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GS Paper 1: History,

TOPICS COVERED

23 March 2026

23Mar

Syrian Kurds come back home to celebrate Nowruz for the first time since exile

सीरियाई कुर्द निर्वासन के बाद पहली बार नवरोज़ मनाने के लिए घर लौटे

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Syrian Kurds come back home to celebrate Nowruz for the first time since exile

GS 1: History
Associated Press
AL BASOUTA

Abdul Rahman Omar fled his village in the Afrin district in northern Syria eight years ago as a Turkish offensive against Kurdish fighters swept across the area.

Now he is among hundreds of Kurds who have recently returned to Afrin. He joined neighbours in celebrating the spring festival of Nowruz for the first time since their return from exile, and for the first time after the government declared the celebration a national holiday.

Nowruz, the Farsi-language word for "new year," is an ancient Persian festival that is also celebrated by Kurds in Syria, Turkey and Iraq as well as Iran. It is

characterised by colourful street festivals and torch-bearing processions winding their way into the mountains.

The 3,000-year-old festival is rooted in the ancient religion of Zoroastrianism and is marked by people across faiths including Zoroastrians, Muslims, Christians, Jews and those of the Baha'i faith as well as by millions in the diaspora.

Mr. Omar joined a row of young men and women in a line dance to a pounding beat Friday evening and then proceeded up into the hills above the village of al-Basouta.

They hoisted torches and Kurdish flags and spelled out the word "rape-rin," meaning "rapturing" in Kurdish, with flames.

The initially peaceful

holiday celebration was marred by tensions between Arabs and Kurds in some areas Saturday after images circulated on social media of a man taking down the Syrian flag during festivities in the north-eastern city of Kobani.

Afrin was seized by Turkish forces and allied Syrian opposition fighters in 2018, following a Turkey-backed military operation that pushed fighters with the Kurdish-led Syrian Democratic Forces and thousands of Kurdish civilians from the area.

Turkey considers the SDF to be a terrorist organisation because of its ties to the Kurdistan Workers' Party, or PKK, a separatist group that staged a decades-long insurgency in Turkey. A peace process is



Flames of tradition: Kurdish women light a bonfire during Nowruz celebrations in Istanbul on Sunday. AFP

now underway. Kurds who remained in Afrin complained of discrimination and human rights violations. Many who left were afraid or unable to return because Arab Syrians displaced from other areas by the country's civil war had taken up residence in their homes. Mr. Omar spent his years in exile in the Sheikh Maqsood neighbourhood of Aleppo city.

The area became a flash point in January in fighting between government forces and the SDF, which had built up a *de facto* autonomous region in northeast Syria during the civil war that began in 2011.

The battle in Aleppo, followed by a government offensive that seized much of the territory formerly

held by the SDF, resulted in an agreement to merge the Kurdish-led forces into the national army and bring key institutions in northeast Syria back under the control of the Central Government. The government also agreed to facilitate the return of displaced Kurds to Afrin, including a convoy of 400 families who left the SDF-controlled Hassakeh province earlier this month.

Angelia Hajima, a young Kurdish woman who joined the group proceeding into the hills, credited Masoud Barzani, the head of the Kurdistan Democratic Party – the dominant Kurdish party in neighbouring Iraq – with brokering the SDF-Damascus deal that led to the return of the displaced. "I hope that eve-

ryone can go back to their homeland now," she said.

During ceasefire negotiations with the SDF in January, interim Syrian President Ahmad al-Sharaa issued a decree strengthening Kurdish rights. The move was seen as an attempt to appeal to the country's Kurdish minority, many of whom are wary of his government.

The decree made Kurdish an official language along with Arabic, and adopted Nowruz as a national holiday. It also restored the citizenship of tens of thousands of Kurds in northeastern Hassakeh province after they were stripped of it during the 1962 census.

Under the 50-year rule of the Assad dynasty in Syria, which ended with the

ouster of former President Bashar Assad in December 2024, Kurds were marginalised and public celebrations of Nowruz were banned. Mr. Omar recalled that Kurds used to light Nowruz torches clandestinely and were sometimes pursued by security forces because of it.

"This is the first time I go to the mountain and light the flame and I'm not afraid," he said.

While Friday night's festivities went forward peacefully, some areas saw outbreaks of violence on Saturday. The Internal Security force in Aleppo said it was seeking to identify the person who ripped down the flag and would take "necessary measures" against him "within the legal framework."

23Mar. Syrian Kurds come back home to celebrate Nowruz for the first time since exile

सीरियाई कुर्द निर्वासन के बाद पहली बार नवरोज़ मनाने के लिए घर लौटे

- **Nowruz, the Farsi-language word for "new year," is an ancient Persian festival** that is also celebrated by **Kurds in Syria, Turkey and Iraq** as well as Iran.
नवरोज़, जो फारसी भाषा में "नया साल" का अर्थ है, एक प्राचीन पर्शियन त्योहार है जिसे सीरिया, तुर्की, इराक और ईरान में कुर्द भी मनाते हैं।
- It is characterised by colourful street festivals and torch-bearing processions winding their way into the mountains.
यह रंग-बिरंगे सड़क उत्सवों और मशाल लेकर पहाड़ों की ओर जाने वाली जुलूसों के लिए जाना जाता है।
- **The 3,000-year-old festival is rooted in the ancient religion of Zoroastrianism and is marked by people across faiths including Zoroastrians, Muslims, Christians, Jews and those of the Baha'i faith as well as by millions in the diaspora.**
यह 3000 साल पुराना त्योहार प्राचीन धर्म जोरास्ट्रियनिज्म से जुड़ा है और इसे जरथुस्ती, मुस्लिम, ईसाई, यहूदी और बहाई धर्म के लोग तथा प्रवासी समुदाय के लाखों लोग मनाते हैं।
- **Turkey considers the SDF to be a terrorist organisation because of its ties to the Kurdistan Workers' Party, or PKK, a separatist group that staged a decades-long insurgency in Turkey.**
तुर्की SDF को आतंकवादी संगठन मानता है क्योंकि इसके **PKK (कुर्दिस्तान वर्कर्स पार्टी)** से संबंध हैं, जिसने तुर्की में दशकों तक विद्रोह किया।

GS Paper 1: Geography

TOPICS COVERED

23 March 2026

23Mar MPC: confirming new moons
MPC: नए चंद्रमाओं की पुष्टि करना



Ugandan rangers handle a rhino at the Kidepo Valley National Park following the first wildlife exchange between Kenya and Uganda as part of a wider effort by conservation groups and the Uganda Wildlife Authority to rebuild a national population wiped out by poaching, in the Karamoja region of northeastern Uganda on March 17. Reuters

Ugandan rangers handle a rhino at the Kidepo Valley National Park following the first wildlife exchange between Kenya and Uganda as part of a wider report by conservation groups and the Uganda Wildlife Authority to rebuild a national population wiped out by poaching, in the Karamoja region of northeastern Uganda on March 17.



MPC: confirming new moons

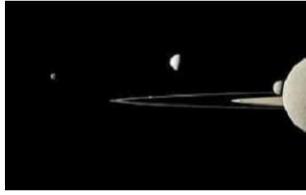
GS I: Geography
Vasudevan Mukunth

Last week, the Minor Planet Centre (MPC) announced 15 new moons had been found, four around Jupiter and 11 around Saturn. The Jovian moons were found by the U.S.-based Scott Sheppard and David Tholen and the Saturnian ones by a team led by Edward Ashton in Taiwan.

The MPC is the world's primary repository for all observations of small bodies in the solar system. Located in Cambridge, Massachusetts, it operates at the Smithsonian Astrophysical Observatory under the International Astronomical Union, and plays a vital role in tracking asteroids, comets, and the moons of the outer planets.

When astronomers discover a new object, they send their data to the MPC, where experts verify the observations and calculate the object's orbit. If the discovery is new, the MPC assigns it an official designation. This process ensures every known minor planet has a unique identity and a predictable path.

One of the MPC's most critical jobs involves monitoring near-earth objects (NEOs). NEOs are space rocks that could potentially threaten the earth. With support from NASA's Planetary Defense Coordination Office, MPC maintains a large database that allows scientists to



On July 29, 2011, the Cassini mission captured five of Saturn's moons in a single frame with its narrow-angle camera. NASA/JPL-CALTECH

predict if and when a rock might come close to the earth.

The MPC also facilitates communication within the global scientific community by publishing electronic circulars that alert researchers to new discoveries or interesting celestial events. These updates allow observatories worldwide to coordinate their efforts and gather more data quickly.

For feedback and suggestions for 'Science', please write to science@thehindu.co.in with the subject 'Daily page'

23Mar. MPC: confirming new moons MPC: नए चंद्रमाओं की पुष्टि करना

Minor Planet Centre (MPC) and New Moons Discovery

माइनर प्लेनेट सेंटर (MPC) और नए चंद्रमाओं की खोज

• Last week, the **Minor Planet Centre (MPC)** announced **15 new moons** had been found, **four around Jupiter and 11 around Saturn**.

