



DAILY CURRENT AFFAIRS 27-04-2026

Mapping Perspective

1. Aspero

Prelims Perspective

2. INS Nireekshak
3. Online Gaming Authority of India

Mains Perspective

4. Electricity Trading in India
5. Fertiliser crisis in India

Aspero

Syllabus: Prelims Bits – Places in news.

Context:

- Archaeologists in Peru recently uncovered a structure at Áspero that appears to have been used to observe the sky, adding detail to early scientific practices in the Caral Civilisation

About Áspero

Location & Cultural Context

- It is a late preceramic archaeological site associated with the Norte Chico civilization (also called Caral-Supe civilization), one of the oldest known civilizations in the Americas
- It is located in Peru on the right bank of the Supe River, only 500 meters from the Pacific Ocean



Chronology & Settlement Pattern

- Once a major fishing centre for the city of Caral, Áspero was inhabited throughout the Late Archaic period from before 3000 BC to approximately 1800 BC
- It was a major urban center with monumental architecture, including large platform mounds and sunken circular plazas, serving as a hub for trade, agriculture, and religious rituals

Economic Significance

- Áspero was the main supplier of marine products during this period
- Researchers have identified 25 architectural complexes demonstrating a complex social organization based on the use of marine resources and exchange with populations from the coast, the highlands, and the jungle

Social & Archaeological Findings

- Among the site's most notable findings are elite funerary contexts such as the Lady of the Four Tupus, the Elite Male, and the recent burial of a high-status girl
- These findings indicate social stratification and presence of elite classes

Scientific & Cultural Significance

- Áspero functioned not only as a fishing center but also as a place for the development of scientific and ritual knowledge
- Astronomical observations conducted there helped inhabitants understand and predict environmental changes, highlighting advanced knowledge of natural surroundings

Analytical Insight

- Reflects early urbanisation and complex socio-economic organisation in preceramic societies
- Demonstrates integration of economy (marine resources), religion (ritual spaces), and science (astronomical observations)
- Indicates early development of environmental awareness and predictive knowledge systems in ancient civilizations

INS Nireekshak

Syllabus: GS-3: Science and Technology – Defence Technology.

Context:

- INS Nireekshak recently arrived in Colombo to participate in the fourth edition of the India–Sri Lanka Diving Exercise (DIVEX 2026).

About INS Nireekshak

- It is a Dive Support and Submarine Rescue Vessel of the Indian Navy.
- Built by Mazgaon Shipbuilders in 1985; in service with the Navy since 1989; commissioned in 1995.

- Equipped with advanced deep-sea diving systems, recompression chambers, and submarine rescue infrastructure; can deploy Deep Submergence Rescue Vehicles and support saturation diving missions.
- Its sophisticated systems allow it to maintain stability during sensitive underwater operations, making it indispensable for search-and-rescue missions, underwater inspections, and diver training.



DIVEX 2026 – Key Facts

- It is the fourth edition of the India–Sri Lanka Diving Exercise.
- The week-long exercise will bring together diving teams from the Indian Navy and the Sri Lankan Navy to undertake specialised underwater operations and training drills.
- Aimed at enhancing interoperability, strengthening coordination, and facilitating exchange of best practices between the two maritime forces.

Humanitarian & Strategic Significance

- As part of India’s humanitarian outreach, INS Nireekshak will hand over two BHISM (Bharat Health Initiative for Sahyog Hita & Maitri) cubes to Sri Lankan authorities under the government’s Aarogya Maitri initiative.
- These portable medical units are equipped to handle up to 200 emergency cases and come with essential medicines and basic surgical capabilities.

Analytical Perspective

- Enhances maritime cooperation and defence diplomacy between India and Sri Lanka.
- Reflects India’s role in regional security and humanitarian assistance (HADR) in the Indian Ocean Region.
- Strengthens interoperability in niche domains like deep-sea diving and submarine rescue operations.

Online Gaming Authority of India

Syllabus: GS-2: Statutory Body – Regulatory Body.

Context:

- The government recently constituted the **Online Gaming Authority of India (OGAI)**, comprising six members.

About OGAI

- It is a regulatory body established under the **Promotion and Regulation of Online Gaming Act 2025**.
- The authority will be a digital office under the Ministry of Electronics and Information Technology (MeitY), Government of India; it will be operational starting May 1.
- It will act as the central regulator for online games, including esports, bringing them under a formal registration and classification system.

Functions of OGAI

- Categorising and registering online games, deciding whether a game qualifies as a money game, and addressing public grievances.
- Issuing guidelines, codes of practice, and directions to ensure compliance.
- Coordinating with financial institutions and law enforcement agencies to ensure effective enforcement.

