiative can reduce agricultural vulnerability by enabling farmers to make timely and informed decisions regarding crop planning and sowing.
- **Promoting Precision Agriculture:** The use of AI-based weather forecasting supports the growth of precision agriculture and data-driven farming practices in India.
- **Improving Disaster Preparedness:** Accurate local weather forecasts can improve preparedness against floods, droughts, and extreme weather events.
- **Advancing India's Meteorological Capabilities:** The initiative reflects India's growing capabilities in climate science, weather modelling, and AI-enabled forecasting systems.
- **Spatial Variability of the Monsoon:** The Indian monsoon displays considerable spatial variation even within the same district.
 - ♦ In several cases, the monsoon may officially arrive in a district, while many villages and blocks within that district may continue to experience dry conditions.

Government Initiatives to Improve Weather Forecasting

- **Mission Mausam:** It was launched to upgrade the capabilities of India's weather department in forecasting, modelling, and dissemination. The objectives of the mission are;
 - ♦ Develop Cutting Edge Weather Surveillance Technologies & Systems

- ♦ Implement Next-generation radars, and satellites with advanced instrument payloads
- ♦ Develop improved earth system models, and data-driven methods (use of AI/ML).
- **The 'National Monsoon Mission'** was set out in **2012** to move the nation over to a system that relies more on **real-time, on-the-ground data gathering**.
- The IMD is also increasingly using **Doppler radars** to improve efficiency in predictions. The number of Doppler radars has increased from **15 in 2013 to 50 in 2026**.
 - ♦ Doppler radars are used to predict rainfall in the immediate vicinity, making predictions more timely and accurate.
- The Ministry of Agriculture & Farmers Welfare have initiated the **weather information network and data system (WINDS)** under which more than **200,000 ground stations** will be installed, to generate long-term, hyper-local weather data.

Challenges Associated with the Forecast System

- **Limited Weather Infrastructure:** Many regions in India still lack sufficient weather monitoring stations and observational infrastructure, which limits the accuracy of hyper-local forecasting.
- **Threat of El Niño Conditions:** The forecasting system may face a major challenge this year because of the possible development of El Niño conditions during the later phase of the monsoon season.
 - ♦ El Niño conditions are generally associated with **weaker southwest monsoon** rainfall in India.
- **Complexity of Monsoon Dynamics:** The Indian monsoon is influenced by multiple factors such as **ocean-atmosphere interactions, pressure systems, temperature variations, and regional topography**.
 - ♦ Forecasting rainfall at micro scales therefore remains scientifically challenging.

Way Ahead

- **The system should be expanded** to all States and Union Territories to improve nationwide weather forecasting capacity.
- India needs greater investment in **automatic weather stations, Doppler radars, and observational infrastructure** to improve forecasting accuracy.

- Weather forecasts should be **integrated with mobile-based agricultural advisory services** to improve last-mile delivery of information to farmers.
- **Effective coordination** between the IMD, State governments, agricultural institutions, and local administrations will be essential for the successful implementation of the forecasting system.

Indian Meteorological Department (IMD)

- IMD is an agency of the **Ministry of Earth Sciences**.
- It is the principal agency responsible for meteorological observations, weather forecasting and seismology.
- It is also one of the six Regional Specialized Meteorological Centres of the **World Meteorological Organisation (WMO)**.

Source: TH

WINDFALL FOR AGRIFOOD CORPORATIONS AMID GEOPOLITICAL SHOCKS

Context

- A report titled **The New Geopolitics of Food** by the **IPES- Food** highlights how geopolitical disruptions have enabled large agrifood corporations to earn extraordinary profits, while worsening hunger, food inflation, and environmental degradation, across the world.

Key Findings of the Report

- **Corporations Used Crises to Increase Profits:** The report argues that several agrifood corporations increased prices beyond actual production cost increases.
 - ♦ **Food inflation** after 2020 created opportunities for corporations to raise profit margins.
 - ♦ **Limited competition in food markets** enabled dominant firms to exercise pricing power.
- **Concentration of Corporate Power:** Since 2008, a series of mergers and acquisitions has reduced the number of major seed and agrochemical companies from six to four.

