

DAILY CURRENT AFFAIRS (DCA)

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PM MODI VISIT TO UZBEKISTAN

Context

- PM Modi paid a **state Visit to Uzbekistan**.

Major Highlights

- India and Uzbekistan announced to **elevate their mutual Strategic Partnership to Comprehensive Strategic Partnership level**.
- Both Countries agreed to **set a target of 5 billion dollars of bilateral trade by 2030**, which is 5 times the current trade.
- Grant of USD 1 million** for afforestation in the **Aral Sea region**.
- Uzbekistan has also agreed to **establish a framework for long-term supply of uranium to India** and discuss the sites of the mining for rare earth minerals.
- Commercial Agreement** between NPCI International Payments Ltd (NIPL) with National Interbank Processing Centre JSC (NIPC) to **enable UPI Apps of India to scan national QR – UZQR for making merchant payments in Uzbekistan**.
- Cultural Exchange Programme** between India and Uzbekistan **for the years 2026-30**.
- Letter of Intent for the **conservation and restoration of ancient Buddhist sites of Fayaz Tepa and KaraTepa located in Termez, Uzbekistan**.
- Prime Minister Narendra Modi also received the **highest award of Uzbekistan** for Foreign Leaders i.e. the **“Oliy Darajali Do’sitlik” Order**.

Brief on India-Uzbekistan Ties

- Establishment of Ties:** Both Nations established diplomatic ties in **1992**. India and Uzbekistan declared their **Strategic Partnership in 2011**.
- Bilateral Trade and Investments:** India is among **top 10 trade partners** of Uzbekistan with bilateral trade of **USD 1.32 billion** which is well below potential.
 - Total Indian investments in Uzbekistan amount to US\$ 451 million (approx). Indian investments by Indian companies include pharmaceuticals, healthcare, education and residential building.
- Defence & Security Cooperation:** A Joint Working Group on defence was established in 2019. India & Uzbekistan regularly participate in joint military exercises **“DUSTLIK”**.

- The 3rd meeting of India–Central Asia NSAs/Secretaries of Security Councils was held in 2025, it reviewed regional security challenges, advanced counterterrorism and tech cooperation.
- Cultural Cooperation:** Indian films, actors and songs have been extremely popular in Uzbekistan. Yoga is immensely popular with more than 2000 participants attending International Yoga Day.
- Diaspora & people-to-people ties:** Indian community is estimated to be 21,000 which includes students, workers & business professionals.
 - First ever India-Uzbekistan Consular Dialogue was held in 2025 during which discussions were held on visa processes, consular cooperation, and security matters.
- Multilateral engagement:** India and Uzbekistan cooperate closely at several multilateral platforms such as the UN, G20, BRICS & SCO.

Significance of Uzbekistan for India

- Strategic location:** Uzbekistan is strategically located in the heart of **Central Asia**, making it important for India's engagement with the wider Eurasian region and for countering the influence of other major powers.

Central Asia

- Central Asia is the **landlocked central region of Asia**, extending from the **Caspian Sea in the west to the border of western China in the east**.
 - It is bounded on the **north by Russia and on the south by Iran, Afghanistan, and China**.
- The region consists of the former Soviet republics of **Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan, and Turkmenistan**.
- Central Asia's unique geographical position is deeply rooted in its historical ties to the “Silk Trade Routes,” and has been **pivotal in the region's geopolitics and beyond**.



Connectivity: Uzbekistan is important for India's efforts to develop **alternative routes to Central Asia**, particularly through **Chabahar Port and the International North-South Transport Corridor (INSTC)**.

- **Energy and critical minerals:** Uzbekistan is a significant uranium producer, accounting for **roughly 6.6% of global production in 2024**. It creates opportunities for India to diversify its energy and critical-mineral supply chains.
- **Security cooperation:** Both countries share concerns over **terrorism, extremism, drug trafficking and instability in Afghanistan**. Defence cooperation, including joint military exercises, strengthens regional security coordination.
- **Economic potential:** Uzbekistan offers opportunities for Indian investments and trade in **pharmaceuticals, IT, agriculture, textiles, mining, energy and infrastructure**.
- **Regional diplomacy:** Uzbekistan is a key member of the **Shanghai Cooperation Organisation (SCO)** and an important partner in India's **Connect Central Asia** policy.