Membership Structure

- The authority will comprise 6 members, with the Additional Secretary of MeitY as Chairperson.
- Other five members will include Joint Secretaries from:
 - Ministry of Home Affairs
 - Ministry of Information and Broadcasting
 - Ministry of Youth Affairs and Sports
 - Department of Financial Services
 - Department of Legal Affairs

Analytical Significance

- Ensures **formal regulation of online gaming sector**, addressing concerns of legality and consumer protection.

- Brings **inter-ministerial coordination**, reflecting multi-dimensional nature (security, finance, legal, youth affairs).
- Enhances **accountability and grievance redressal**, crucial in context of rising online gaming and betting concerns.

Electricity Trading in India

Syllabus: GS-3: Industry – Power Sector.

Context:

- India is moving toward restructuring its electricity trading system through proposed regulations on market coupling, issued by the Central Electricity Regulatory Commission (CERC).
- Market coupling aims to aggregate bids from all power exchanges and determine a single, uniform market-clearing price, replacing the current system where different exchanges set varying prices.

Existing System of Electricity Trading

- Traditionally, electricity in India is sold through long-term Power Purchase Agreements (PPAs) between generators and distribution companies (DISCOMs).
- Power exchanges enable short-term trading to manage demand fluctuations, where surplus electricity is sold at market-driven prices.
- Present system follows decentralised price discovery, with each exchange determining its own price.

Shift to Unified Market Mechanism

- Proposed reform seeks to shift from decentralised price discovery to a unified system.
- Grid Controller of India designated as central operator for implementing market coupling and ensuring efficient price discovery.

CERC's Market Coupling Proposal: Key Features

Regulatory Framework

- Proposed through Power Market (Second Amendment) Regulations, 2026.
- Builds on 2021 regulations where market coupling was first introduced.

Concept of Market Coupling

- System where buy and sell bids from all power exchanges are combined.

- Determines a single, uniform market-clearing price (MCP) for electricity.
- Shifts price discovery from individual exchanges to a central Market Coupling Operator (MCO).

Objectives of Market Coupling

- Enable uniform price discovery across power exchanges
- Reduce price disparities between regions
- Provide a reliable benchmark price for policymakers
- Improve market efficiency and stability

Institutional Mechanism

Grid India as Market Coupling Operator (MCO)

- Grid Controller of India proposed as MCO.
- Responsibilities:
 - Operating and managing market coupling
 - Creating a dedicated internal cell
- Interim arrangement: power exchanges continue price discovery until rollout.

Centralised Price Discovery Mechanism

- MCO will aggregate bids from all power exchanges.
- Determine single MCP based on maximisation of economic surplus (buyer + seller benefits).
- Ensures efficient and transparent pricing.

Operational Framework

Power Market Coupling Procedure (PMCP)

- Grid India to develop PMCP within six months.
- PMCP will define:
 - Roles and responsibilities of MCO
 - Standardised bid formats
 - Design of price discovery algorithm

Uniform Bid Collection and Transmission

- All power exchanges will:
 - Collect bids in standardised format

- Share with MCO via secure channels within defined timelines
- Ensures consistency and seamless integration.

Phased Implementation

- Initial coverage:
 - Day-Ahead Market (DAM) – trading for next-day delivery
 - Real-Time Market (RTM)
- Gradual extension to other market segments.

Controversies and Challenges

Regulatory and Legal Issues

- Insider trading allegations flagged by SEBI involving confidential information leak.

Industry Opposition

- India Energy Exchange (IEX), dominant player (>90% DAM share), opposed the move.
- Concern: loss of competitive advantage under uniform pricing mechanism.

Market Structure and Key Players

- Dominant player: India Energy Exchange (IEX)
- Other exchanges:
 - Power Exchange India Limited
 - Hindustan Power Exchange Ltd

Electricity Trading in India: Structure and Mechanisms

Dual System of Trading

Long-Term Contracts

- Power Purchase Agreements (PPAs): typically 25-year contracts between generators and DISCOMs.

Short-Term Markets

- Facilitated through power exchanges.
- Used to manage demand fluctuations and surplus supply.

Market-Based Price Discovery

- Electricity traded through bids (demand) and offers (supply).
- Market-clearing price (MCP) determined at demand-supply intersection.

- Benefits:
 - Generators optimise output and revenue
 - Utilities efficiently meet variable demand

Types of Power Markets (Based on Timing)

Spot Market

- Real-Time Market (RTM): near-immediate delivery
- Intraday Market: same-day trading before delivery

Day-Ahead Market (DAM)

- Closed auctions for 15-minute time blocks
- Electricity delivered next day

Term-Ahead Market (TAM)

- Contracts for delivery from 3 hours to 11 days ahead

Growth of Short-Term Electricity Markets

- Volume increased from 65.90 Billion Units (2009-10) to 238.35 Billion Units (2024-25).
- Growth rate:
 - Short-term transactions: 8.9% CAGR
 - Total generation: 5.8% CAGR
- Share in total electricity generation increased from 9.6% to 13.03%.