- **Several companies** reportedly increased fertilizer prices beyond actual production cost, thereby earning higher profits.

Concerns Associated with Excessive Corporate Control

- **Threat to Food Sovereignty:** Countries may lose control over domestic food systems due to dependence on multinational corporations.
- **Price Manipulation:** Highly concentrated markets increase the possibility of excessive pricing and profiteering during crises.
- **Weakening of Small Farmers:** Large corporations often dominate supply chains, limiting bargaining power for small producers.
- **Increased Vulnerability to Global Shocks:** Overdependence on global trade exposes countries to wars, sanctions, shipping disruptions, and commodity price volatility.



Impact on Developing Countries

- **Food Import Dependence:** The global food import bill reached approximately **US\$2.2 trillion in 2025**, with the sharpest increases occurring in Least Developed Countries and Net Food Importing Developing Countries.
- **Food Inflation:** Low-income countries experienced higher food inflation than developed nations because poorer countries have limited fiscal capacity to subsidise food and stabilise prices.
- **Rural Poverty and Inequality:** Small and marginal farmers continued to face rising input costs, limited bargaining power, and unstable incomes, thereby worsening rural distress and inequality.
- **Significance for India:** In India public procurement and buffer stock system helped stabilise domestic food prices during earlier global food crises.

- Institutions such as the **Food Corporation of India and the Public Distribution System** ensured that food grains remained accessible to large sections of the population.

Way Ahead

- Governments should strengthen **domestic agriculture through greater public investment, improved irrigation and storage infrastructure, diversified cropping systems, and stronger farmer support mechanisms.**
- Countries should revive **public food reserves, buffer stock systems, marketing boards, and supply management mechanisms** to stabilise food prices during global crises.
- Governments should strengthen **competition laws and anti-monopoly regulations** to prevent excessive concentration of market power in agrifood sectors.
- **Sustainable Agriculture** should be promoted through **agroecological and climate-resilient farming practices.**
- **Global Food Governance:** International institutions should prioritise food security, fair agricultural trade, debt relief for vulnerable countries, and equitable global food systems.

Source: DTE

RURAL DEVELOPMENT IN INDIA

Context

- The Government of India and **International Fund for Agricultural Development (IFAD)** launched a new **eight-year Country Strategic Opportunities Programme (COSOP) for 2026–2033.**

About

- **Aim:** Strengthening rural incomes, improving resilience and expanding sustainable livelihood opportunities across India.
- **It focuses on two major priorities:** Enhancing the social, economic and climate resilience of rural communities, and strengthening knowledge systems to scale successful development models across India and other countries of the Global South.

- **Major Objectives:** Strengthening grassroots institutions including self-help groups, farmer producer organisations and cooperatives.
 - ♦ They are expected to play a key role in linking finance, technology, infrastructure and markets.
- India and IFAD have partnered **for nearly five decades**, during which 35 rural development projects have been implemented across multiple states.

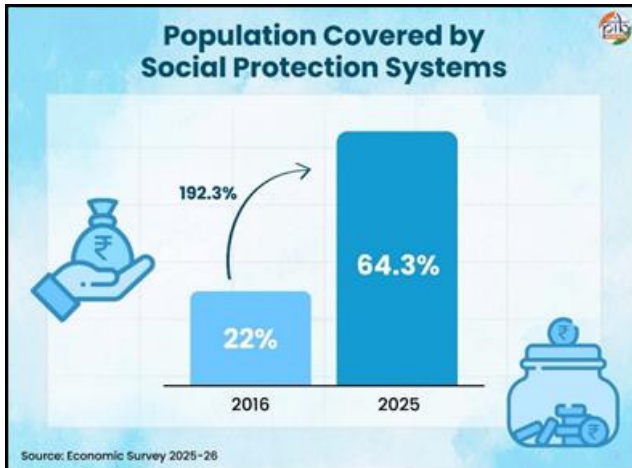
International Fund for Agricultural Development (IFAD)

- IFAD was established in 1977 following the 1974 World Food Conference.
- It was created in response to global concerns about **food crises and rural poverty, particularly in developing nations.**
- **Headquarters:** Rome
- India is a **founding member of IFAD.**
- **Objectives:**
 - ♦ Reducing rural poverty.
 - ♦ Enhancing agricultural productivity.
 - ♦ Improving food and nutritional security.
 - ♦ Promoting inclusive rural development.
 - ♦ Supporting small and marginal farmers, women, and indigenous communities.