Areas of Concern

- **Limited bilateral trade:** Despite significant potential, India-Uzbekistan trade remains relatively modest due to geographical distance, limited connectivity and high transportation costs.
- **Connectivity constraints:** India lacks direct land access to Central Asia because of Pakistan's geographical position. Dependence on routes through Iran and Afghanistan makes connectivity vulnerable to geopolitical disruptions.
- **China's growing influence:** China has emerged as a major economic and strategic partner of Uzbekistan through the Belt and Road Initiative (BRI), creating greater competition for India's economic and strategic outreach in Central Asia.

Way ahead:

- **Enhance Connectivity:** Strengthen Chabahar Port and INSTC to establish reliable trade routes between India and Central Asia, overcoming geographical constraints.
- **Strengthen security cooperation:** Expand counter-terrorism, intelligence sharing and defence cooperation, with greater coordination on the security challenges emerging from Afghanistan.

- **Build regional partnerships:** Utilise platforms such as the SCO and India-Central Asia mechanism to coordinate on connectivity, terrorism, trade and regional stability.

Source: PMO

INDIA-JAPAN ECONOMIC PARTNERSHIP

Context

- The Union Minister of Commerce and Industry concluded his official visit to Japan **aimed at accelerating Japanese investment in India**.

Major Highlights

- **Aim:** To advance the target of **JPY 10 trillion in Japanese private investment** in India over the next decade, agreed upon during the PM's visit to Japan in 2025.
- **A series of high-level meetings** with Japanese government leaders, financial institutions and business executives were held to accelerate investment, strengthen industrial partnerships and deepen economic cooperation.
- **India presented a six-pillar strategy** covering chip design, semiconductor machinery and materials, fabrication, ATMP/OSAT, research and development, and talent development.
- The visit provided **fresh momentum to the India-Japan Special Strategic and Global Partnership**, with discussions covering trade, investment, technology, manufacturing and resilient supply chains.

Brief on India-Japan Relations

- **Establishment of Relations:** After WWII, India opted for a separate Peace Treaty with Japan, signed in 1952, marking the start of formal diplomatic relations.
- **India and Japan have instituted a 2+2 Foreign and Defense Ministerial Meeting** since 2018. Three rounds of the 2+2 Foreign and Defence Ministerial Meeting have already been held so far.
- **Growth in Bilateral Ties:** India-Japan bilateral relations were elevated to Global Partnership in 2000, Strategic and Global Partnership in 2006, and Special Strategic and Global Partnership in 2014.
- **Strategic Synergy:** India's Act East Policy and Indo-Pacific Oceans Initiative (IPOI) align closely with Japan's Free and Open Indo-Pacific (FOIP) policy.