पिछले सप्ताह, **माइनर प्लेनेट सेंटर (MPC)** ने घोषणा की कि **15 नए चंद्रमा** खोजे गए हैं, जिनमें से **4 बृहस्पति (Jupiter)** और **11 शनि (Saturn)** के आसपास हैं।

• The **Jovian moons** were found by the U.S.-based **Scott Sheppard** and **David Tholen** and the **Saturnian ones** by a team led by **Edward Ashton** in **Taiwan**.

जॉवियन चंद्रमा अमेरिका के **Scott Sheppard** और **David Tholen** द्वारा खोजे गए और **शनि के चंद्रमा** **Taiwan** में **Edward Ashton** के नेतृत्व वाली टीम द्वारा खोजे गए।

• The **MPC** is the world's primary repository for all observations of **small bodies in the solar system**.

MPC सौरमंडल के छोटे पिंडों के सभी अवलोकनों का विश्व का प्रमुख भंडार है।

- Located in **Cambridge, Massachusetts**, it operates at the **Smithsonian Astrophysical Observatory** under the **International Astronomical Union**, and plays a vital role in tracking **asteroids, comets, and the moons of the outer planets**.

यह **Cambridge, Massachusetts** में स्थित है और **International Astronomical Union** के तहत **Smithsonian Astrophysical Observatory** में कार्य करता है तथा **क्षुद्रग्रह, धूमकेतु और बाहरी ग्रहों के चंद्रमाओं** को ट्रैक करने में महत्वपूर्ण भूमिका निभाता है।

- When astronomers discover a new **object**, they send their data to the **MPC**, where experts **verify the observations and calculate the object's orbit**.

जब खगोलविद कोई नया **पिंड** खोजते हैं, तो वे उसका डेटा **MPC** को भेजते हैं, जहां विशेषज्ञ अवलोकनों की पुष्टि करते हैं और उसकी **कक्षा (orbit)** की गणना करते हैं।

- If the discovery is new, the **MPC assigns it an official designation**.

यदि खोज नई होती है, तो **MPC** उसे एक **आधिकारिक नाम (designation)** प्रदान करता है।

- This process ensures every known **minor planet** has a **unique identity and a predictable path**.

यह प्रक्रिया सुनिश्चित करती है कि हर ज्ञात **लघु ग्रह (minor planet)** की एक विशिष्ट पहचान और अनुमानित पथ हो।

- One of the **MPC's most critical jobs** involves monitoring **near-earth objects (NEOs)**.

MPC का एक महत्वपूर्ण कार्य **निकट-पृथ्वी वस्तुओं (NEOs)** की निगरानी करना है।

- **NEOs** are space rocks that could potentially threaten the **earth**.

NEOs ऐसे अंतरिक्ष पिंड हैं जो संभावित रूप से **पृथ्वी** के लिए खतरा बन सकते हैं।

- With support from **NASA's Planetary Defense Coordination Office**, MPC maintains a **large database** that allows scientists to predict if and when a rock might come close to the earth.

NASA के **Planetary Defense Coordination Office** के सहयोग से MPC एक बड़ा **डेटाबेस** बनाए रखता है, जिससे वैज्ञानिक यह अनुमान लगा सकते हैं कि कोई पिंड कब और कितना पृथ्वी के करीब आएगा।

- The **MPC** also facilitates communication within the global **scientific community** by publishing **electronic circulars** that alert researchers to new discoveries or interesting **celestial events**.

MPC वैश्विक वैज्ञानिक समुदाय के बीच संचार को भी बढ़ावा देता है, यह **इलेक्ट्रॉनिक सर्कुलर** प्रकाशित करता है जो शोधकर्ताओं को नई खोजों और महत्वपूर्ण **खगोलीय घटनाओं** की जानकारी देते हैं।

- These updates allow observatories worldwide to coordinate their **efforts** and gather more **data** quickly.



ये अपडेट दुनिया भर की वेधशालाओं को अपने प्रयासों का समन्वय करने और अधिक डेटा जल्दी एकत्र करने में मदद करते हैं।

GS Paper II: Polity,	
TOPICS COVERED	23 March 2026
23Mar	'Double engine' — cute slogan, a serious federal question 'डबल इंजन' — आकर्षक नारा, एक गंभीर संघीय प्रश्न
23Mar	Is compulsory voting feasible in the Indian context? क्या भारतीय संदर्भ में अनिवार्य मतदान संभव है?

'Double engine' — cute slogan, a serious federal question

GS II: Polity **MOB**
Every election season produces memorable slogans. Most fade once the votes are counted, but some linger and begin to shape how citizens think about governance itself. One such phrase is the "double-engine sarkar". At first hearing, it sounds harmless, even cute: two governments working in tandem to accelerate development. Yet, behind the metaphor lies a serious constitutional question about India's federal compact.

The idea is simple: if the same party governs both the Union and the State, development will move faster because the two governments will work in harmony. Taken at face value, this is unexceptionable. Of course governments at different levels should coordinate. That is indeed cooperative federalism. The real question is what happens when they do not share the same political ideology. But the "double-engine" slogan carries a deeper implication. It suggests that development flows preferentially to States governed by the same party as the Union government.

'Aligned States' benefit

During election campaigns the message is often made quite explicit: elect the party ruling at the Centre so that your State can benefit from faster development. If you do not, you will be starved of funds. This is where the constitutional difficulty begins.

India's Constitution does not envisage a system where State governments depend on the goodwill, or charity, of the ruling party at the Centre. It creates a federal structure in which the Union and the States are partners within their respective spheres. The Union government represents the Republic as a whole, not merely those States governed by the party in power in New Delhi.

Public money collected through national taxation belongs to the Union of India, not to the ruling party. Taxes are collected in the name of the Republic, from citizens of every State regardless of how they vote. The distribution of these resources cannot depend on which party governs a State. A citizen in Kerala or Tamil Nadu pays the same taxes as a citizen in Uttar Pradesh or Madhya Pradesh. The constitutional promise is that both will receive their fair share in return.

India's constitutional framers understood this danger. That is why they built institutional safeguards into the system. The most important is the Finance Commission. Under Article 280, the Finance Commission is appointed every five years to recommend how Union revenues should be shared with the States. Its purpose is vital: fiscal transfers must be rule-based, not politically negotiated. The Commission evaluates States on objective criteria — how far their incomes lag



S.Y. Quraishi
is a former
Chief Election
Commissioner
of India

behind the national average, their population, geographic size, and fiscal capacity — so that politics cannot determine who gets what.

Issues raised by States, federal friction
Recent debates around fiscal federalism show how sensitive this issue remains. Southern States have expressed concern that the use of more recent population data in allocation formulas may penalise them for having successfully controlled population growth. Another issue is the increasing resort of the Union government to cesses and surcharges, which fall outside the divisible pool and are not shared with States. This effectively reduces the quantum of resources available for constitutionally mandated sharing, concentrating more fiscal power in Union hands and weakening the financial autonomy of States. The Sixteenth Finance Commission, which is currently deliberating, will have to grapple seriously with these concerns if it is to restore confidence in the fairness of the fiscal federal arrangement.

Governments in Tamil Nadu, Kerala, Karnataka, Andhra Pradesh and Telangana have argued that States which acted early to stabilise population should not be penalised in the distribution of national resources. Senior Ministers from these States have at times remarked, in visible frustration, that they feel reduced to "beggars", pleading for funds that constitutionally belong to them. This is not the language of political theatre. It reflects a genuine structural grievance about the terms on which States participate in the Indian Union.

Federal friction is visible not only in financial matters but also in the legislative process. In recent years, Governors in some States have sat for long periods over Bills passed by elected legislatures, effectively using the constitutional office as an instrument of political sabotage. Tamil Nadu and Kerala have witnessed particularly prolonged delays. The pattern is difficult to ignore: the delays have been in States that are governed by parties opposed to the ruling dispensation at the Centre. A Governor who withholds assent to legislation passed by an elected Assembly is, in effect, a second engine running in reverse.

Such delays have drawn judicial attention. In *State of Punjab vs Principal Secretary to the Governor of Punjab* (2023), the Supreme Court of India made it clear that a Governor cannot use inaction to stall the legislative process. The Court emphasised that the Governor's office is not meant to function as a parallel political authority over an elected legislature.

More recently, in *State of Tamil Nadu vs Governor of Tamil Nadu* (2025), the Court observed that prolonged inaction by a Governor

in assenting to Bills is constitutionally impermissible. These rulings together signal a firm judicial commitment to protecting the legislative sovereignty of elected State assemblies.

The experience of Delhi over the past decade provides a further illustration. Many initiatives of the elected government became entangled in disputes with the Lieutenant-Governor and the Union government. Courts eventually had to intervene. The lesson is not merely about one city: it is about what happens when the machinery of federal governance is used to punish a political opponent rather than serve the public.

Seen together — fiscal transfers, gubernatorial delays, and the Delhi impasse — these developments form a coherent pattern. The "double-engine" slogan is not merely a campaign metaphor. It is a description of how governance actually functions when political alignment is absent. And that is precisely the constitutional problem. The form of federalism survives; its spirit is quietly hollowed out.

India's federal system has faced similar tensions before. In earlier decades, Article 356 was frequently misused to dismiss elected State governments. The Court's landmark judgment in *S.R. Bommai vs Union of India* placed important limits on that practice. The challenge today is subtler: governments may remain in office, yet, governance itself may become hostage to political alignment.