Rural Development in India

- There is a gradual shift away from a **purely government-led model** of development towards **more community-driven, decentralised approaches.**
- **Local governments and grassroots institutions** are increasingly recognised as critical actors in planning, implementation, and monitoring of development initiatives.
- **Key Developments:**
 - ♦ **Rural Development Budget allocations rose** over 211% from ₹87,765 crore (2016-17) to ₹2.73 lakh crore (2026-27).
 - ♦ **Poverty has declined significantly**, with extreme poverty at 5.3% (2022-23), which is less than the global average, and multidimensional poverty has reduced to 11.28%.

- ♦ **Women-led collectives anchor last-mile delivery**, mobilizing 10.05 crore women across 90.09 lakh SHGs, supported by 9 lakh community cadres.
- ♦ **Rural connectivity is near-universal**, with budgetary allocations for Pradhan Mantri Gram Sadak Yojana increasing by 51% since 2017.



National Panchayati Raj Day

- India celebrates National Panchayati Raj Day **on April 24 every year** to mark the **foundation of the Panchayati Raj System, when the Constitution (73rd Amendment) Act, 1992, came into force.**
- It celebrates the **importance of grassroots democracy**, strengthens local governance and helps empower rural communities.

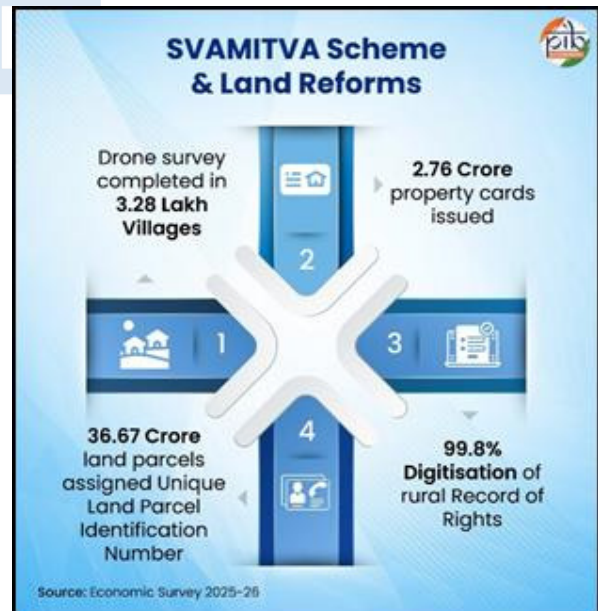
Government Initiatives

- **The Swachh Bharat Mission (Grameen):** It was launched in **2014** to achieve Open Defecation Free (ODF) status nationwide by October 2019, and all districts were **declared ODF by 2019–20.**
 - ♦ As of December 31, 2025, over 96 percent of villages under the Swachh Bharat Mission have attained **ODF Plus status.**
 - ♦ **An ODF Plus village** is defined as one that sustains its ODF Status, ensures solid and liquid waste management, and remains visually clean.
- **Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA):** It was launched in 2017 to achieve **universal household electrification** by providing electricity connections to all willing un-electrified households in rural areas and all willing poor households in urban areas in the country.

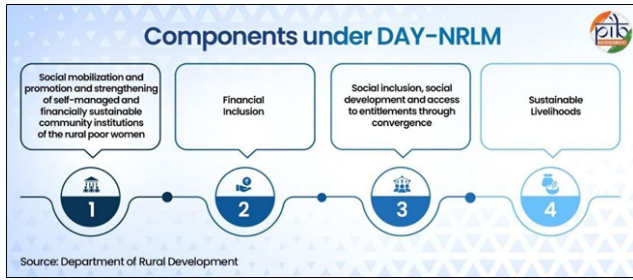
- **Pradhan Mantri Awaas Yojana-Gramin (PMAY-G)** aims to achieve the objective of **Housing for All by 2029** by providing pucca dwellings with basic amenities to eligible rural households.
- **Launched in 2000, the Pradhan Mantri Gram Sadak Yojana (PMGSY-I)** was designed to provide all-weather road connectivity to eligible unconnected habitations.