- **Bilateral Trade: India- Japan Comprehensive Economic Partnership Agreement (CEPA)** came into effect in 2011. India's total trade with Japan in FY25-26 is USD 27.48 billion, with Exports of USD 6.04 billion and Imports of USD 21.44 billion.
 - ♦ In 2024-25, India ranked 18th in Japan's total trade with 1.4% share while Japan ranked 17th in India's total trade with 2.1% share.
 - **Collaboration on Global Initiatives:** Japan and India cooperate in initiatives like the International Solar Alliance (ISA), Coalition for Disaster Resilient Infrastructure (CDRI), and Leadership Group for Industry Transition (LeadIT).
 - ♦ Both countries work together in multilateral frameworks like the Japan-Australia-India-U.S. Quad and the India-Japan-Australia Supply Chain Resilience Initiative (SCRI).
 - **Defence and Security:** Joint Declaration on Security Cooperation (2008), Defence Cooperation and Exchanges MoU (2014), Information Protection Agreement (2015), Reciprocal Provision of Supplies and Services Agreement (2020), and co-development of the UNICORN naval mast (2024).
 - ♦ **Exercises:** Malabar (with the US and Australia), Milan (multilateral naval), JIMEX (bilateral maritime), Dharma Guardian (Army), and Coast Guard cooperation are held regularly.
 - ♦ 2024-25 saw the participation of service chiefs in India and Japan, strengthening interoperability.
 - **Development and Infrastructure Cooperation:** Japan has been India's largest ODA donor since **1958**, supporting critical infrastructure and human development projects. Japan's ODA disbursement to India in 2024-25 stood at about JPY 440 billion.
 - ♦ The **Mumbai-Ahmedabad High Speed Rail** is the flagship project symbolising advanced technology transfer and skill development.
 - **Investment:** FDI Equity Inflow from 2000 to 2026 to India have been around US\$ 48.14 billion ranking **Japan fifth among source countries for FDI** and accounting for 6% of total FDI into India.
 - ♦ Japanese FDI into India has mainly been in automobile, electrical equipment, telecommunications, chemical, financial (insurance) and pharmaceutical sectors.
 - **India-Japan Act East Forum:** Established in 2017, it aims to provide a platform for India-Japan collaboration under the rubric of India's "Act East Policy" and Japan's "Vision of a Free and Open Indo-Pacific".
 - **Space Collaboration:** ISRO and JAXA collaborate in X-ray astronomy, satellite navigation, lunar exploration, and the Asia Pacific Regional Space Agency Forum (APRSAP).
 - ♦ In 2016, they signed a Memorandum of Cooperation (MoC) for peaceful space exploration and use.
 - ♦ Both sides are cooperating on the **Lunar Polar Exploration Mission** to explore the moon's south polar region- scheduled for launch in **2026-27**.
 - **Tourism:** 2023-24 was celebrated as the Year of Tourism Exchange, with the theme "Connecting Himalayas with Mount Fuji".
 - **Diaspora:** About 54,000 Indians live in Japan, mainly IT professionals and engineers.
 - **Emerging Focus Areas:** Digital cooperation (semiconductors, startups), clean energy, supply chain resilience, industrial competitiveness, and skill development.
- Areas of Concern**
- **Trade Imbalance:** There is a significant trade imbalance, with Japan exporting more to India than India exports to Japan, creating a need for better reciprocal trade.
 - **Cultural and Language Barriers:** Despite strong ties, differences in language, culture, and business practices pose challenges to deeper integration.
 - **Limited People-to-People Exchanges:** The scale of people-to-people interactions is still limited, impacting deeper mutual understanding.
 - **Infrastructure Constraints:** Despite improvements, some areas in India still lack the infrastructure necessary to support large-scale Japanese investments effectively.
 - **Different Economic Priorities:** India's focus on rapid economic growth may sometimes contrast with Japan's emphasis on sustainable development and technology.

Way Ahead

- **Enhance Trade and Investment:** Focus on reducing the trade imbalance by increasing Indian exports to Japan and encouraging Japanese investment in India's manufacturing and technology sectors.
- **Boost People-to-People Connections:** Increase cultural exchanges, tourism, and educational collaborations to deepen mutual understanding.

- **Technology and Innovation Partnership:** Leverage Japan's expertise in technology and India's growing digital sector to collaborate in AI, robotics, renewable energy, and space exploration.
- **Address Environmental Concerns:** Increase cooperation on environmental sustainability, climate change, and disaster resilience to support both countries' green energy goals.