Structural reform needed

What is needed is not merely judicial intervention, but structural reform. The Finance Commission's recommendations could be made more binding. A fixed statutory timeline, say, three months, could be prescribed for Governors to act on Bills, failing which assent would be deemed granted. Inter-State/governmental councils, already provided for under Article 263, could be revitalised as genuine forums for cooperative federalism rather than ceremonial gatherings. These are not radical proposals; they are logical completions of the constitutional architecture that the framers intended.

Political slogans will continue to animate election campaigns. But a slogan that implicitly threatens citizens with slower development if they choose the "wrong" party at the State level does not merely distort electoral choice; it corrodes the constitutional promise of equal citizenship. Development cannot depend on political alignment. It must rest on rules and institutions that treat every State, and every citizen, with equal fairness. That constitutional balance, not the number of engines pulling the same train, is the only engine India's federal democracy truly needs.

Fairness, not
political
alignment, must
guide India's
federal balance

23Mar. 'Double engine' — cute slogan, a serious federal question 'डबल इंजन' — आकर्षक नारा, एक गंभीर संघीय प्रश्न

Double-Engine Sarkar and Federalism Debate
डबल-इंजन सरकार और संघवाद की बहस

- Every election season produces memorable slogans.
हर चुनावी मौसम में कुछ यादगार नारे सामने आते हैं।



- Most fade once the votes are counted, but some linger and begin to shape how citizens think about **governance** itself.
अधिकांश नारे वोटों की गिनती के बाद खत्म हो जाते हैं, लेकिन कुछ बने रहते हैं और नागरिकों की शासन के बारे में सोच को प्रभावित करते हैं।
- One such phrase is the “**double-engine sarkar**”.
ऐसा ही एक नारा है “**डबल-इंजन सरकार**”।
- At • rst hearing, it sounds harmless, even cute: two governments working in tandem to accelerate **development**.
पहली बार सुनने पर यह सरल लगता है: दो सरकारें मिलकर **विकास** को तेज करती हैं।
- Yet, behind the metaphor lies a serious **constitutional question** about India’s **federal compact**.
लेकिन इस रूपक के पीछे भारत के **संवैधानिक ढांचे** और **संघवाद** से जुड़ा गंभीर प्रश्न छिपा है।
- The idea is simple: if the same party governs both the **Union and the State**, development will move faster because the two governments will work in harmony.
विचार सरल है: यदि एक ही पार्टी **केंद्र और राज्य** दोनों में शासन करे तो विकास तेजी से होगा क्योंकि दोनों सरकारें समन्वय में काम करेंगी।
- Taken at face value, this is unexceptionable.
सतही तौर पर यह विचार स्वीकार्य लगता है।
- Of course governments at di• erent levels should coordinate.
निश्चित रूप से विभिन्न स्तरों की सरकारों को समन्वय करना चाहिए।
- That is indeed **cooperative federalism**.
यही **सहकारी संघवाद** है।
- The real question is what happens when they do not share the same **political ideology**.
वास्तविक प्रश्न यह है कि जब उनकी **राजनीतिक विचारधारा** अलग हो तो क्या होगा।
- But the “double-engine” slogan carries a deeper implication.
लेकिन “डबल-इंजन” नारे का एक गहरा अर्थ भी है।
- It suggests that **development • ows preferentially** to States governed by the same party as the **Union government**.
यह संकेत देता है कि **विकास** उन राज्यों को प्राथमिकता से मिलता है जहां **केंद्र की पार्टी** की सरकार होती है।

Aligned States’ bene• t 'समान दल वाले राज्य' लाभान्वित होते हैं

- During **election campaigns** the message is often made quite explicit: elect the party ruling at the **Centre** so that your State can bene• t from faster development.
चुनाव अभियानों में यह संदेश स्पष्ट होता है: **केंद्र की सत्ताधारी पार्टी** को चुनें ताकि राज्य को तेज विकास का लाभ मिले।
- If you do not, you will be starved of **funds**.
यदि ऐसा नहीं किया गया, तो राज्य को **वित्तीय संसाधनों** से वंचित किया जा सकता है।
- This is where the **constitutional di• culty** begins.
यहीं से **संवैधानिक समस्या** शुरू होती है।
- India’s **Constitution** does not envisage a system where State governments depend on the **goodwill** of the ruling party at the Centre.
भारत का **संविधान** ऐसा तंत्र नहीं मानता जिसमें राज्य सरकारें केंद्र की सत्ताधारी पार्टी की **कृपा** पर निर्भर हों।
- It creates a **federal structure** in which the Union and the States are **partners** within their respective spheres.
यह एक **संघीय संरचना** बनाता है जिसमें केंद्र और राज्य अपने-अपने क्षेत्रों में **साझेदार** होते हैं।
- The Union government represents the **Republic as a whole**, not merely those States governed by the party in power in New Delhi.
केंद्र सरकार पूरे **राष्ट्र का प्रतिनिधित्व** करती है, न कि केवल उन राज्यों का जहां उसकी पार्टी सत्ता में है।
- **Public money** collected through national **taxation** belongs to the Union of India, not to the ruling party.
राष्ट्रीय **करों** से एकत्रित **सार्वजनिक धन** भारत संघ का होता है, किसी पार्टी का नहीं।



- Taxes are collected in the name of the **Republic**, from citizens of every State regardless of how they vote.
कर पूरे राष्ट्र के नाम पर हर राज्य के नागरिकों से लिए जाते हैं, चाहे उन्होंने किसी को भी वोट दिया हो।
- The distribution of these resources cannot depend on which party governs a State.
इन संसाधनों का वितरण इस पर निर्भर नहीं हो सकता कि राज्य में कौन सी पार्टी शासन कर रही है।
- A citizen in **Kerala or Tamil Nadu** pays the same taxes as a citizen in **Uttar Pradesh or Madhya Pradesh**.
केरल या तमिलनाडु का नागरिक उतना ही कर देता है जितना **उत्तर प्रदेश या मध्य प्रदेश** का नागरिक।
- The constitutional promise is that both will receive their **fair share** in return.
संविधान का वादा है कि सभी को उनका **न्यायसंगत हिस्सा** मिलेगा।
- India's **constitutional framers** understood this danger.
भारत के **संविधान निर्माताओं** ने इस खतरे को समझा था।
- That is why they built **institutional safeguards** into the system.
इसलिए उन्होंने व्यवस्था में **संस्थागत सुरक्षा उपाय** शामिल किए।
- The most important is the **Finance Commission**.
इनमें सबसे महत्वपूर्ण है **वित्त आयोग**।
- Under **Article 280**, the Finance Commission is appointed every **five years** to recommend how Union revenues should be shared with the States.
अनुच्छेद 280 के तहत वित्त आयोग हर **5 वर्ष** में नियुक्त किया जाता है ताकि केंद्र के राजस्व को राज्यों में बांटने की सिफारिश की जा सके।
- Its purpose is vital: • **scal transfers** must be **rule-based**, not politically negotiated.
इसका उद्देश्य महत्वपूर्ण है: **राजकोषीय हस्तांतरण नियम-आधारित** होना चाहिए, न कि राजनीतिक।
- The Commission evaluates States on **objective criteria** — how far their incomes lag behind the national average, their **population, geographic size**, and • **scal capacity** — so that politics cannot determine who gets what.
आयोग राज्यों का मूल्यांकन **वस्तुनिष्ठ मानकों** पर करता है — जैसे उनकी आय, **जनसंख्या, भौगोलिक आकार**, और **राजकोषीय क्षमता** — ताकि यह तय करने में राजनीति का प्रभाव न हो कि किसे कितना मिलेगा।

Issues raised by States, federal friction राज्यों द्वारा उठाए गए मुद्दे और संघीय तनाव

- Recent debates around • **scal federalism** show how sensitive this issue remains.
हाल की **राजकोषीय संघवाद** पर बहसें दिखाती हैं कि यह मुद्दा कितना संवेदनशील है।
- **Southern States** have expressed concern that the use of more recent **population data** in allocation formulas may penalise them for having successfully controlled **population growth**.
दक्षिणी राज्यों ने चिंता जताई है कि संसाधन वितरण में नवीनतम **जनसंख्या डेटा** के उपयोग से उन्हें **जनसंख्या नियंत्रण** में सफलता के बावजूद नुकसान हो सकता है।
- Another issue is the increasing resort of the Union government to **cesses and surcharges**, which fall outside the **divisible pool** and are not shared with States.
एक अन्य मुद्दा केंद्र सरकार द्वारा बढ़ते हुए **सेस और अधिभार** का उपयोग है, जो **विभाज्य पूल** से बाहर होते हैं और राज्यों के साथ साझा नहीं किए जाते।
- This e• ctively reduces the quantum of resources available for constitutionally mandated sharing, concentrating more • **scal power** in Union hands and weakening the • **nancial autonomy** of States.
इससे संवैधानिक रूप से साझा किए जाने वाले संसाधनों की मात्रा घटती है, जिससे अधिक **वित्तीय शक्ति** केंद्र के पास केंद्रित होती है और राज्यों की **वित्तीय स्वायत्तता** कमजोर होती है।
- The **Sixteenth Finance Commission**, which is currently deliberating, will have to grapple seriously with these concerns if it is to restore con• dence in the fairness of the • **scal federal arrangement**.
वर्तमान में कार्यरत **सोलहवां वित्त आयोग** को इन मुद्दों पर गंभीरता से विचार करना होगा ताकि **राजकोषीय संघीय व्यवस्था** की निष्पक्षता में विश्वास बहाल किया जा सके।
- Governments in **Tamil Nadu, Kerala, Karnataka, Andhra Pradesh and Telangana** have argued that States which acted early to stabilise **population** should not be penalised in the distribution of national resources.