- **Digitalisation and Technology-Led Service Delivery in Rural Areas:** Digitalisation has emerged as a critical enabler of inclusive and efficient service delivery in rural India.



- **The Deendayal Antyodaya Yojana – National Rural Livelihood Mission (DAY-NRLM):** It was launched in 2010 by restructuring the earlier Swarnajayanti Gram Swarozgar Yojana (SGSY), the initiative was renamed in 2016 as Deendayal Antyodaya Yojana – National Rural Livelihood Mission (DAY-NRLM).



- **Community Resource Persons (CRPs)**, including Bank Sakhis, Krishi Sakhis, Pashu Sakhis, and Enterprise Promotion CRPs, facilitate the smooth functioning of women-led community institutions.
- **The Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)**: It is a demand-driven skill training linked to assured placements, with quality and industry relevance ensured through mandatory third-party certification by National Skill Development Corporation (NSDC) Sector Skill Councils.
- **Entrepreneurship Pathways for Women in Rural India**: Aligning skill development initiatives with emerging sectors such as manufacturing, renewable energy, digital services, and agro-processing broadens economic opportunities for women.
 - ◆ Complementary measures, including 'Back to Work' and 'Returnship Programmes', facilitate workforce re-entry.

Conclusion

- **Sustained public investment** has broadened access to housing, rural connectivity, drinking water, sanitation, digital services, and social protection.
- Central to this transformation has been the **empowerment of local institutions**, including Panchayati Raj Institutions, Self-Help Groups, and community cadres.
- These reforms position rural India not merely as a recipient of development interventions but as a **pivotal driver of inclusive growth**.

Source: PIB

INDIA'S GOLD IMPORT PROBLEM & UAE TREATY

Context

- Recently, the Prime Minister of India urged citizens to postpone non-essential gold purchases and reduce petroleum consumption to conserve India's foreign exchange reserves with the West Asia crisis entering its third month.

Why Gold Imports Matter for India?

- India is one of the world's largest consumers of gold. However, domestic production is negligible, forcing the country to rely heavily on imports.

Rising Gold Import Bill

Surging value of gold imports

	IMPORTS (\$BN)	QUANTITY (TONNES)
FY26	71.97	721.04
FY25	58.00	757.09
FY24	45.54	795.32
FY23	35.01	678.30
FY22	46.16	879.04

SOURCE: COMMERCE AND INDUSTRY MINISTRY

Gold import in FY26 had jumped by nearly 25% to **\$71.97 billion**. REUTERS

- India's gold imports in FY26 rose sharply despite lower physical volumes because of a **steep increase in global gold prices**.
- **Key Observation:**
 - ◆ Gold import value rose by nearly **25% in FY26**.
 - ◆ Physical imports declined, but prices surged by over **40% globally**, inflating the import bill.
- It demonstrates how commodity price shocks can affect India's balance of payments even without a rise in consumption.
- Excessive gold imports become a **macroeconomic challenge** during periods of global uncertainty because they increase the **Current Account Deficit (CAD)**; put pressure on **foreign exchange reserves**; depreciate the **rupee**; increase imported inflation; and worsen external sector vulnerability.

Impact on India's Economy

- **Pressure on Current Account Deficit (CAD)**: Gold constitutes a major non-essential import item.
 - ◆ Rising imports widen the trade deficit, especially when oil prices are simultaneously high.
 - ◆ A higher CAD increases dependence on foreign capital inflows.

- **Stress on Forex Reserves:** Higher import payments require larger outflows of dollars. It reduces the Reserve Bank of India's ability to stabilise the rupee during external shocks.
 - ♦ According to RBI data and government assessments, maintaining adequate forex reserves is crucial for import cover, exchange-rate stability, and investor confidence.
- **Rupee Depreciation:** Large dollar demand for gold and crude oil imports weakens the rupee.
 - ♦ A depreciated rupee further raises import costs, creating a vicious cycle of inflation.
- **Inflationary Pressures:** Rising gold and oil prices increase imported inflation. This complicates monetary policy management for the RBI.