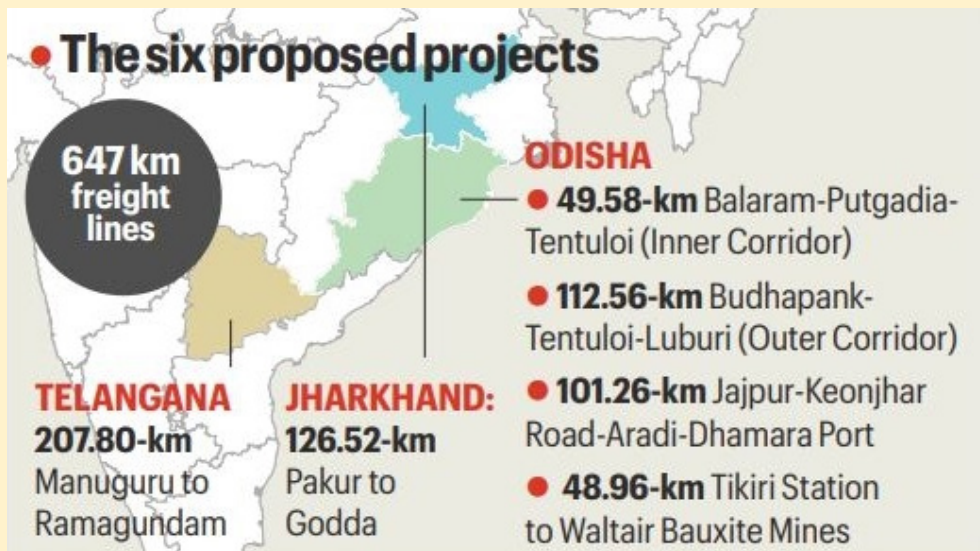
Source: DD

HYBRID ANNUITY MODEL IN INDIAN RAILWAYS**Context**

- The **Public Private Partnership Appraisal Committee (PPPAC)** approved six railway projects covering **647 km** under the **Hybrid Annuity Model (HAM)**, marking the Indian Railways' first major adoption of HAM.

Key Features of the Projects

- Total capital cost over the **17–19 year concession period** is estimated at **₹40,866 crore**.



- Four projects are in **Odisha**, while one each is in **Telangana** and **Jharkhand**.
- The routes primarily cater to **coal, iron ore, bauxite, coke, fertilisers, cement and food grains**.
- Construction is proposed to begin from **April 2028**, subject to final approval and bidding.

About Investment Models

- **Public Private Partnership models** enable private participation in infrastructure while sharing responsibilities and risks.
- Major models include:
 - ♦ **Engineering, Procurement and Construction (EPC):** Government finances the project; private entities mainly undertake construction.
 - ♦ **Design, Build, Finance, Operate and Transfer (DBFOT):** Private party finances, develops and operates the asset before transferring it.

- ♦ **Build, Operate and Transfer (BOT):** Private entity builds and operates the project for a concession period.
- ♦ **Hybrid Annuity Model (HAM):** A hybrid of public funding and private financing, with government support through grants and annuity payments.
- ♦ **Development Partner Model:** Private/public entities participate in developing railway infrastructure associated with specific traffic or industrial requirements.

What is the Hybrid Annuity Model?

- HAM is a form of **Public Private Partnership (PPP)** that combines public funding with private financing.

- Under the proposed arrangement:
 - Government contribution:** Indian Railways will provide **40% of the bid project cost as grant during construction**.
 - Private financing:** The concessionaire will finance the remaining **60%**.
 - Repayment:** After commissioning, the Railways will repay the private investment through **annuity payments along with interest**.
 - Operations:** Indian Railways will operate trains and collect freight revenues.
 - Risk sharing: Traffic and tariff risks remain with Indian Railways.** Thus, lower-than-expected freight traffic would not directly penalise the private concessionaire.
 - The private party will undertake maintenance of railway assets as specified in the concession agreement.
- Land acquisition and clearances** may cause delays.
- PPP projects require robust dispute-resolution and risk-allocation mechanisms.

Conclusion and Way Forward

- HAM should be implemented with **transparent bidding, realistic traffic assessments, strong contract enforcement and independent performance monitoring**.
 - Lessons from highways-sector HAM projects can guide its application to railways.
- The shift towards HAM represents an important evolution in Indian Railways' PPP strategy.
- If risks are allocated efficiently, it can combine **public oversight with private capital and efficiency**, accelerating freight-corridor development while preserving Railways' operational control.

Source: IE

Why HAM for Railways?

- Earlier, the projects were considered under the **Design, Build, Finance, Operate and Transfer (DBFOT)** model. However, market feedback indicated greater private-sector interest under HAM.
- Significance:**
 - Mobilises long-term private capital** for railway infrastructure.
 - Reduces the Railways' immediate financing burden.
 - Transfers **construction and maintenance responsibilities** to the private sector while retaining strategic operations with Railways.
 - Facilitates **mineral and port connectivity**, strengthening freight logistics.
 - Can improve India's **multimodal transport efficiency and logistics competitiveness**.
 - Provides an alternative financing mechanism amid large infrastructure investment requirements.

Challenges

- Fiscal burden:** Future annuity and interest payments create long-term government liabilities.
- Demand estimation:** The government bears traffic and tariff risks.
- Contract management:** Effective monitoring of construction and maintenance standards is essential.