तमिलनाडु, केरल, कर्नाटक, आंध्र प्रदेश और तेलंगाना की सरकारों ने तर्क दिया है कि जिन्होंने समय रहते जनसंख्या नियंत्रण किया उन्हें संसाधन वितरण में दंडित नहीं किया जाना चाहिए।

- Senior Ministers from these States have at times remarked, in visible frustration, that they feel reduced to “beggars”, pleading for funds that constitutionally belong to them.

इन राज्यों के वरिष्ठ मंत्रियों ने निराशा में कहा है कि वे खुद को “भिखारी” जैसा महसूस करते हैं, जो अपने संवैधानिक अधिकार के धन के लिए अनुरोध कर रहे हैं।

- This is not the language of **political theatre**. यह राजनीतिक नाटक की भाषा नहीं है।
- It reflects a genuine **structural grievance** about the terms on which States participate in the Indian Union.

यह भारतीय संघ में राज्यों की भागीदारी की शर्तों पर एक वास्तविक संरचनात्मक शिकायत को दर्शाता है।

- **Federal friction** is visible not only in financial matters but also in the **legislative process**. संघीय तनाव केवल वित्तीय मामलों में ही नहीं बल्कि विधायी प्रक्रिया में भी दिखाई देता है।
- In recent years, **Governors** in some States have sat for long periods over **Bills passed by elected legislatures**, effectively using the constitutional **power** as an instrument of **political sabotage**.

हाल के वर्षों में कुछ राज्यों में राज्यपालों ने निर्वाचित विधानसभाओं द्वारा पारित विधेयकों को लंबे समय तक रोके रखा, जिससे संवैधानिक पद का उपयोग राजनीतिक बाधा के रूप में हुआ।

- **Tamil Nadu and Kerala** have witnessed particularly prolonged delays. तमिलनाडु और केरल में विशेष रूप से लंबे विलंब देखे गए हैं।
- The pattern is difficult to ignore: the delays have been in States that are governed by parties opposed to the ruling dispensation at the **Centre**. यह पैटर्न स्पष्ट है: देरी उन्हीं राज्यों में हुई जहां की सरकारें केंद्र की सत्ताधारी पार्टी के विरोध में हैं।
- A **Governor** who withholds assent to legislation passed by an elected Assembly is, in effect, a second engine running in **reverse**. एक राज्यपाल जो विधानसभा द्वारा पारित विधेयकों को मंजूरी नहीं देता, वह वास्तव में एक ऐसा इंजन है जो उल्टी दिशा में चल रहा है।

- Such delays have drawn **judicial attention**. ऐसे विलंबों ने न्यायपालिका का ध्यान आकर्षित किया है।
- In **State of Punjab vs Principal Secretary to the Governor of Punjab (2023)**, the **Supreme Court of India** made it clear that a Governor cannot use **inaction** to stall the legislative process.

State of Punjab vs Principal Secretary to the Governor of Punjab (2023) में सुप्रीम कोर्ट ने स्पष्ट किया कि राज्यपाल निष्क्रियता के माध्यम से विधायी प्रक्रिया को रोक नहीं सकता।

- The Court emphasised that the Governor's **power** is not meant to function as a **parallel political authority** over an elected legislature. न्यायालय ने कहा कि राज्यपाल का पद निर्वाचित विधानसभा के ऊपर समानांतर राजनीतिक प्राधिकरण के रूप में कार्य नहीं कर सकता।
- More recently, in **State of Tamil Nadu vs Governor of Tamil Nadu (2025)**, the Court observed that prolonged **inaction** by a Governor in assenting to Bills is **constitutionally impermissible**.

हाल ही में **State of Tamil Nadu vs Governor of Tamil Nadu (2025)** में न्यायालय ने कहा कि राज्यपाल द्वारा विधेयकों पर लंबी निष्क्रियता संवैधानिक रूप से अस्वीकार्य है।

- These rulings together signal a **firm judicial commitment** to protecting the **legislative sovereignty** of elected State assemblies. ये फैसले निर्वाचित विधानसभाओं की विधायी संप्रभुता की रक्षा के लिए न्यायपालिका की मजबूत प्रतिबद्धता को दर्शाते हैं।
- The experience of **Delhi** over the past decade provides a further illustration. पिछले दशक में दिल्ली का अनुभव इसका एक और उदाहरण प्रस्तुत करता है।
- Many initiatives of the **elected government** became entangled in disputes with the **Lieutenant-Governor** and the **Union government**. निर्वाचित सरकार की कई पहलें उपराज्यपाल और केंद्र सरकार के साथ विवादों में उलझ गईं।
- Courts eventually had to **intervene**. अंततः न्यायालयों को हस्तक्षेप करना पड़ा।



- The lesson is not merely about one city; it is about what happens when the machinery of **federal governance** is used to punish a **political opponent** rather than serve the public. यह केवल एक शहर का मामला नहीं है, बल्कि यह दिखाता है कि जब **संघीय शासन प्रणाली** का उपयोग जनता की सेवा के बजाय **राजनीतिक विरोधियों को दंडित करने** के लिए किया जाता है तो क्या होता है।

Federalism Challenges and Structural Reforms संघवाद की चुनौतियाँ और संरचनात्मक सुधार

- Seen together — **scal transfers, gubernatorial delays, and the Delhi impasse** — these developments form a **coherent pattern**.
एक साथ देखने पर — **राजकोषीय हस्तांतरण, राज्यपालों की देरी और दिल्ली गतिरोध** — ये घटनाएँ एक **सुसंगत पैटर्न** बनाती हैं।
- The “**double-engine**” slogan is not merely a campaign metaphor.
“**डबल-इंजन**” नारा केवल चुनावी रूपक नहीं है।
- It is a description of how **governance actually functions** when **political alignment** is absent.
यह दर्शाता है कि जब **राजनीतिक समानता (alignment)** नहीं होती तो **शासन वास्तव में कैसे काम करता है**।
- And that is precisely the **constitutional problem**.
और यही वास्तविक **संवैधानिक समस्या** है।
- The form of **federalism** survives; its spirit is quietly **hollowed out**.
संघवाद का ढांचा बना रहता है, लेकिन उसकी भावना धीरे-धीरे **खोखली** हो जाती है।
- India’s federal system has faced similar tensions before.
भारत का संघीय तंत्र पहले भी ऐसे तनावों का सामना कर चुका है।
- In earlier decades, **Article 356** was frequently misused to dismiss **elected State governments**.
पहले के दशकों में **अनुच्छेद 356** का अक्सर उपयोग **निर्वाचित राज्य सरकारों** को बर्खास्त करने के लिए किया गया।
- The Court’s landmark judgment in **S.R. Bommai vs Union of India** placed important limits on that practice.
S.R. Bommai बनाम भारत संघ के ऐतिहासिक निर्णय ने इस प्रथा पर महत्वपूर्ण सीमाएँ लगाईं।
- The challenge today is subtler: governments may remain in **o• ce**, yet, **governance itself** may become hostage to **political alignment**.
आज की चुनौती अधिक सूक्ष्म है: सरकारें बनी रहती हैं, लेकिन **शासन स्वयं राजनीतिक समानता** का बंधक बन जाता है।

Structural reform needed संरचनात्मक सुधार आवश्यक

- What is needed is not merely **judicial intervention**, but **structural reform**.
आवश्यकता केवल **न्यायिक हस्तक्षेप** की नहीं बल्कि **संरचनात्मक सुधार** की है।
- The **Finance Commission’s recommendations** could be made more **binding**.
वित्त आयोग की सिफारिशों को अधिक **बाध्यकारी** बनाया जा सकता है।
- A **xed statutory timeline**, say, **three months**, could be prescribed for Governors to act on Bills, failing which **assent would be deemed granted**.
राज्यपालों के लिए विधेयकों पर निर्णय लेने हेतु **3 महीने** की निश्चित **वैधानिक समय सीमा** तय की जा सकती है, जिसके बाद **स्वीकृति स्वतः मानी जाएगी**।
- Inter-State/governmental councils**, already provided for under **Article 263**, could be revitalised as genuine forums for **cooperative federalism** rather than ceremonial gatherings.
अनुच्छेद 263 के तहत स्थापित **अंतर-राज्यीय परिषदों** को केवल औपचारिक मंच के बजाय वास्तविक **सहकारी संघवाद** के मंच के रूप में पुनर्जीवित किया जा सकता है।
- These are not **radical proposals**; they are logical completions of the **constitutional architecture** that the framers intended.
ये **कट्टरपंथी प्रस्ताव** नहीं हैं; बल्कि संविधान निर्माताओं द्वारा कल्पित **संवैधानिक ढांचे** की तार्किक पूर्ति हैं।



- Political **slogans** will continue to animate election campaigns. राजनीतिक नारे चुनाव अभियानों में आगे भी प्रभाव डालते रहेंगे।
- But a slogan that implicitly threatens citizens with **slower development** if they choose the “wrong” party at the State level does not merely distort **electoral choice**; it corrodes the **constitutional promise of equal citizenship**. लेकिन ऐसा नारा जो “गलत” पार्टी चुनने पर **धीमे विकास** की चेतावनी देता है, वह केवल **चुनावी विकल्प** को प्रभावित नहीं करता बल्कि **समान नागरिकता के संवैधानिक वादे** को भी कमजोर करता है।
- **Development** cannot depend on **political alignment**. **विकास राजनीतिक समानता पर निर्भर नहीं होना चाहिए।**
- It must rest on **rules and institutions** that treat every State, and every citizen, with **equal fairness**. यह **नियमों और संस्थाओं** पर आधारित होना चाहिए जो हर राज्य और नागरिक के साथ **समान न्याय** करें।
- That constitutional balance, not the number of **engines pulling the same train**, is the only engine India’s **federal democracy** truly needs. वही संवैधानिक संतुलन, न कि एक ही दिशा में खींचने वाले **इंजनों की संख्या**, भारत के **संघीय लोकतंत्र** के लिए वास्तविक आवश्यकता है।

Is compulsory voting feasible in the Indian context?

