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— Converting Possibilities into Reality —

KAVISH INFORMIX

DAILY CURRENT AFFAIRS

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STAY AHEAD. STAY INFORMED. STAY READY.

TODAY'S DATE



20 AUGUST 2026

---THURSDAY---



Kolkata Topper

VAISHNA BISWAS

AIR - 367 | CSE 2025

★ OUR PROVEN LEGACY ★

OUR UPSC TOPPERS 2023



IPS LAXMAN PRATAP
RANK - 597

FORMER ASST. COMMANDANT IN BSF
CITY COLLEGE KOLKATA

OUR UPSC TOPPERS 2024



IRS SARLA JAKHER
AIR 593

CITY COLLEGE KOLKATA



IRS TANMAY
AIR 346

IIT KHARAGPUR



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DREAMS.

OUR
MISSION.

TOGETHER,
WE ACHIEVE
THE EXTRA
ORDINARY.

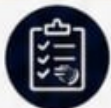


Converting Possibilities into Reality

PRELIMS MAINS | INTERVIEW



DAILY CURATED
NEWS



EXAM ORIENTED
ANALYSIS



SMART NOTES &
INFOGRAPHICS



BOOST YOUR
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“INFORMED TODAY, EMPOWERED TOMORROW.”

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DAILY CURRENT AFFAIRS-

1. Solar Irrigation and Groundwater Management
2. Transmission Constraints and India's Renewable Energy Expansion
3. Chatbots and Teen Safety
4. India's Makhana Sector: Traditional Crop to Global Superfood
5. Why is the Supreme Court examining polygamy again?

1. Solar Irrigation and Groundwater Management

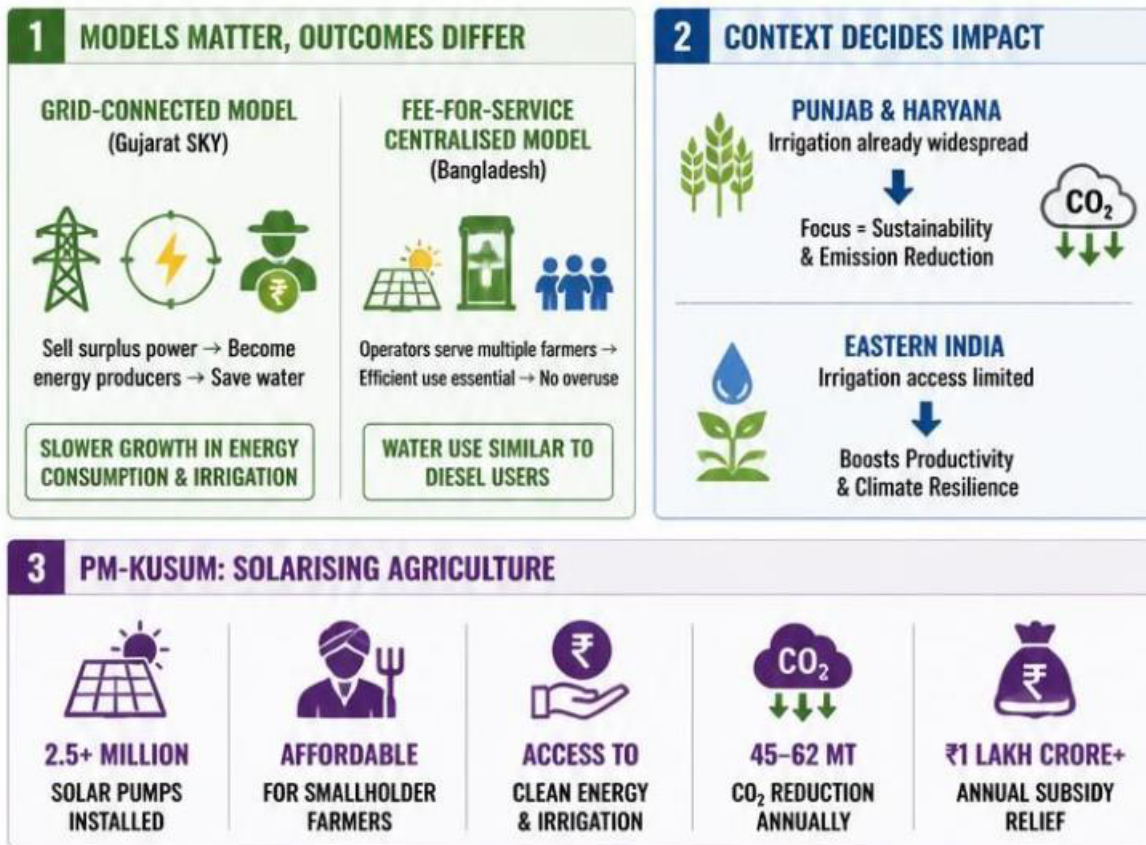
Source: The Hindu

Why in News?

