UPSC Daily Current Affairs| Prelim Bits 12-04-2025

Modernization of Command Area Development and Water Management

Prelims – *Economic and Social Development-Sustainable Development.*

Why in News?

The Union Cabinet recently approved the Modernization of Command Area Development and Water Management (M-CADWM) as a sub-scheme of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) for the period 2025-2026.

- **Aim** - Modernization of the irrigation water supply network to supply of irrigation water from existing canals or other sources in a designated cluster.
- **Micro irrigation facilitation** - It will make robust backend infrastructure for micro-irrigation by farmers from established source to the Farm gate upto 1 Ha with underground pressurized piped irrigation.
- **Use of technology** - Supervisory Control and Data Acquisition (SCADA), Internet of things technology will be used for water accounting and water management.
- **Irrigation Management Transfer (IMT)** - Water User Society (WUS) will manage Irrigation assets.
- The Water User Societies will be linked with existing Economic Entities like FPO or PACS for five years.
- **Benefits** - This will increase the Water Use Efficiency (WUE) at the farm level, increase agriculture production & productivity; and thereby increase the income of farmers.

Command Area Development And Water Management (CAD&WM) Programme

• The programme was launched in 1974-75.
• It is being implemented under Pradhan Mantri Krishi Sinchai Yojna (PMKSY) - Har Khet Ko Pani from 2015-16.
• The ongoing CADWM programme has now been restricted to implementation of CAD works of 99 prioritized Accelerated Irrigation Benefits Programme (AIBP) projects.
• **Components of CADWM Programme**
• **Structural Intervention**
- On-Farm Development (OFD) works;
- Construction of field, intermediate & link drains;
- Correction of system deficiencies; and
- Reclamation of waterlogged areas.
• **Non-Structural Intervention** - Activities directed at strengthening of Participatory Irrigation Management (PIM) including:
- One time Functional Grant to the registered Water Users' Associations (WUAs);
- One time Infrastructure Grant to the registered WUAs;
- Trainings, demonstration

Reference

PIB | Modernization of Command Area Development and Water Management

Niveshak Didi

Prelims – *Current events of national and international importance| Economic and Social Development.*

Mains (GS II) – *Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.*

Why in News?

Recently, a Memorandum of Agreement (MoA) has signed jointly to launch the Phase 2 of the Niveshak Didi.

- **Niveshak Didi** – A unique initiative that ***trains women postal workers and community leaders*** to act as financial educators within their local regions.
- **Aim** – To scale financial literacy among ***women in rural, semi-urban, and underserved areas*** through grassroots mobilization and community-driven education.
- To empower rural women with the skills and *confidence to make informed financial decisions*.
- **Nodal Ministry –** Ministry of Corporate Affairs.

Phase 1 of Niveshak Didi *was launched in 2022* and *more than 55,000 beneficiaries participated in IPPB Financial Literacy Camps across India.*

Approximately 60% female beneficiaries mostly in the youth & economically active age group.

- **Launched by –** Investor Education and Protection Fund Authority (IEPFA) and India Post Payments Bank (IPPB).
- **Significance** – It is a *women-centric model* led by almost 40,000 women postal workers trained as Niveshak Didis, who will conduct sessions on *responsible investing, fraud awareness, savings habits, and digital banking tools*.
- It enables them to *build trust, inspire & share financial discipline*, and create a lasting impact at the grassroots level.

Phase 2 *will see the deployment of over 4,000 financial literacy camps across India.*

Investor Education and Protection Fund Authority (IEPFA)

• **Established on** – *2016.*
• It is a *statutory body*, under the Ministry of Corporate Affairs.
• **Vision** – To build a *financially aware and confident India*.
• **Objective** – To ensure that investors across the country are both informed and protected.
• To educate people about their *rights and responsibilities* as investors.

• India Post Payments Bank (IPPB)

• **Established on** – *2018,* under the Ministry of Communication.
• **Vision** – To build the *most accessible, affordable and trusted bank* for the common man in India.
• **Objective** – To remove barriers for the *unbanked & underbanked* and reach the last mile leveraging the Postal network.
• **Key pillars** – Enabling *Paperless, Cashless and Presence-less banking* in a simple and secure manner at the customers' doorstep.
• **Significance** – It delivers *simple and affordable banking solutions* through intuitive interfaces.

Reference

PIB| Launch Phase 2 of Niveshak Didi

Artemis Accords

Prelims – *Current events of national and international importance.*

Mains (GS III) – *Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.*

Why in news?

Bangladesh recently became the 54th nation to sign the Artemis Accords.

- **Aim** – To provide a *non-binding framework of principles* to guide peaceful and cooperative civil space exploration, supporting NASA's Artemis Program.