How can voter turnout be increased without making voting mandatory?

GS II: Polity
Rangarajan R.

The story so far:

The Election Commission has announced the poll schedule for five Assembly elections to be held in April-May 2026. In a separate hearing before the Supreme Court on a poll-related matter, the court raised questions regarding mandatory voting in elections.

What is the right to vote in India?
Article 326 of the Constitution grants every citizen the right to vote without any discrimination. It provides that any citizen who is not less than 18 years old and is not otherwise disqualified under the Constitution or any law on certain grounds is entitled to be registered as a voter.

MOB

Section 19 of the Representation of the People Act, 1950, requires a citizen to be at least 18 years old and ordinarily resident in a constituency to be registered as an elector. Section 62 of the Representation of the People Act, 1951, provides the right to vote to every person whose name is entered in the electoral roll of a constituency. In various cases, the Supreme Court has held that the right to vote is a statutory right.

Should voting be made compulsory?
Voting is essential for a functional democracy, but it is neither a fundamental duty nor a legal duty in India. Proposals for compulsory voting have long been debated.

The Dinesh Goswami Committee on electoral reforms, set up in 1990, did not favour compulsory voting, citing practical

difficulties in implementation. Instead, it recommended improving voter participation through awareness campaigns.

The Law Commission, in its 255th report (2015), discussed the issue in detail. Compulsory voting does result in increased voter turnout by an average of about 7%. Nevertheless, this increase in participation is a direct corollary of the severity and strict enforcement of penalties for not voting.

Some democracies, such as Australia and several Latin American countries, have provisions for compulsory voting. In Australia, Argentina, and Brazil, voters may be fined if they fail to vote without valid reasons. In Peru, certain public goods and services are denied to non-voters.

Penalising non-voters by imposing fines

or restricting their access to government services is an extremely harsh measure that will not work in the Indian context. From a constitutional perspective, compulsory voting could be seen as violating the fundamental right to freedom of expression under Article 19(1).

What can be the way forward?

Low voter turnout can result in candidates winning by securing a minority of the total votes in a constituency.

However, as discussed in the Law Commission report, compulsory voting is neither desirable nor feasible in India. The solution lies in fostering enthusiasm amongst voters to exercise their right to vote through innovative campaigns, especially using social media.

For migrant workers, stricter implementation of the statutory holiday on the day of polling, coupled with an increase in transport facilities by running special buses and trains, can effectively increase participation. With the advent of newer technologies, robust and secure methods acceptable to all stakeholders for remote voting should be considered. (Rangarajan R. is a former IAS officer and author of ‘Courseware on Polity Simplified.’ He currently trains at Officers IAS academy. Views expressed are personal)

THE GIST

▼ The right to vote in India is a statutory right under Article 326 and the Representation of the People Act, and compulsory voting is neither a fundamental duty nor a legal duty.

▼ While higher voter turnout shows a more representative democracy, compulsory voting is neither desirable nor feasible, and the focus should be on awareness, enthusiasm, and better access for voters.

23Mar. Is compulsory voting feasible in the Indian context? क्या भारतीय संदर्भ में अनिवार्य मतदान संभव है?

- **Right to Vote and Compulsory Voting Debate in India**
भारत में मतदान का अधिकार और अनिवार्य मतदान पर बहस
- The **Election Commission** has announced the poll schedule for **five Assembly elections** to be held in **April-May 2026**. निर्वाचन आयोग ने **अप्रैल-मई 2026** में होने वाले **पांच विधानसभा चुनावों** का कार्यक्रम घोषित किया है।
- In a hearing before the **Supreme Court**, questions were raised regarding **mandatory voting**. **सुप्रीम कोर्ट** में सुनवाई के दौरान **अनिवार्य मतदान** पर सवाल उठाए गए।
- **What is the right to vote in India?**
भारत में मतदान का अधिकार क्या है?
- **Article 326** of the Constitution grants every citizen the **right to vote without discrimination**. संविधान का **अनुच्छेद 326** हर नागरिक को **बिना भेदभाव के मतदान का अधिकार** देता है।
- It provides that any citizen aged **18 years or above** and not disqualified is entitled to be registered as a voter. इसमें कहा गया है कि **18 वर्ष या उससे अधिक आयु** का कोई भी नागरिक, जो अयोग्य नहीं है, मतदाता के रूप में पंजीकरण का हकदार है।
- **Section 19** of the **Representation of the People Act, 1950** requires a citizen to be **18 years old and ordinarily resident in a constituency**.



- जन प्रतिनिधित्व अधिनियम, 1950 की धारा 19 के अनुसार नागरिक की आयु 18 वर्ष और वह संबंधित क्षेत्र का निवासी होना चाहिए।
- Section 62 of the Representation of the People Act, 1951 provides the right to vote to those whose name is in the electoral roll.
जन प्रतिनिधित्व अधिनियम, 1951 की धारा 62 के अनुसार जिनका नाम मतदाता सूची में है उन्हें मतदान का अधिकार है।
- The Supreme Court has held that the right to vote is a statutory right.
सुप्रीम कोर्ट ने कहा है कि मतदान का अधिकार एक वैधानिक अधिकार है।

Should voting be made compulsory?
क्या मतदान अनिवार्य होना चाहिए?

- Voting is essential for democracy, but it is neither a fundamental duty nor a legal duty in India.
मतदान लोकतंत्र के लिए आवश्यक है, लेकिन यह न तो मौलिक कर्तव्य है और न ही कानूनी कर्तव्य।
- Proposals for compulsory voting have long been debated.
अनिवार्य मतदान पर लंबे समय से बहस होती रही है।
- The Dinesh Goswami Committee (1990) did not favour compulsory voting due to practical difficulties.
दिनेश गोस्वामी समिति (1990) ने व्यावहारिक कठिनाइयों के कारण अनिवार्य मतदान का समर्थन नहीं किया।
- It recommended increasing participation through awareness campaigns.
इसने जागरूकता अभियानों के माध्यम से मतदान बढ़ाने की सिफारिश की।
- The Law Commission (255th Report, 2015) noted compulsory voting increases turnout by about 7%.
विधि आयोग (255वीं रिपोर्ट, 2015) के अनुसार अनिवार्य मतदान से लगभग 7% मतदान बढ़ता है।
- This increase depends on strict penalties for non-voting.
यह वृद्धि कड़े दंड पर निर्भर करती है।
- Some countries like Australia, Argentina, Brazil, Peru have compulsory voting provisions.
ऑस्ट्रेलिया, अर्जेंटीना, ब्राजील, पेरू जैसे देशों में अनिवार्य मतदान है।
- Non-voters may face fines or denial of public services.
मतदान न करने पर जुर्माना या सरकारी सेवाओं से वंचित किया जा सकता है।
- Such penalties are considered harsh and unsuitable for the Indian context.
ऐसे दंड कठोर हैं और भारत के लिए उपयुक्त नहीं माने जाते।
- Compulsory voting may violate Article 19(1) (freedom of expression).
अनिवार्य मतदान अनुच्छेद 19(1) (अभिव्यक्ति की स्वतंत्रता) का उल्लंघन कर सकता है।

What can be the way forward?
आगे का रास्ता क्या हो सकता है?