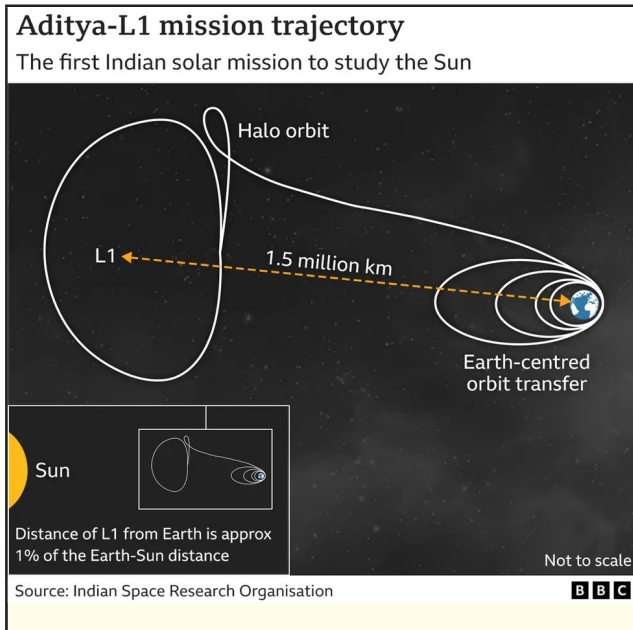
ADITYA-L1: INDIAN SOLAR MISSION'S NEW FINDINGS

In News

- Researchers from Manipal Academy of Higher Education, ISRO, Department of Space and other institutions have used **Aditya-L1's data for studying solar flares**.

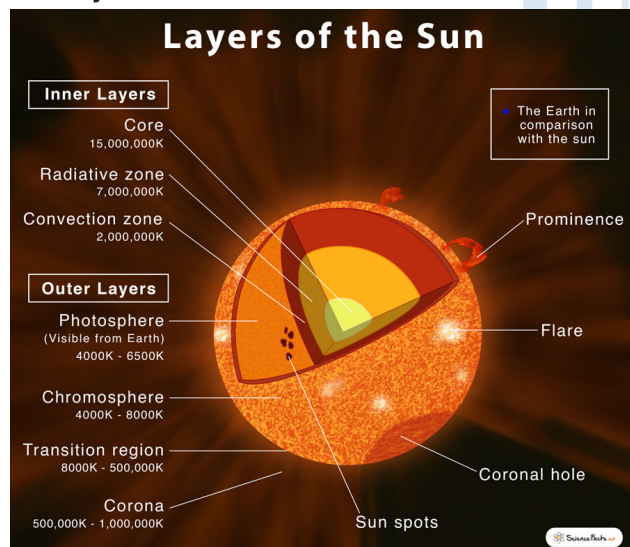
Aditya-L1

- Aditya-L1 spacecraft is launched from Satish Dhawan Space Center (SDCS), Sriharikota onboard **PSLV-C57 with PSLV-XL configuration in 2023**.
- It is the first space-based observatory-class Indian solar mission to **study the Sun**.
- It is placed in a **halo orbit around the Lagrangian point 1 (L1) of the Sun-Earth system**, which is about 1.5 million km from the Earth.
 - A satellite placed in the halo orbit around the L1 point has the major advantage of continuously viewing the **Sun without any occultation/eclipse**.



Solar Flares

- Solar flares are sudden and intense bursts of **electromagnetic radiation from the Sun**.
 - It is understood to result from the release of magnetic energy.
- Solar flares often accompany solar magnetic storms called **coronal mass ejections (CME)**.
- Solar flares become more frequent around **every 11 years**.



Types

- There are five categories, listed here in order from most intense to least intense:
 - X-class flares** are the biggest and they are major events that can trigger radio blackouts around the whole world and long-lasting radiation storms in the upper atmosphere.

- M-class flares** are medium-sized and they generally cause brief radio blackouts that affect Earth's polar regions.
 - Minor radiation storms sometimes follow an M-class flare.
- C-class flares** are small with few noticeable consequences here on Earth.
 - At its peak, a C-class flare is ten times less powerful than an M-class flare.
- B-class flares** are ten times smaller or weaker than C-class flares.
- A-class flares** are at least ten times less intense than B-class flares, with no noticeable consequences on Earth.