  NASA's Artemis Program *aims to return humans to the Moon and Mars.*

- **Established** – In 2020 by the United States, led by NASA and the U.S. Department of State and 7 other initial signatory nations.
- **Scope** – Applies to civil space activities on the Moon, Mars, asteroids, comets, their orbits, Lagrangian points and transit paths.
- **Signatories** – There are *54 countries* including Bangladesh.
- **India** – *Signed the Accords in 2023* to boost the cooperation between the two nations and explore the domain beyond the boundaries of Earth.

Core Principles of the Accord

- **Peaceful Exploration** – All activities exclusively for peaceful purposes.

- **Transparency** – Commitment to sharing space policies, plans, and scientific findings by the nations.
- **Implementation** – Through memoranda, government agreements and agency arrangements.
- **Compatibility** – Aligns with the 1967 Outer Space Treaty and other international space law.
- **Safety Zones** – Provides for establishment of safety zones to prevent harmful interference.
- **Space Resources** – Affirms the right to extract and utilize space resources sustainably.
- **Registration** – Requires registration of space objects for identification.
- **Interoperability** – Promotes compatible systems and standards.
- **Space Debris** – Commits signatories to debris mitigation planning.
- **Emergency Assistance** – Provides framework for supporting astronauts in distress.

Significance

- Represents largest international coalition for space exploration governance.
- Creates practical framework for sustainable lunar presence.
- Facilitates international cooperation while respecting sovereignty.
- Positions signatories for future space economy participation.

Reference

NASA | Artemis Accords

Efficient Air Conditioners (ACs)

Prelims – *General issues on Environmental ecology, Bio-diversity and Climate Change.*

Mains (GS III) – *Conservation, environmental pollution and degradation, environmental impact assessment.*

Why in news?

Intense summers and economic growth are driving rapid AC adoption, straining India's power grid, especially during peak hours, making AC efficiency a critical issue.

Challenges faced due to Air Conditioners (ACs)

- **Rapid Growth** – India is adding 10-15 million AC units annually, with projections indicating an additional 150 million units over the next decade.
- **Peak Load Crisis** – ACs significantly contribute to peak electricity demand, especially during evening and night-time hours when solar power generation diminishes, but heat persists.

In May 2024, India's evening peak demand hit a record 240 GW, largely driven

by cooling needs.

- **Supply-Demand Gap** – Potential shortfall in firm power capacity (reliable 24/7 power) projected as early as 2026, despite overall capacity additions.

The issues with Current Standards

- **Outdated MEPS** – India's Minimum Energy Performance Standards (MEPS) for ACs, represented by the star rating system, are lagging behind global benchmarks.
- **Inverter AC Gap** – The widely sold inverter (variable-speed) ACs at India's 1-star minimum rating are nearly 50% less efficient than the minimum standards in countries like China and Japan.
- **Lagging International Benchmarks** – China's minimum standard is roughly equivalent to India's highest 5-star rating, meaning a large portion of ACs sold in India *would not meet basic requirements in the Chinese market*.

Strategic Importance

- Enhancing AC efficiency acts as a power system reliability safeguard.
- It offers a consumer savings strategy through lower electricity bills.
- Provides an industrial competitiveness lever, potentially positioning India as a leader in efficient cooling technology.

Proposed Roadmap for Higher Efficiency		
Year	**Proposed Minimum Efficiency (Indian Seasonal Energy Efficiency Ratio)**	**Relevance**
2027	5.0 (current 5-star)	India’s top-rated models now
2030	6.3	Premium models in Indian market
2033	7.4	Global best-in-class
• The *Indian Seasonal Energy Efficiency Ratio (ISEER)* is a metric used to assess the energy efficiency of air conditioners, considering seasonal variations in temperature and operating conditions and is a key factor in the BEE (Bureau of Energy Efficiency) star rating system for room air conditioners.		

Benefits of Efficiency Upgrade

- **Peak Demand Reduction** – Projected to contribute up to 120 GW by 2030 and 180 GW by 2035 to peak demand.
- **Consumer Savings** – Cumulative savings by 2035 projected between ₹66,000 crore to ₹2.25 lakh crore ($8–$26 billion) due to reduced electricity bills."
- **Infrastructure Cost Savings** – Avoided investments potentially reaching ₹7.5 lakh crore by 2035 in new power generation and grid infrastructure.
- **Energy Savings** – 120 terawatt hours (TWh) per year by 2035, which is equivalent to 60 GW of solar capacity.
- **Environmental Gains** – Reduced carbon footprint.

Challenges to Efficiency Adoption

- Higher upfront cost of efficient ACs.
- Low consumer awareness about ISEER ratings.
- Retailer preference for low-efficiency models (higher margins).
- Tenant-owner disconnect (buyers don't pay the electricity bills).
- Absence of strong regulatory push.