India-UAE CEPA and Gold Imports

- India and the UAE signed the **Comprehensive Economic Partnership Agreement (CEPA)** in February 2022 to strengthen bilateral trade and investment.
 - ♦ However, some tariff concessions under the agreement unintentionally **increased bullion imports**.
- The agreement inadvertently inverted the intended duty differential between **Bullion** (refined gold), and **Dore** (semi-pure gold alloy).
 - ♦ As a result, India imports more finished gold instead of refining it domestically.
- A working paper of IIM Ahmedabad highlighted that, India imports large quantities of **finished bullion** rather than raw dore, and tariff structure under CEPA made bullion imports relatively more attractive than dore imports. It reduced opportunities for domestic refining and value addition.

Weak Gold Refining Ecosystem

- Despite being one of the world's largest consumers of gold, India has not emerged as a major global gold refining and trading hub.
- Countries such as Switzerland and the United Arab Emirates have developed strong refining ecosystems despite having negligible domestic gold production.
 - ♦ They developed world-class refining infrastructure, LBMA-accredited refineries, and integration with global supply chains.
 - ♦ Refining generates nearly **40% value addition**, helping offset trade deficits through exports.

Challenges For India

- **Lack of LBMA-Accredited Refineries:** India currently lacks globally recognised LBMA-certified refineries, limiting access to international bullion markets.
- **Underutilised Capacity:** Existing refineries operate below potential due to policy and structural issues.
- **Limited Global Integration:** India remains largely an end consumer rather than a value-added participant in global gold supply chains.
- **Import Structure Bias:** The import ecosystem favours refined bullion imports over domestic processing.

Government Measures and Policy Suggestions

- **Short-Term Measures:**
 - ♦ **Demand Management:** Discouraging non-essential gold purchases, and encouraging financial savings instruments
 - ♦ **Import Controls:** Historically, India has used higher import duties, gold monetisation schemes, and sovereign gold bonds (SGBs) to reduce physical gold demand.
- **Long-Term Structural Reforms:**
 - ♦ **Develop Refining Ecosystem:** Establish LBMA-accredited refineries, and encourage domestic value addition.
 - ♦ **Promote Gold Recycling:** India has significant idle household gold reserves.
 - ♦ **Expand Financial Alternatives:** Encourage SGBs, gold ETFs, and digital gold, to reduce dependence on physical imports.
 - ♦ **Review CEPA Tariff Structure:** Ensure trade agreements support domestic manufacturing and refining.
 - ♦ **Strengthen External Sector Resilience** to diversify exports, reduce oil dependence, and improve forex management.

Source: IE

NEWS IN SHORT

SARDAR VALLABHAI PATEL

In News

- Recently, the Prime Minister paid tribute to Sardar Vallabhbhai Patel at Somnath Temple during the 75th anniversary celebrations of the temple's reconstruction.

Sardar Vallabhbhai Patel

- He was known as the “Iron Man of India” and was a major leader in India’s freedom struggle.
- **Early life:** He was born on October 31, 1875, in Nadiad.
 - ♦ He studied law in England, became a barrister, and later started a successful law practice in India.
- **Contributions in freedom struggle:** Inspired by Mahatma Gandhi, he joined the Indian independence movement.
 - ♦ He led important movements like the Kheda Satyagraha (1918) and Bardoli Satyagraha (1928) against British policies and taxes.
 - ♦ His leadership earned him the title “Sardar,” meaning leader or chief.
 - ♦ He was a senior leader of the Indian National Congress and actively participated in movements like the Quit India Movement (1942).
- **Post independence role :** After Independence in 1947, he became India’s first Deputy Prime Minister and Home Minister.
 - ♦ His greatest achievement was integrating more than 560 princely states into the Indian Union, helping unite the country.
 - ♦ He also contributed to building India’s administrative system and maintaining national unity and security.
- **Death and legacy:** He passed away on December 15, 1950.
 - ♦ His legacy continues through monuments like the Statue of Unity, the world’s tallest statue.
 - ♦ He is remembered as a symbol of strength, unity, and dedication to the nation.