Fertiliser crisis in India

Syllabus: GS-3: Indian Agriculture -Fertiliser.

Context:

- India facing **sharp rise in fertiliser prices** due to **supply disruptions** triggered by **US-Israel-Iran conflict** and **closure of Strait of Hormuz** (key global energy and trade route)
- Latest **urea import tender (Indian Potash Limited)**: prices at **\$935-959/tonne**, nearly double **\$508-512/tonne (February, RCF)**

Price Rise Across Key Fertilisers

- **DAP (Di-Ammonium Phosphate):** ~\$680–720 → \$865–925/tonne
- **Sulphur:** ~\$300–550 → ~\$900/tonne
- **Ammonia:** ~\$435 → \$850–900/tonne
- Surge affects **finished fertilisers + key raw materials**, amplifying **overall cost pressures**

Supply Chain Disruptions

- **Closure of Strait of Hormuz** restricting **global shipments**
- **Shutdown of facilities (QatarEnergy, Maaden)** due to **Iranian strikes** reducing supply
- India sourcing from **Indonesia, Malaysia, Morocco, Jordan**
- Suppliers catering to **multiple regions (incl. South America)** → **increased competition** → **price rise**

Kharif Season Fertiliser Challenge

- **Kharif season (June – Southwest Monsoon)** faces **serious fertiliser supply challenge**, especially **urea**
- Estimated requirement: **19.4 mt**
- Available stock (**early April**): **~5.5 mt**
- Indicates **significant shortfall before peak sowing**

Dependence on Imports and Gulf Region

- Annual urea consumption: **39–40 mt**
- Domestic production: **30–31 mt**
- **Imports: 9–10 mt**
- **~40% imports (pre-war)** from **GCC countries**
- **>60% LNG** (key input for urea) sourced from **Gulf**
- **Gulf disruptions** impacting **imports + domestic production**

Impact on Domestic Production

- Normal monthly production: **~2.5 mt**
- March output: **~1.5 mt**
- April expected: **~1.7–1.8 mt**
- **Recovery unlikely before June**
- **LNG supply disruptions** reducing **production capacity**

Logistical and Import Constraints

- **Shipment delays** due to vessels stuck near **Persian Gulf & Strait of Hormuz**
- **Cargo loading deadlines extended** due to **availability + transit issues**
- **Imports + transport bottlenecks** worsening **supply shortages**

Relative Position of Other Fertilisers

- Better availability: **DAP, MOP (Muriate of Potash), SSP (Single Super Phosphate), NPKS fertilisers**
- **Urea shortage** remains **most critical concern**

Outlook: Kharif vs Rabi

- **Kharif season** may be **managed with difficulty**
- **Rabi season** faces **greater risk of intensified shortages**

Addressing the Fertiliser Crisis: Alternatives & Policy Options

Consumption Pattern & Structural Vulnerability

- Urea: ~55% share (70–71 mt)
- DAP: ~9–9.5 mt
- NPKS fertilisers: ~14.2 mt
- SSP: ~5–5.5 mt
- Heavy dependence on **urea & DAP** → **high vulnerability to disruptions**

Shift Toward Alternative Fertilisers

- **Ammonia shortages** may drive substitution with:
 - TSP (Triple Super Phosphate): high P (46%), no N
 - MAP (Mono Ammonium Phosphate): balanced N + P
 - SSP: lower P + contains sulphur
- Helps maintain **nutrient supply despite shortages**

Proposal: Fortified Fertilisers

- **Coating urea/DAP** with **micronutrients (Zn, Fe, B, etc.)**
- Adding **secondary nutrients (S, Ca, Mg)**
- **Relaxing price controls** on fortified products

Benefits:

- Improved crop yields + nutrient efficiency

- Reduced need for separate micronutrient application
- Higher value to farmers despite higher prices

Role of Biostimulants

- Derived from **microbes, seaweed, organic matter**
- Do not supply nutrients directly → **enhance nutrient uptake efficiency**
- Example: **phosphate-solubilising bacteria** convert **locked P** → **usable form**

Improving Nutrient Use Efficiency

- Fertilisers show **limited plant absorption**
- Biostimulants improve: **soil nutrient availability + biomass conversion**
- Can be **blended with chemical fertilisers** → **reduce overall consumption**

Conclusion

- Crisis may accelerate **diversification, innovation, efficiency**
- **Fortified fertilisers + biostimulants** can reduce **dependence on traditional inputs** while sustaining **agricultural productivity**