Reference

The Hindu | Energy Efficiency

Panchayat Advancement Index

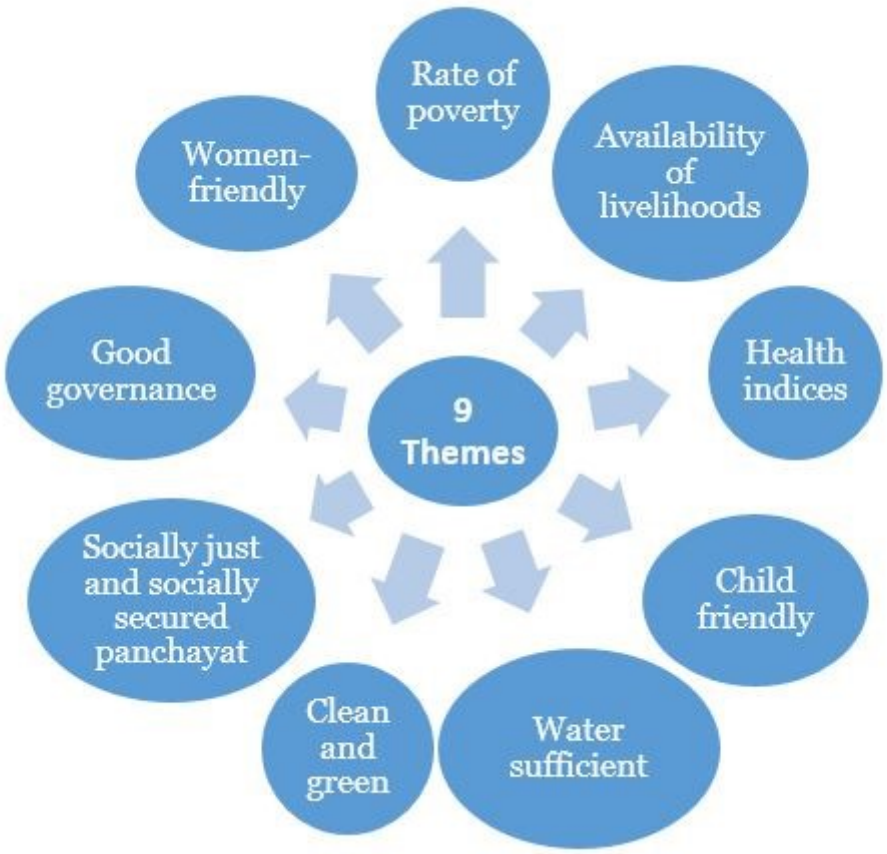
Prelims – *Indian Polity and Governance-Constitution, Political System, Panchayati Raj, Public Policy, Rights Issues, etc.*

Mains (GS II) – *Important aspects of governance, transparency and accountability, e-governance.*

Why in news?

In a push for data driven governance, the Department of Panchayati Raj has come up with the first ever Panchayat Advancement Index (PAI).

- **Panchayat Advancement Index (PAI)** – Aims to assess and measure the progress made by grassroots-level institutions in achieving localized SDGs, thereby contributing to the attainment of SDG 2030.
- It is a *multi-domain and multi-sectoral index* that is intended to be used to assess the overall holistic development, performance & progress of Panchayats.
- The index takes into account *various socio-economic indicators and parameters* to gauge the well-being and development status of the local communities within the jurisdiction of a Panchayat.
- **Launched by** – Ministry of Panchayati Raj.
- **9 themes** – PAI has been compiled based on 435 unique local Indicators (331 mandatory & 104 optional) on nine themes.



- These themes align global goals with rural realities, helping local governments tailor their strategies for holistic development.
- **Categories of performance** – Based on these, gram panchayats are grouped into one of the 5 categories of performance
    1. Achiever (90+)
    2. Front runner (75 to below 90)
    3. Performer(60 to below 75)
    4. Aspirant (40 to below 60)
    5. Beginners (below 40)
- **Performance** – The 2022-23 PAI data reveals that out of 2,55,699 Gram Panchayats, 2,16,285 submitted validated data.
- *699 (0.3%) Panchayats emerged as Front Runners*, 77,298 (35.8%) were Performers, 1,32,392 (61.2%) were Aspirants while 5,896(2.7%) Gram Panchayats were at the Beginner Level.
- *None of the Gram Panchayat was qualified as an Achiever* and as of now, no inter-state comparison has been done.
- *Gujarat led the index* with 346 Gram Panchayat as Front Runners, followed by Telangana with 270 Front Runners.
- States with a high number of Performers include Gujarat, Maharashtra, Telangana along with Madhya Pradesh and Uttar Pradesh.
- *Bihar, Chhattisgarh, and Andhra Pradesh have a significant share of Aspirant Gram Panchayats*.
- **Significance of PAI** – Promotes Evidence-Based Planning.
- Enhances Accountability & Transparency.
- Fosters Competitive Federalism.

- Localizing SDGs.
- Informs Resource Allocation.

References

1. The Hindu | Panchayat Advancement Index (PAI)
2. PIB | Panchayat Advancement Index (PAI)