How Aditya-L1 Observes Solar Flares?

- Aditya-L1, located at the Sun-Earth L1 point, allows uninterrupted views of solar activity at different wavelengths.
 - Its Solar Ultraviolet Imaging Telescope (SUIT) payload studies the Sun in 11 near-ultraviolet (NUV) filters, exploring layers from the top photosphere to the chromosphere.
 - Solar Low Energy X-ray Spectrometer (SoLEXS) and the High Energy L1 Orbiting X-ray Spectrometer (HEL1OS) monitor X-ray emissions from intense processes in the solar corona.
- Combined, NUV and X-ray measurements enable scientists to understand how activity in the lower solar atmosphere is tied to energy release in the corona during the build-up of solar flares.

Impacts

- The findings suggest that repeated small-scale energy releases may gradually destabilise magnetic fields, triggering major flares.
- It improves understanding of solar-flare formation and
- It could contribute to more reliable flare and space-weather forecasting, helping protect satellites, astronauts, communication systems and other critical technologies.

Source :[TH](#)

NEWS IN SHORT

GOVT. PLANS TO CONCLUDE TRADE AGREEMENT WITH CHILE

Context

- India is committed to concluding a **“balanced and mutually beneficial”** trade deal with Chile within this year.

About

- India and Chile started their **CEPA negotiations** in **2025**, following the signing of the Terms of Reference.
- India’s exports to Chile stood at \$1.2 billion** in 2025-26, about 5.8% higher than in the previous year. Imports from Chile, on the other hand, stood at **\$5 billion — 93% higher than in 2024-25**.

About Chile

- Chile is a **long, narrow country on the west coast of South America**.
 - Its coastline stretches over 6,437 km but is only about 91 km wide.
- Cape Horn**: Located at the southern tip of South America, Cape Horn is known for high winds and treacherous waves.



- The world’s driest non- polar desert is the Atacama Desert**, located in northern Chile.
- Chile is located along a **highly seismic and volcanic zone**, part of the **Pacific Ring of Fire**, due to the **subduction of the Nazca and Antarctic plates** in the South American plate.
- Escondida** is the largest copper mine in the world, it is located in the Atacama Desert of northern Chile **producing over 5% of global supplies**.
- Chile is also rich in mineral resources **such as lithium**.
 - The **“Lithium Triangle”** refers to a region in South America that contains some of the world’s largest lithium reserves.

- This triangular-shaped region encompasses **parts of Argentina, Bolivia, and Chile**; they possess **58% of the world’s known lithium reserves**.

Source: TH

QUALIFIED MOST-FAVOURED NATION RULE

Context

- India is reportedly considering a **limited form of the Most-Favoured Nation (MFN) provision** as part of the proposed overhaul of its bilateral investment treaty (BIT) framework.

About

- India excluded MFN from BIT in 2016**, following the country’s experience with investment arbitration.
- The current move** is seen as necessary not only to attract foreign investors, but also to **enable Indian investors to get similar treatment** in major economies like the US or EU.
- An open approach to granting qualified MFN status to foreign investors could also be a great **leverage in bilateral negotiations**.

MFN in an Investment Treaty

- In an investment treaty, it generally requires a country **to provide investors from one treaty partner treatment no less favourable than that available to investors from another treaty partner**.
 - If India gives investors from one country a particular protection under a later treaty, an MFN clause can allow investors from another treaty partner to seek the same treatment.
- This is **different from the MFN principle under the World Trade Organization (WTO)**, where the provision applies to trade relations between members. Last year, India opposed a US proposal to dilute the WTO’s MFN principle.

Source: BS

PER DROP MORE CROP (PDMC) SCHEME

In Context

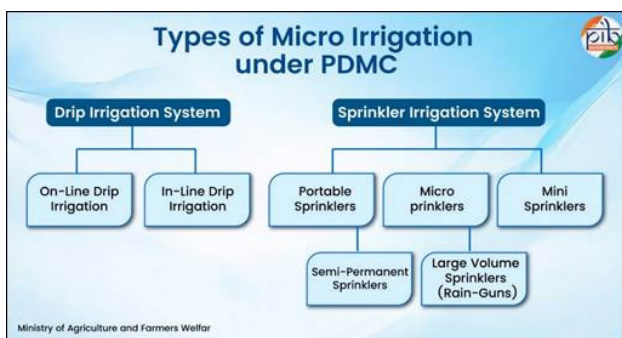
- Per Drop More Crop (PDMC) has been a game changer in the irrigation paradigm in India using micro irrigation technology, which ensures effective use of water.