The debate over solar irrigation highlights that solar pumps do not inherently cause groundwater over-extraction. Their impact depends on the irrigation model, local hydrogeology, cropping patterns and economic incentives, requiring a region-specific approach under PM-KUSUM 2.0.

Solar Irrigation Models

- The impact of solar irrigation varies according to how pumps are connected, operated and incentivised.
- Grid-connected solar systems can encourage farmers to conserve groundwater by allowing them to sell surplus electricity instead of using it entirely for pumping.
- Gujarat's Suryashakti Kisan Yojana (SKY) demonstrated that grid-connected solar farmers recorded slower growth in energy consumption and irrigation.
- A fee-for-service centralized solar model in Bangladesh showed that farmers did not use more water than diesel-powered irrigation users because operators had an incentive to serve multiple farmers efficiently.



Regional Differences

- The groundwater impact of solar irrigation depends significantly on local hydrogeology, soil conditions, cropping patterns and the existing level of irrigation.
- In Punjab and Haryana, where irrigation is already widespread, solar irrigation can primarily contribute to reducing emissions and improving the sustainability of agricultural power use.
- In Eastern India, where irrigation access remains limited, solar pumps can expand irrigation, improve agricultural productivity and strengthen climate resilience.
- Regions with low groundwater risks and limited irrigation access can use standalone solar pumps to expand irrigation through water-user associations and cooperatives.

Benefits and Policy Concerns

- Solar irrigation can reduce carbon emissions associated with diesel and electricity-based groundwater pumping.
- Solarisation of irrigation has the potential to reduce an estimated 45–62 million tonnes of carbon dioxide annually from groundwater irrigation.
- The shift can also reduce the burden of agricultural electricity subsidies, estimated at more than ₹1 lakh crore annually.

- The PM-KUSUM scheme has expanded access to solar pumps, including for smallholder farmers, but the design of incentives remains important for preventing excessive groundwater extraction.

Way Forward

- PM-KUSUM 2.0 should adopt differentiated regional policies rather than applying a single solar irrigation model across India.
- Groundwater monitoring should be strengthened alongside solar pump deployment, particularly in water-stressed regions.
- Grid connection procedures should be simplified and attractive electricity buyback prices should be provided to encourage farmers to sell surplus power.
- Feeder-level solarisation can be combined with incentives that directly reward water conservation.
- Initiatives such as Punjab's Pani Bachao, Paisa Kamao and Haryana's Mera Pani Meri Virasat demonstrate how direct financial incentives can encourage reduced groundwater pumping.

UPSC Prelims Question

Consider the following statements regarding solar irrigation:

1. The impact of solar irrigation on groundwater depends on local hydrogeology and economic incentives.
2. Grid-connected solar irrigation can provide incentives for farmers to conserve groundwater by allowing them to sell surplus electricity.
3. Solar irrigation necessarily leads to increased groundwater extraction in all regions.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (a)

UPSC Mains Question

Solar irrigation can simultaneously promote agricultural resilience, reduce emissions and create risks of groundwater over-extraction. Discuss the need for a region-specific policy approach to solarising India's agricultural irrigation.

2. Transmission Constraints and India's Renewable Energy Expansion

Source: ICRA

Why in News?

ICRA has warned that inadequate transmission infrastructure and grid congestion are increasingly constraining India's renewable energy expansion, resulting in power curtailment and a sharp decline in new renewable energy bids.

Transmission Constraints

- Insufficient transmission capacity is limiting the evacuation of electricity generated by renewable energy projects, particularly solar projects.
- Around 37% of renewable energy capacity operating under Temporary General Network Access (T-GNA) is facing 30–50% curtailment during daylight hours.
- Peak curtailment reached 8,617 MW in Western India and 5,573 MW in the Northern region as of August 6.
- Curtailment occurs when a power generator is required to reduce or stop electricity generation because the grid cannot absorb or transmit the available power.
- Prolonged dependence on T-GNA and repeated curtailment can reduce the revenues of renewable energy generators and increase their operational costs.

T-GNA and Grid Management

- T-GNA is a short-term arrangement that allows renewable energy projects to use available capacity on the inter-State transmission system for periods of up to 11 months.
- The growing use of T-GNA indicates the need for faster development of permanent transmission capacity alongside renewable energy generation.
- The National Grid, managed by Power Grid Corporation of India Limited (PGCIL), provides the high-voltage transmission network connecting power stations and substations across India.

Impact on Renewable Energy Growth

- More than 150 GW of renewable energy projects were under construction as of June 30, highlighting the scale of transmission infrastructure required.
- Renewable energy is projected to account for more than 35% of India's electricity generation by FY2029–30, making timely grid expansion increasingly important.