- Low voter turnout can lead to candidates winning with a minority of votes.
कम मतदान से उम्मीदवार कम मतों से जीत सकते हैं।
- However, compulsory voting is neither desirable nor feasible in India.
लेकिन अनिवार्य मतदान न तो वांछनीय है और न ही व्यावहारिक।
- The solution lies in encouraging voters through innovative campaigns, especially via social media.
समाधान नवीन अभियानों और सोशल मीडिया के माध्यम से मतदाताओं को प्रेरित करना है।
- For migrant workers, proper implementation of poll-day holiday can help.
प्रवासी श्रमिकों के लिए मतदान दिवस अवकाश का सही पालन मदद कर सकता है।
- Increasing transport facilities like special buses and trains can boost participation.
विशेष बसों और ट्रेनों जैसी सुविधाएँ भागीदारी बढ़ा सकती हैं।
- With new technologies, secure remote voting methods should be explored.
नई तकनीकों के साथ सुरक्षित रिमोट वोटिंग के विकल्पों पर विचार किया जाना चाहिए।



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23 March 2026

23Mar

Will completely close Strait of Hormuz : Iran

ईरान होर्मुज़ जलडमरूमध्य को पूरी तरह बंद कर देगा : ईरान

Will completely close Strait of Hormuz : Iran

Trump threatened to 'obliterate' Iran's power plants if it did not reopen the Strait in 48 hours

Tehran says critical infrastructure in West Asia could be 'irreversibly destroyed' if it is attacked

Iran said it would strike power plants in Israel, nations hosting U.S. and firms with U.S. interests

GS II: IR
Reuters
Agence France-Presse
WASHINGTON/TEHRAN

The Iranian military on Sunday threatened to completely shut down the strategic Strait of Hormuz and attack U.S. infrastructure, including energy facilities in the Gulf, if U.S. President Donald Trump acts on threats to target the country's power plants.

Mr. Trump on Saturday threatened to "obliterate" Iran's power plants if Tehran did not fully reopen the Strait of Hormuz in 48 hours, suggesting a significant escalation barely a day after he talked about "winding down" the war, now in its fourth week.

Treasury Secretary Scott Bessent said the U.S. may need to "escalate" its attacks against Iran to be able to wind down the war. Asked if Mr. Trump was winding down or escalating



Assessing damage: People inspecting the site of an Iranian missile strike in Dimona, Israel on Sunday. AFP

ing the war, he said: "They're not mutually exclusive. Sometimes you have to escalate to de-escalate."

The strait has been effectively closed since the start of the war, sparked by U.S.-Israeli bombardment of Iran. The conflict has since spread across West Asia, with Iran responding with attacks on Israel and

U.S. interests in the region.

"If the U.S.'s threats regarding Iran's power plants are carried out... the strait will be completely closed, and it will not be reopened until our destroyed power plants are rebuilt," military's operational command Khatam Al-Anbiba said.

Iran's Parliament Speaker Mohammad Baqer Gha-

Modi chairs meeting to review impact of conflict

The Hindu Bureau
NEW DELHI

As tensions continue to mount in West Asia, Prime Minister Narendra Modi on Sunday chaired a meeting of the Cabinet Committee on Security (CCS) to review the

situation and suggest mitigating measures.

A government statement said that the conflict's impact over the short, long and medium term were assessed.

FULL REPORT ON
» PAGE 4

libaf wrote on X that critical infrastructure in West Asia could be "irreversibly destroyed" should Iranian power plants be attacked.

The military command said it would also strike Israel's "power plants, energy, and information and communications technology (ICT) infrastructure", along with power plants in regional countries hosting

U.S. bases and companies with U.S. shareholders.

The Islamic Republic's power grid is deeply intertwined with its energy sector. Striking major plants could trigger blackouts, crippling everything from pumps and refineries to export terminals and military command centres.

While some Gulf desert states such as Saudi Ara-

bia, Oman and the UAE have access to more than one sea to draw water from for desalination, Qatar, Bahrain and Kuwait are crowded along the shoreline of the Gulf with no other coastline.

Earlier in the day, Iranian media reports quoted Iran's representative to the U.N. maritime agency as saying that the Strait of Hormuz remains open to all shipping except vessels linked to "Iran's enemies".

Ali Mousavi's comments came from an interview published on Friday by the Chinese news agency Xinhua, much before Mr. Trump's ultimatum. Meanwhile, Iran's Parliament is mulling imposing tolls on shipping through the strait, with Speaker Ghalibaf saying maritime traffic would "not return to its pre-war status".

Traffic through the vital strait has been brought to a near-standstill since the

start of the war, that has so far killed over 2,000 people. A relatively small number of vessels have been able to transit it - around 5% of its pre-war volume, according to analytics firm Kpler. Iranian forces have attacked multiple vessels, saying they failed to heed "warnings" against transiting the waterway.

In recent days, Iran has allowed some vessels, while warning it would block ships from countries it says have joined the "aggression" against it.

Meanwhile, the exiled son of Iran's last shah Reza Pahlavi called on Mr. Trump and Israeli Prime Minister Benjamin Netanyahu to refrain from targeting Iran's civilian infrastructure, because it "belongs to the Iranian people and to the future of a free Iran."

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23Mar. Will completely close Strait of Hormuz : Iran

ईरान होर्मुज़ जलडमरूमध्य को पूरी तरह बंद कर देगा : ईरान

- Trump threatened to 'obliterate' Iran's power plants if it did not reopen the Strait in 48 hours.
ट्रम्प ने धमकी दी कि यदि 48 घंटे में Strait को फिर से नहीं खोला गया तो वे ईरान के power plants को 'obliterate' कर देंगे।
- Tehran says critical infrastructure in West Asia could be 'irreversibly destroyed' if it is attacked.
तेहरान ने कहा कि पश्चिम एशिया में critical infrastructure पर हमला हुआ तो वह 'irreversibly destroyed' हो सकता है।
- Iran said it would strike power plants in Israel, nations hosting U.S. and firms with U.S. interests.
ईरान ने कहा कि वह Israel, अमेरिका की मेजबानी करने वाले देशों और अमेरिकी हितों वाली कंपनियों के power plants पर हमला करेगा।
- The Iranian military on Sunday threatened to completely shut down the strategic Strait of Hormuz and attack U.S. infrastructure, including energy facilities in the Gulf, if U.S. President Donald Trump acts on threats to target the country's power plants.
ईरानी सेना ने रविवार को Strait of Hormuz को पूरी तरह बंद करने और खाड़ी में ऊर्जा सुविधाओं सहित अमेरिकी बुनियादी ढांचे पर हमला करने की धमकी दी, यदि अमेरिकी राष्ट्रपति Donald Trump ईरान के power plants पर हमला करने की धमकी को लागू करते हैं।
- Mr. Trump on Saturday threatened to "obliterate" Iran's power plants if Tehran did not fully reopen the Strait of Hormuz in 48 hours, suggesting a significant escalation barely a day after he talked about "winding down" the war, now in its fourth week.
श्री ट्रम्प ने शनिवार को धमकी दी कि यदि तेहरान 48 घंटे में Strait of Hormuz को पूरी तरह नहीं खोलता है तो वे ईरान के power plants को "obliterate" कर देंगे, जो युद्ध को "winding down" करने की बात के एक दिन बाद ही बड़ा escalation दर्शाता है।
- Treasury Secretary Scott Bessent said the U.S. may need to "escalate" its attacks against Iran to be able to wind down the war.



ट्रेजरी सचिव Scott Bessent ने कहा कि युद्ध को समाप्त करने के लिए अमेरिका को ईरान के खिलाफ अपने हमलों को “escalate” करना पड़ सकता है।