Background of Per Drop More Crop (PDMC)

- The initiative originally began in January 2006 as the **Centrally Sponsored Scheme (CSS)** for Micro Irrigation.
- It was later upgraded to the **National Mission on Micro Irrigation (NMMI) in 2010-11**. During FY 2014-15, it became part of the **National Mission on Sustainable Agriculture (NMSA)** under the "On Farm Water Management" (OFWM) component.
- From FY 2015-16 to FY 2021-22, it was officially named **Per Drop More Crop (PDMC)** and implemented as a core component of the **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)**.
- Since 2022-23, PDMC has been implemented under the Pradhan Mantri Rashtriya Krishi Vikas Yojana (PM-RKVY)

Types of Micro Irrigation Systems under PDMC

- Drip irrigation:** It is a type of irrigation where water is delivered directly to the root zone of plants through emitters, reducing water loss and enhancing efficiency.
 - There are two varieties:**
 - On-line drip:** Drippers are laid as per the position of the plant, and it is suitable for unevenly spaced crops.
 - In-line drip:** Drippers are put in the pipes at regular intervals, and it is good for uniformly irrigated crops.
- Sprinkler irrigation** is the application of water through a system of pipes, usually by pumping, and then spraying the water through nozzles to form a uniform pattern of spray droplets to resemble natural rainfall. Up to this point, the irrigation is fairly uniform.
 - It is ideal for high-density crops, grains, legumes, spices, seeds and



Features

- Financial assistance:** The government provides financial assistance of up to five hectares per beneficiary to install micro irrigation systems. Small and marginal farmers receive 55%, and other farmers receive 45% financial assistance.
 - Some state governments also provide additional subsidies from their own budgets.
- Water management:** It advocates precision water management to maximise crop output and augment farmers' revenue.
 - The initiative also encourages fertigation to enhance the effectiveness of nutrient application and prioritises water-scarce and groundwater-stressed areas.
 - Fertigation is the application of fertilisers through the irrigation water directly to the area where most of the plant's roots develop
- Convergence:** It also encourages the combination of micro-irrigation with tube wells, river-lift irrigation and solar-powered irrigation systems.

Progress

- The Pradhan Mantri Krishi Sinchayee Yojana – Per Drop More Crop (PDMC) initiative has enhanced water use efficiency, crop yield, employment and farmers' incomes.
- A NITI Aayog review (2020-21) indicated income gains of 10-69% and improvements in water-use efficiency of 30-70%.
- The Economic Survey 2020-21 pointed out savings of 20-48% in water, 10-17% in energy, 30-40% reduction in labour expenses, 11-19% in fertiliser and 20-38% higher yields of crops by micro-irrigation.

Source : [PIB](#)

PRADHAN MANTRI FASAL BIMA YOJANA

In Context

- Pradhan Mantri Fasal Bima Yojana (PMFBY) has evolved as one of the key pillars of India's agricultural risk management system in the last 10 years.

Pradhan Mantri Fasal Bima Yojana (PMFBY)

- It was **introduced in 2016** to cover the greatest number of farmers under crop insurance.

- It **covers risks** from pre-sowing, including prevented/failed sowing, broad-based mid-season adversity, localised calamities due to hailstorms, floods, landslip, etc. at specific land parcels, to post-harvest losses due to cyclones, unseasonal rainfall and other specified hazards.
- The Union Budget 2026-27 has earmarked **Rs. 12,200 crore for PMFBY** reiterating the Government's sustained commitment toward farmer coverage through crop insurance.