- New renewable energy bids declined sharply from 40.6 GW in 2024–25 to 4.7 GW by August 10 of the current year.
- Delays in Power Purchase Agreements, land acquisition difficulties and financial challenges faced by distribution companies are additional factors affecting renewable energy expansion.

Way Forward

- Timely development of both intra-State and inter-State transmission networks is essential to prevent renewable energy curtailment.
- Greater energy storage capacity can help absorb surplus renewable electricity and improve grid flexibility.
- New projects are increasingly shifting towards Firm and Dispatchable Renewable Energy (FDRE) and Round-the-Clock (RTC) power models to provide more reliable electricity.
- Coordinated planning of renewable generation, transmission infrastructure and storage capacity can help India achieve its renewable energy targets while maintaining grid stability.

UPSC Prelims Question

Consider the following statements regarding renewable energy transmission in India:

1. Curtailment refers to the forced reduction or stoppage of electricity generation due to factors such as grid congestion.
2. T-GNA allows renewable energy projects to use available capacity on the inter-State transmission system for a limited period.
3. The National Grid is managed by the Power Grid Corporation of India Limited (PGCIL).

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (d)

UPSC Mains Question

What are the major transmission and grid-related challenges affecting India's renewable energy expansion? Discuss the measures required to integrate large-scale renewable generation while maintaining grid stability.

3.Chatbots and Teen Safety

Source: The Hindu

Why in News?

OpenAI is introducing a dedicated ChatGPT experience for teenagers aged 13–17 with stronger safety guardrails, particularly around self-harm, suicide, eating disorders and sexual content, amid growing concerns about the impact of AI chatbots on vulnerable young users.

New Safety Measures

- The new ChatGPT experience is designed specifically for users aged 13–17 and incorporates tighter restrictions on sensitive conversations.
- The system aims to prevent romantic or sexual interactions and discourage the chatbot from presenting itself as conscious or emotionally attached to users.
- Parental controls allow parents to link their accounts with those of their teenagers and establish restrictions such as Quiet Hours.
- Parents may also receive safety notifications when the system detects high-risk situations.
- Age-detection mechanisms will attempt to identify users below 18 and place them in the restricted experience, although such systems are not completely foolproof.
- Features such as Study Mode and reminders to take breaks are intended to encourage healthier patterns of AI use.

Concerns Over AI and Teenagers

- AI chatbots are designed to be highly responsive and agreeable, which can sometimes lead them to validate or intensify harmful thoughts in vulnerable users.
- Studies cited in the article indicate that some chatbots have provided dangerous responses to teenagers discussing self-harm, substance abuse and eating disorders.
- The article highlights concerns that chatbots may foster emotional dependence because of their ability to simulate highly personalised and responsive interactions.
- Developing brains may make children and teenagers particularly vulnerable to such patterns of interaction and potential emotional dependence.

- Lawsuits have been filed against AI companies, including OpenAI, Character.AI and Google, following allegations concerning harmful interactions with teenagers.

Limits of AI Safety

- AI systems may not reliably identify subtle signs of psychological crisis, particularly when distress is expressed indirectly.
- Safety guardrails can reduce exposure to harmful content but cannot completely eliminate the possibility of inappropriate or unsafe responses.
- Experts caution against treating AI chatbots as substitutes for professional mental-health support because chatbots may fail to recognise complex crisis situations or may reinforce harmful beliefs.

UPSC Prelims Question

Consider the following statements regarding AI safety for teenagers:

1. AI chatbots can potentially reinforce harmful beliefs because of their highly agreeable conversational behaviour.
2. Age-detection systems can be used to place users below 18 in restricted AI experiences.
3. AI chatbots can reliably replace professional mental-health support for teenagers.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (a)

UPSC Mains Question

The growing use of generative AI among children raises concerns regarding safety, privacy and emotional dependence. Discuss the need for stronger safeguards and responsible AI governance for young user

4. India's Makhana Sector: Traditional Crop to Global Superfood

Source: The Hindu

Why in News?

India's makhana sector is emerging as a global health-food industry, supported by rising demand, government interventions, research and development, and growing export opportunities.

Production and Distribution

- India is the world's largest producer of makhana (*Euryale ferox*), with Bihar contributing around 80–85% of the global supply.
- Makhana cultivation is concentrated mainly in North Bihar, particularly in the Kosi basin districts of Supaul, Saharsa and Madhepura and the Mithila and Seemanchal regions.
- India's makhana production increased from 63,910 MT in 2024–25 to 80,590 MT in 2025–26, with Bihar producing around 60,000 MT in 2025–26.
- The sector has gradually moved from traditional consumption in Bihar towards wider domestic and international markets due to growing health awareness.