- Asked if Mr. Trump was winding down or escalating the war, he said:
जब उनसे पूछा गया कि क्या ट्रम्प युद्ध को कम कर रहे हैं या बढ़ा रहे हैं, उन्होंने कहा:
- “They’re not mutually exclusive. Sometimes you have to escalate to de-escalate.”
“ये परस्पर विरोधी नहीं हैं। कभी-कभी de-escalate करने के लिए escalate करना पड़ता है।”
- The strait has been effectively closed since the start of the war, sparked by U.S.-Israeli bombardment of Iran.
यह strait युद्ध की शुरुआत से ही प्रभावी रूप से बंद है, जो अमेरिका-इज़राइल द्वारा ईरान पर बमबारी से शुरू हुआ।
- The conflict has since spread across West Asia, with Iran responding with attacks on Israel and U.S. interests in the region.
यह संघर्ष पूरे पश्चिम एशिया में फैल गया है, जिसमें ईरान ने Israel और क्षेत्र में अमेरिकी हितों पर हमले किए हैं।
- “If the U.S.’s threats regarding Iran’s power plants are carried out... the strait will be completely closed, and it will not be reopened until our destroyed power plants are rebuilt,” military’s operational command Khatam Al-Anbiya said.
“यदि ईरान के power plants के खिलाफ अमेरिकी धमकियां लागू की जाती हैं... तो strait पूरी तरह बंद कर दिया जाएगा और तब तक नहीं खोला जाएगा जब तक हमारे नष्ट हुए power plants फिर से नहीं बन जाते,” सैन्य कमांड Khatam Al-Anbiya ने कहा।
- Iran’s Parliament Speaker Mohammad Baqer Ghalibaf wrote on X that critical infrastructure in West Asia could be “irreversibly destroyed” should Iranian power plants be attacked.
ईरान की संसद के स्पीकर Mohammad Baqer Ghalibaf ने X पर लिखा कि यदि ईरान के power plants पर हमला हुआ तो पश्चिम एशिया का critical infrastructure “irreversibly destroyed” हो सकता है।
- The military command said it would also strike Israel’s “power plants, energy, and information and communications technology (ICT) infrastructure”, along with power plants in regional countries hosting U.S. bases and companies with U.S. shareholders.
सैन्य कमान ने कहा कि वह Israel के “power plants, energy, और ICT infrastructure” के साथ-साथ उन देशों के power plants पर भी हमला करेगा जहां अमेरिकी बेस और कंपनियां हैं।
- The Islamic Republic’s power grid is deeply intertwined with its energy sector.
इस्लामिक गणराज्य का power grid उसके ऊर्जा क्षेत्र से गहराई से जुड़ा हुआ है।
- Striking major plants could trigger blackouts, crippling everything from pumps and refineries to export terminals and military command centres.
मुख्य संयंत्रों पर हमला blackouts ला सकता है, जिससे पंप, रिफाइनरी, निर्यात टर्मिनल और सैन्य कमांड सेंटर प्रभावित हो सकते हैं।
- While some Gulf desert states such as Saudi Arabia, Oman and the UAE have access to more than one sea to draw water from for desalination, Qatar, Bahrain and Kuwait are crowded along the shoreline of the Gulf with no other coastline.
जहां Saudi Arabia, Oman और UAE के पास जल विलवणीकरण के लिए एक से अधिक समुद्र हैं, वहीं Qatar, Bahrain और Kuwait केवल खाड़ी के तट पर निर्भर हैं।
- Earlier in the day, Iranian media reports quoted Iran’s representative to the U.N. maritime agency as saying that the Strait of Hormuz remains open to all shipping except vessels linked to “Iran’s enemies”.
दिन में पहले, ईरानी मीडिया ने संयुक्त राष्ट्र समुद्री एजेंसी में ईरान के प्रतिनिधि के हवाले से कहा कि Strait of Hormuz सभी जहाजों के लिए खुला है, सिवाय उन जहाजों के जो “Iran’s enemies” से जुड़े हैं।
- Ali Mousavi’s comments came from an interview published on Friday by the Chinese news agency Xinhua, much before Mr. Trump’s ultimatum.
Ali Mousavi की टिप्पणियां चीनी समाचार एजेंसी Xinhua द्वारा शुक्रवार को प्रकाशित एक साक्षात्कार से आईं, जो ट्रम्प के अल्टीमेटम से पहले का है।
- Meanwhile, Iran’s Parliament is mulling imposing tolls on shipping through the strait, with Speaker Ghalibaf saying maritime traffic would “not return to its pre-war status”.
इस बीच, ईरान की संसद strait से गुजरने वाले जहाजों पर tolls लगाने पर विचार कर रही है, और स्पीकर Ghalibaf ने कहा कि समुद्री यातायात “pre-war status” में वापस नहीं आएगा।



- Traffic through the vital strait has been brought to a near-standstill since the start of the war, that has so far killed over 2,000 people.
महत्वपूर्ण strait से यातायात युद्ध की शुरुआत से लगभग ठप हो गया है, जिसमें अब तक 2,000 से अधिक लोग मारे जा चुके हैं।
- A relatively small number of vessels have been able to transit it — around 5% of its pre-war volume, according to analytics firm Kpler.
एनालिटिक्स फर्म Kpler के अनुसार, केवल लगभग 5% जहाज ही pre-war स्तर की तुलना में इस मार्ग से गुजर पाए हैं।
- Iranian forces have attacked multiple vessels, saying they failed to heed “warnings” against transiting the waterway.
ईरानी बलों ने कई जहाजों पर हमला किया है, यह कहते हुए कि उन्होंने जलमार्ग से गुजरने के खिलाफ “warnings” को नजरअंदाज किया।
- In recent days, Iran has allowed some vessels, while warning it would block ships from countries it says have joined the “aggression” against it.
हाल के दिनों में, ईरान ने कुछ जहाजों को अनुमति दी है, लेकिन चेतावनी दी है कि वह उन देशों के जहाजों को रोकेगा जो उसके खिलाफ “aggression” में शामिल हैं।
- Meanwhile, the exiled son of Iran’s last shah Reza Pahlavi called on Mr. Trump and Israeli Prime Minister Benjamin Netanyahu to refrain from targeting Iran’s civilian infrastructure, because it “belongs to the Iranian people and to the future of a free Iran.”
इस बीच, ईरान के अंतिम शाह के निर्वासित पुत्र Reza Pahlavi ने Donald Trump और इज़राइल के प्रधानमंत्री Benjamin Netanyahu से ईरान के civilian infrastructure को निशाना न बनाने का आग्रह किया, क्योंकि यह “ईरानी जनता और एक स्वतंत्र ईरान के भविष्य का है।”

GS Paper III: Economy,

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23 March 2026

23Mar	Modi assesses impact of West Asia conflict on India मोदी ने भारत पर पश्चिम एशिया संघर्ष के प्रभाव का आकलन किया
23Mar	Rice, wheat procurement is ‘consistently’ low: panel चावल, गेहूं की खरीद ‘लगातार’ कम: समिति
23Mar	India’s dual dependence on West Asia for urea production यूरिया उत्पादन के लिए पश्चिम एशिया पर भारत की दोहरी निर्भरता
23Mar	What insurance numbers do not reveal बीमा के आंकड़े क्या नहीं बताते
23Mar	As West Asia war threatens gas supply, remembering a gas grid India never built जब पश्चिम एशिया का युद्ध गैस आपूर्ति को खतरे में डालता है, भारत द्वारा कभी न बनाए गए गैस ग्रिड को याद करना
23Mar	NSEIX opens doors to U.S. stocks for Indian investors NSEIX ने भारतीय निवेशकों के लिए अमेरिकी शेयरों के दरवाजे खोले
23Mar	Old Mangalore Port likely to get a jetty via Sagarmala सागरमाला के माध्यम से ओल्ड मैंगलोर पोर्ट को जेट्टी मिलने की संभावना



Modi assesses impact of West Asia conflict on India

Cabinet Committee on Security discusses diversifying sources of imports, including fertilizers, chemicals, pharmaceuticals, and petrochemicals; PM directs 'whole-of-government approach'

GS III: Economy

The Hindu Bureau
NEW DELHI

As tensions continue to escalate in West Asia, threatening energy and commodity supply routes, Prime Minister Narendra Modi on Sunday chaired a meeting of the **Cabinet Committee on Security (CCS)** to review the situation and suggest mitigating measures.

A government statement said the meeting assessed the ongoing conflict's short-, long-, and medium-term impact.

Furthermore, the committee also discussed potential measures, both immediate and long-term, to manage the crisis.

"The ongoing conflict in West Asia will have significant short, medium and long-term impact on the global economy. Its effect on India was assessed, and counter-measures, both immediate and long-term, were discussed," the statement said.

Mr. Modi directed that a Group of Ministers (GoM) and a group of secretaries be formed to work exclu-



Taking stock: Prime Minister Narendra Modi chairs a meeting of the Cabinet Committee on Security to review the situation, in view of the escalating tensions in West Asia, in New Delhi on Sunday. DPR PMO

sively on a "whole-of-government approach" to the crisis.

The Prime Minister urged sectoral groups to work in consultation with all stakeholders.

Alternate sources

The CCS discussed diversifying sources of major imports, including fertilizers, chemicals, pharmaceuticals, and petrochemicals.

Fertilizers assume signif-

icance ahead of the coming kharif season, and in view of the disruptions to natural gas imports after Tehran's missile attacks devastated energy infrastructure in Qatar, which is among the biggest importers of LNG globally.

"The measures taken in the last few years to maintain adequate stocks of fertilizers will ensure timely availability and food security. Alternate sources of

fertilizers were also discussed to ensure continued availability in the future," the statement read.

The Cabinet committee also called for ensuring an "adequate" supply of coal stocks at all power plants.

The carbon commodity becomes essential with power demand expected to peak in summers and the potential constraints of natural gas supplies due to the ongoing conflict.

23Mar. Modi assesses impact of West Asia conflict on India

मोदी ने भारत पर पश्चिम एशिया संघर्ष के प्रभाव का आकलन किया

- Cabinet Committee on Security discusses **diversifying sources of imports**, including fertilizers, chemicals, pharmaceuticals, and petrochemicals; PM directs '**whole-of-government approach**'
कैबिनेट समिति ऑन सिक्योरिटी ने आयात स्रोतों के विविधीकरण पर चर्चा की, जिसमें उर्वरक, रसायन, फार्मास्यूटिकल्स और पेट्रोकेमिकल्स शामिल हैं; प्रधानमंत्री ने 'संपूर्ण-सरकार दृष्टिकोण' का निर्देश दिया
- As tensions continue to escalate in **West Asia**, threatening energy and commodity supply routes, Prime Minister Narendra Modi on Sunday chaired a meeting of the **Cabinet Committee on Security (CCS)** to review the situation and suggest mitigating measures.
जैसे-जैसे पश्चिम एशिया में तनाव बढ़ता जा रहा है, जो ऊर्जा और वस्तु आपूर्ति मार्गों को खतरे में डाल रहा है, प्रधानमंत्री नरेंद्र मोदी ने रविवार को कैबिनेट समिति ऑन सिक्योरिटी (CCS) की बैठक की अध्यक्षता की, ताकि स्थिति की समीक्षा की जा सके और शमन उपाय सुझाए जा सकें।
- A government statement said the meeting assessed the ongoing conflict's **short-, long-, and medium-term impact**.