Source:DD

SPEEDY TRIAL A ‘HUMAN RIGHT’

Context

- The Supreme Court of India, while hearing a criminal case pending for nearly 35 years in Uttar Pradesh, declared that the **right to speedy trial** is not only a constitutional guarantee under **Article 21** but also a human right.

Article 21 of the Constitution

- Article 21 guarantees the **protection of life and personal liberty** except according to procedure established by law.

- Judicial interpretation has expanded **Article 21** to include fair trial, legal aid, humane prison conditions, and speedy justice.

Judicial Evolution

- **Hussainara Khatoon v. State of Bihar:** The Supreme Court first recognised speedy trial as a fundamental right under **Article 21**. The case highlighted the plight of undertrial prisoners languishing in jails for years.
- **A.R. Antulay v. R.S. Nayak:** The Court laid down principles to determine violation of the right to speedy trial. It clarified that delays caused by systemic inadequacies also violate constitutional rights.

Source: TH

PCOS RENAMED AS PMOS

Context

- A global medical consensus has renamed **Polycystic Ovary Syndrome (PCOS)** as **Polyendocrine Metabolic Ovarian Syndrome (PMOS)** after nearly 14 years of scientific consultations involving doctors, researchers, and patient advocacy groups across the world.

What is PMOS?

- **PMOS, earlier known as PCOS**, is a complex hormonal and metabolic disorder **affecting women of reproductive age**.
- It impacts the **endocrine system, metabolism, reproductive health**, and mental well-being.
- The disorder affects nearly one in eight women globally and is among the leading causes of **infertility and menstrual irregularities**.
- **Symptoms of PMOS:**
 - ♦ **Risk of Diabetes:** Insulin resistance can lead to **Type-2 diabetes mellitus**.
 - ♦ **Cardiovascular Risks:** Women with PMOS are more vulnerable to hypertension and heart diseases.
 - ♦ **Fertility Challenges:** The disorder affects ovulation and reproductive health.
 - ♦ **Mental Health Concerns:** Long-term stress, body image issues, and hormonal imbalance may contribute to psychological disorders.

Why Was PCOS Renamed?

- The earlier name **Polycystic Ovary Syndrome** was considered scientifically inaccurate and misleading, as many women diagnosed with the condition do not actually develop ovarian cysts.

- The earlier term primarily associated the disorder with reproductive organs, whereas the condition also significantly affects **metabolism, hormones, cardiovascular health, and mental health.**

Source: ET

DRDO CONDUCTS LONG-DURATION SCRAMJET COMBUSTOR TEST IN HYDERABAD

Context

- The Defence Research and Development Organisation (DRDO) has successfully conducted an extensive, long-duration test of its Actively Cooled Full-Scale Scramjet Combustor in Hyderabad.

About

- The test was conducted at the **Scramjet Connect Pipe Test (SCPT) Facility.**
- It achieved a sustained runtime of more than **1,200 seconds**, improving upon the earlier **700-second test** conducted in **January 2026.**

What is a Scramjet Engine?

- A **Scramjet (Supersonic Combustion Ramjet)** is an advanced **air-breathing propulsion system** designed for hypersonic speeds.
- It compresses incoming air using its high speed, allowing fuel combustion to occur in supersonic airflow. It uses oxygen present in the atmosphere for combustion.

Significance of achievement

- The successful test strengthens India's capability in developing **indigenous hypersonic cruise missiles.**
- It marks progress in advanced aerospace and next-generation defence technologies.

What is Hypersonic Technology?

- Hypersonic technology refers to **systems capable of travelling at speeds greater than Mach 5**, which is five times the speed of sound.
- Hypersonic weapons can travel at extremely high speeds while **maintaining manoeuvrability during flight**, making them difficult to detect and intercept.
- **Types of Hypersonic Weapons**
 - ♦ **Hypersonic Glide Vehicles (HGVs):** These are launched using rockets and glide towards the target at hypersonic speeds.

♦ Hypersonic Cruise Missiles (HCMs):

These are powered throughout flight by advanced air-breathing engines such as scramjets.