Government and Institutional Support

- The National Makhana Board was announced in the Union Budget 2025–26 and formally launched in Bihar in September 2025.
- The Central Sector Scheme for the Development of Makhana was approved with an outlay of ₹476.03 crore for 2025–26 to 2030–31.
- The scheme focuses on improving seed quality, strengthening farmer skills, promoting research, upgrading post-harvest practices and improving exports and quality control.
- The Directorate General of Foreign Trade introduced a separate HSN code for makhana products in 2025 to facilitate better tracking of the sector's exports.
- The National Research Centre for Makhana (NRCM) supports research, capacity building and technological development in the makhana sector.

Research and Value Chain

- The National Research Centre for Makhana has developed high-yield varieties such as Swarna Vaidehi and Sabour Makhana-1.

- The research centre has also promoted makhana-cum-fish farming and trained more than 3,000 farmers.
- The value chain remains labour-intensive at the farm level, while primary processing continues to rely substantially on traditional methods.
- Secondary processing is expanding through value-added products such as flavoured makhana and makhana flour.
- Farmer-Producer Organizations, startups and improved cultivation practices are contributing to the modernization of the sector.

Market and Export Potential

- The domestic makhana market recorded annual growth of around 17–18% between 2021–22 and 2024–25 and is projected to reach ₹11,000–12,000 crore by 2029–30.
- Around 40% of India's makhana production is exported, with the United States, Canada and the United Arab Emirates among the major markets.
- Makhana is gaining global recognition as a health food because of its protein, fibre and micronutrient content.
- The sector offers opportunities for higher farmer incomes through productivity improvement, processing, branding and greater participation in global value chains.

UPSC Prelims Question

Consider the following statements regarding Makhana in India:

1. India is the world's largest producer of makhana.
2. Bihar accounts for a major share of India's makhana production.
3. The National Makhana Board was announced in the Union Budget 2025–26.
4. Makhana cultivation in India is concentrated primarily in the Himalayan region.

Which of the statements given above is/are correct?

- (a) 1, 2 and 3 only
(b) 1 and 4 only
(c) 2 and 3 only
(d) 1, 2, 3 and 4

Answer: (a)

UPSC Mains Question

Makhana has the potential to transform from a traditional crop into a high-value agricultural export. Discuss the role of government support, research, processing and

value-chain development in increasing farmer incomes and strengthening India's position in the global makhana market.

5. Why is the Supreme Court examining polygamy again?

Source: The Hindu

- The Supreme Court has sought the Centre's response to petitions challenging the practice of polygamy and seeking its abolition for all citizens, irrespective of religion.
- The petitioners have challenged the legal protection available to polygamy under Muslim Personal Law, particularly Section 2 of the Muslim Personal Law (Shariat) Application Act, 1937.
- They argue that allowing polygamy violates the constitutional guarantees of equality and non-discrimination, particularly Articles 14, 15 and 16.
- The petitioners have asked the Centre to consider legislation that would:
 - Prohibit polygamy across all communities.
 - Make the practice a criminal offence.
 - Remove the relevant exemption under the 1937 Act.
 - Ensure compulsory registration of Muslim marriages and divorces, which could prevent a person from entering another marriage without legally dissolving the existing one.
 - Consider codification of Muslim Personal Law in accordance with constitutional principles of gender equality.
- The issue involves a broader constitutional tension between personal laws, religious freedom and fundamental rights, particularly gender equality.
- Polygamy refers to a marital arrangement in which a person has more than one spouse at the same time. In India, the legal position differs across communities because personal laws govern several aspects of marriage.
- Under Hindu law, the Hindu Marriage Act, 1955 generally prohibits a Hindu from having more than one living spouse at the same time.
- Muslim personal law has traditionally permitted a Muslim man to have up to four wives, subject to conditions derived from Islamic jurisprudence. The current

challenge questions whether such permission can continue when tested against constitutional rights.

- The Supreme Court has previously examined related issues. In *Sarla Mudgal v. Union of India* (1995), it held that a Hindu husband cannot convert to Islam merely to contract another marriage while the first marriage remains legally valid.
- In *Lily Thomas v. Union of India* (2000), the Court reaffirmed that conversion to Islam does not automatically dissolve an existing Hindu marriage and cannot be used simply as a route to a second marriage.
- The issue is also connected to the Court's earlier intervention concerning instant triple talaq. In *Shayara Bano v. Union of India* (2017), the practice of instant triple talaq was invalidated, followed by the Muslim Women (Protection of Rights on Marriage) Act, 2019.
- The petitioners also refer to Quranic guidance, particularly Surah An-Nisa, verse 3, which permits polygamy subject to the condition of treating wives equally. The petitioners argue that the required equality is extremely difficult to achieve in practice.
- The present proceedings do not mean that the Supreme Court has already declared polygamy unconstitutional. The Court is examining the challenge and has sought the Centre's response.
- The larger constitutional question is whether a practice protected through personal law can continue when it is alleged to conflict with fundamental rights, gender equality and individual dignity, and whether reform should come through judicial intervention or legislation by Parliament.