Key Features PMFBY

- **Premium:** Farmers pay a maximum **2% premium for Kharif and 1.5% for Rabi foodgrain and oilseed crops**.
 - ♦ Maximum premium for commercial and horticultural crops shall be 5%.
 - ♦ The balance premium is subsidised by the Central & State Governments in the ratio of 50:50. For Farmers in North-Eastern & Himalayan States/ UTs, the ratio of subsidy of Central & State Govt. is 90:10. “
- **Eligible:** The Pradhan Mantri Fasal Bima Yojana (PMFBY) offers crop insurance to eligible loanee and non-loanee farmers, including tenant farmers and sharecroppers. The documentation and eligibility criteria are state-specific.
 - ♦ For non-loanee farmers, enrolment is voluntary. The premium is generally collected from the crop loan of loanee farmers by the institution from which they borrowed.
- **Risks Covered**
 - ♦ **Yield Losses (standing crops, on notified area basis):** PMFBY provides area-based coverage against non-preventable risks such as drought, dry spells, floods, inundation, cyclones, hailstorms, lightning, pests and diseases.
 - ♦ **Prevented Sowing:** Where insured farmers incur expenditure but are prevented from sowing due to adverse weather conditions, they shall be eligible for claims up to a maximum of 25% of the sum insured.

- ♦ **Post-Harvest Losses:** Crops kept in “cut-and-spread” condition for drying in the field are covered for up to 14 days after harvesting against specified cyclonic and unseasonal rain events.
- ♦ **Localized Calamities:** Individual farm-level losses caused by hailstorms, landslides, inundation, cloud bursts, and damage by natural fire are covered under specified conditions.
- **Exclusions:** PMFBY excludes losses from war, nuclear risks, riots, theft, specified post-harvest conditions, and other preventable risks.
 - ♦ Numerous restrictions exclude losses that occur in locations not reported, outside of the covered crop lifetime or due to negligence, man-made or preventable causes.



Progress and Achievements Under PMFBY

- PMFBY is being implemented in 25 States & Union Territories as of Kharif 2026. Since the scheme's launch, over 92.46 crore farmer applications have been insured and payments of over 2.06 lakh crore have been made on over 26.33 crore applications.
- As on 27 August 2026, 241.38 lakh farmers covering 278.12 lakh hectares were insured in Kharif 2026, which was higher than Kharif 2025 coverage of 229.77 lakh farmers and 269.38 lakh hectares.
- The growing confidence in the PMFBY is seen in the key states rejoining the scheme — Andhra Pradesh (2022), Jharkhand (2024), West Bengal (2026), while Bihar is slated to rejoin from Rabi 2026-27.

Source: [PIB](#)

SARDAR PATEL NATIONAL UNITY AWARD

In Context

- The Sardar Patel National Unity awards are expected to be announced on October 31, coinciding with the Sardar Vallabhbhai Patel's 150th birth anniversary.

About

- The Sardar Patel National Unity Award was instituted by the **Ministry of Home Affairs (MHA)** in **2019** to recognise outstanding contributions towards national unity and integrity.
- The award is expected to be considered **equivalent to the Padma Vibhushan**.
- The award committee would be constituted by the Prime Minister, and would include the Cabinet Secretary, Principal Secretary to the Prime Minister, Secretary to the President, Home Secretary, as members, and three-four eminent persons selected by the Prime Minister.
- The award is set to **comprise a medal and a citation, but no monetary grant or cash award would be attached to it**.
- It would **not be conferred posthumously, except in very rare and highly deserving cases**.
- The medal will be in the form of a **lotus leaf, made of gold and silver, with Patel's portrait embossed** on one side and the national emblem on the other.



Source: IE

VACUUM BIREFRINGENCE

In Context

- A study found strong evidence of **vacuum birefringence** around the magnetar 1E 1547.0–5408, with X-rays showing polarisation of up to 80%.

About vacuum birefringence

- It is a quantum effect predicted by **Quantum Electrodynamics (QED)** in which extremely strong magnetic fields make empty space and behave like a **birefringent crystal**.
- It was first formulated theoretically in the 1930s by **Werner Heisenberg and Hans Heinrich Euler**.
- It happens when virtual electron–positron pairs in the quantum vacuum are affected by a magnetar's intense magnetic field, causing light passing through it to become strongly polarised.
- It provides a rare test of Quantum Electrodynamics (QED) under extreme conditions and helps scientists understand the nature of the quantum vacuum and magnetic fields of neutron stars.

Source: [TH](#)