Source: AIR

PRADHAN MANTRI SCHOOLS FOR RISING INDIA (PM SHRI)

Context

- **The Union Ministry of Education** has issued a fresh reminder regarding the pending implementation of the **Pradhan Mantri Schools for Rising India (PM SHRI)** scheme to West Bengal, Kerala and Tamil Nadu.

Pradhan Mantri Schools for Rising India (PM SHRI) scheme

- **Aim:** The scheme aims to **turn existing government schools into model schools.**
 - ♦ The scheme is for **existing elementary, secondary, and senior secondary schools** run by the central government and state and local governments around the country.
- **Funding:** It is a **Centrally sponsored scheme** with a total project cost of **27,360 crore** for the period of **five years** from **2022-23 to 2026-27** for transforming nearly **14,500 schools** across the country.
- It will showcase all components of the **National Education Policy 2020**, act as exemplary schools and also offer mentorship to other schools in their vicinity.
- A **'School Quality Assessment Framework'** is being developed to measure the progress and performance of these schools.

Key features of PM SHRI Scheme

- **Development of 'Green schools':** These will be equipped with solar panels, LED lights, nutrition gardens, and waste management, water conservation and harvesting systems.
- **Modern facilities:** Schools will include ICT (information and communication technologies) facilities, smart classrooms, library, digital library, science labs and vocational labs etc.
 - ♦ Schools will also get science and math kits and annual school grants for libraries or sports.
- **Mother tongue and local languages** to be encouraged.

Source: TH

STUDY ON MALARIA VACCINE

In News

- A major study published in the Lancet found that the world's first approved malaria vaccine, RTS,S/AS01E, reduced overall child deaths by 13% in parts of Africa.

Malaria

- It is a serious, life-threatening disease caused by parasites and spread mainly through the bite of infected female Anopheles mosquito.
- It is common in tropical regions and does not spread directly from person to person, though it can rarely spread through infected blood or needles.

Symptoms

- Malaria usually starts with fever, headache, and chills about 10–15 days after infection.
- Early symptoms can be mild, so testing is important. If it becomes severe, it may cause confusion, seizures, breathing problems, jaundice, bleeding, and dark urine, and can be life-threatening.

Prevention and Treatment

- Malaria can be prevented by avoiding mosquito bites using nets, repellents, coils, screens, and protective clothing, and by taking preventive medicines when travelling to high-risk areas.
- Early testing and treatment are essential. Malaria is treated with specific medicines depending on the parasite type and patient factors. Common treatments include Artemisinin-based combination therapy (ACTs) for *P. falciparum*, chloroquine for *P. vivax* (where effective), and primaquine to prevent relapse.

India Specific Data

- In India, malaria cases and deaths have declined sharply between 2015 and 2023:
 - ◆ 80.5% reduction in cases
 - ◆ 78.3% reduction in deaths

- ◆ More than 122 districts reported zero malaria cases
- India exited the WHO High Burden to High Impact group in 2024.
 - ◆ It aims to achieve Zero indigenous malaria cases and deaths by 2027 and Complete malaria elimination by 2030.

Suggestions

- Experts stressed that continued surveillance, mosquito control, and strong public health measures are essential to maintain progress.

Source:IE

NATIONAL FLORENCE NIGHTINGALE AWARDS 2026

Context

- President Droupadi Murmu conferred the National Florence Nightingale Awards 2026 to nurses at a function held at Rashtrapati Bhavan.

About the Award

- Named after Florence Nightingale, the founder of modern nursing, it was instituted in **1973** by the **Ministry of Health and Family Welfare**, Government of India.
- It recognizes **meritorious services of nurses and nursing professionals** who contribute significantly to society.
- A total of **15 awards** are given in the category of Registered Auxiliary Nurses & Midwife, Registered Nurses and Midwife and Registered Lady Visitor.
- **Eligible recipients** include nursing personnel working in Central/State Governments, Union Territories, and Voluntary Organizations, whether in hospitals, community settings, educational institutions, or administration.
- **Each award consists** of a Certificate of Merit, Cash Award of Rs.1,00,000/- and a medal.

Source: AIR