सरकारी बयान में कहा गया कि बैठक में जारी संघर्ष के **अल्पकालिक, दीर्घकालिक और मध्यमकालिक प्रभावों** का आकलन किया गया।

- Furthermore, the committee also discussed potential measures, both **immediate and long-term**, to manage the crisis.
इसके अलावा, समिति ने संकट से निपटने के लिए **तत्काल और दीर्घकालिक** संभावित उपायों पर भी चर्चा की।
- “The ongoing conflict in West Asia will have significant **short, medium and long-term impact on the global economy**.
“पश्चिम एशिया में जारी संघर्ष का वैश्विक अर्थव्यवस्था पर **अल्प, मध्यम और दीर्घकालिक महत्वपूर्ण प्रभाव** पड़ेगा।
- Its effect on India was assessed, and counter-measures, both **immediate and long-term**, were discussed,” the statement said.
भारत पर इसके प्रभाव का आकलन किया गया, और **तत्काल व दीर्घकालिक** दोनों प्रकार के प्रतिकार उपायों पर चर्चा की गई,” बयान में कहा गया।
- Mr. Modi directed that a **Group of Ministers (GoM)** and a group of secretaries be formed to work exclusively on a “**whole-of-government approach**” to the crisis.
श्री मोदी ने निर्देश दिया कि संकट से निपटने के लिए एक **मंत्रियों का समूह (GoM)** और सचिवों का एक समूह बनाया जाए जो विशेष रूप से “**संपूर्ण-सरकार दृष्टिकोण**” पर कार्य करे।
- The Prime Minister urged sectoral groups to work in consultation with all stakeholders.
प्रधानमंत्री ने क्षेत्रीय समूहों से सभी हितधारकों के साथ परामर्श करके काम करने का आग्रह किया।

Alternate sources वैकल्पिक स्रोत

- The CCS discussed **diversifying sources of major imports**, including fertilizers, chemicals, pharmaceuticals, and petrochemicals.
CCS ने **प्रमुख आयात स्रोतों के विविधीकरण** पर चर्चा की, जिसमें उर्वरक, रसायन, फार्मास्यूटिकल्स और पेट्रोकेमिकल्स शामिल हैं।
- Fertilizers assume significance ahead of the coming **kharif season**, and in view of the disruptions to natural gas imports after Tehran’s missile attacks devastated energy infrastructure in Qatar, which is among the biggest importers of **LNG globally**.
आगामी **खरीफ मौसम** से पहले उर्वरकों का महत्व बढ़ जाता है, और तेहरान के मिसाइल हमलों से कतर की ऊर्जा संरचना के नष्ट होने के बाद प्राकृतिक गैस आयात में बाधा को देखते हुए, जो वैश्विक स्तर पर **एलएनजी का प्रमुख आयातक** है।
- “The measures taken in the last few years to maintain adequate stocks of fertilizers will ensure timely availability and **food security**.
“पिछले कुछ वर्षों में उर्वरकों का पर्याप्त भंडार बनाए रखने के लिए उठाए गए कदम समय पर उपलब्धता और **खाद्य सुरक्षा** सुनिश्चित करेंगे।
- Alternate sources of fertilizers were also discussed to ensure continued availability in the future,” the statement read.
भविष्य में निरंतर उपलब्धता सुनिश्चित करने के लिए उर्वरकों के **वैकल्पिक स्रोतों** पर भी चर्चा की गई,” बयान में कहा गया।
- The Cabinet committee also called for ensuring an “**adequate**” **supply of coal stocks** at all power plants.
कैबिनेट समिति ने सभी बिजली संयंत्रों में कोयले के भंडार की “**पर्याप्त**” **आपूर्ति** सुनिश्चित करने का भी आह्वान किया।
- The carbon commodity becomes essential with power demand expected to **peak in summers** and the potential constraints of natural gas supplies due to the ongoing conflict.
यह कार्बन आधारित संसाधन आवश्यक हो जाता है क्योंकि बिजली की मांग **गर्मियों में चरम पर** पहुंचने की उम्मीद है और जारी संघर्ष के कारण प्राकृतिक गैस आपूर्ति में संभावित बाधाएं हैं।



Rice, wheat procurement is 'consistently' low: panel

Standing Committee led by DMK MP asks Food Ministry to strengthen its procurement planning and coordination with States to minimise the gap between estimated and actual procurement

GS III: Economy

The Hindu Bureau
NEW DELHI

Expressing concern that actual procurement of rice and wheat has consistently remained below estimates in recent years and below targets in States such as Bihar, Gujarat, Punjab, and Uttar Pradesh, the Parliamentary Standing Committee on Consumer Affairs, Food, and Public Distribution, headed by DMK MP Kanimozhi, has asked the Union Food Ministry to strengthen its procurement planning and coordination with States to minimise the gap between estimated and actual procurement of both the food grains.

In a report on the Demands for Grants of the Department of Food and Public Distribution, the panel noted that since 2022-23, the procurement of wheat and rice had been less than 30% of the total production.

"Moreover, actual procurement of wheat has been 76.71%, 71.35% and 87.29% of the estimate for



The panel flagged that procurement of rice and wheat has remained below target in Bihar, Gujarat, Punjab, and U.P. PTI

the years 2023-24, 2024-25 and 2025-26 respectively. Similarly, the actual procurement of rice has been less than target since 2022-23," the report revealed.

During the kharif marketing season of 2024-25, the procurement of rice from Andhra Pradesh, Karnataka, and Punjab was 25.60 lakh tonnes, 0.003 lakh tonnes, and 116.13 lakh tonnes against the target of 35 lakh tonnes, 5.29 lakh tonnes, and 124 lakh tonnes, respectively, the panel said.

Similarly, during the rabi marketing season of 2025-26, the procurement of wheat was less than the

target in the States of Bihar, Gujarat, Punjab, and Uttar Pradesh, it added.

Multiple factors at play

The government told the panel that any fluctuation in estimated production and actual production resulted in variation in procurement. "Procurement depends on multiple factors like production, market surplus, minimum support price (MSP), prevailing market rates, demand-supply situation, and participation of private traders, etc., the government informed.

Noting these factors, the panel asked the govern-

ment to strengthen its procurement planning and coordination with the States to minimise the gap between estimated and actual procurement of wheat and rice.

"While noting the Department's submission that procurement levels are influenced by multiple factors, the Committee is concerned that actual procurement has consistently remained below estimates in recent years and below targets in several States," the report said.

The panel asked the Union government to review the methodology used for estimating procurement requirements, enhance real-time monitoring of production and market arrivals, and work closely with State governments – particularly in States where procurement has significantly fallen short of targets – to ensure that procurement operations are more realistic, responsive and effective. It asked the government to apprise it of the corrective measures taken on the suggestions.

23Mar. Rice, wheat procurement is 'consistently' low: panel चावल, गेहूं की खरीद 'लगातार' कम: समिति

- Standing Committee led by **DMK MP** asks Food Ministry to strengthen its **procurement planning** and coordination with States to minimise the gap between **estimated and actual procurement**

डीएमके सांसद की अध्यक्षता वाली समिति ने खाद्य मंत्रालय से **खरीद योजना** और राज्यों के साथ समन्वय मजबूत करने को कहा ताकि **अनुमानित और वास्तविक खरीद** के बीच अंतर कम किया जा सके

- Expressing concern that actual procurement of rice and wheat has consistently remained below estimates in recent years and below targets in States such as **Bihar, Gujarat, Punjab, and Uttar Pradesh**, the Parliamentary Standing Committee on **Consumer Affairs, Food, and Public Distribution**, headed by DMK MP **Kanimozhi**, has asked the Union Food Ministry to strengthen its procurement planning and coordination with States to minimise the gap between estimated and actual procurement of both the food grains.

यह चिंता व्यक्त करते हुए कि हाल के वर्षों में चावल और गेहूं की वास्तविक खरीद लगातार अनुमान से कम रही है और **बिहार, गुजरात, पंजाब और उत्तर प्रदेश** जैसे राज्यों में लक्ष्य से भी कम है, **उपभोक्ता मामले, खाद्य और सार्वजनिक वितरण** पर संसदीय स्थायी समिति, जिसकी अध्यक्षता डीएमके सांसद **कनिमोझी** कर रही हैं,



ने केंद्रीय खाद्य मंत्रालय से दोनों खाद्यान्नों की अनुमानित और वास्तविक खरीद के बीच अंतर कम करने के लिए खरीद योजना और राज्यों के साथ समन्वय मजबूत करने को कहा है।

- In a report on the **Demands for Grants** of the Department of Food and Public Distribution, the panel noted that since 2022-23, the procurement of wheat and rice had been less than **30% of the total production**.
खाद्य और सार्वजनिक वितरण विभाग की **अनुदान मांगों** पर रिपोर्ट में, समिति ने उल्लेख किया कि 2022-23 से गेहूं और चावल की खरीद कुल उत्पादन के **30% से कम** रही है।
- “Moreover, actual procurement of wheat has been 76.71%, 71.35% and 87.29% of the estimate for the years 2023-24, 2024-25 and 2025-26 respectively.
“इसके अलावा, गेहूं की वास्तविक खरीद 2023-24, 2024-25 और 2025-26 के लिए क्रमशः अनुमान का 76.71%, 71.35% और 87.29% रही है।
- Similarly, the actual procurement of rice has been less than target since 2022-23,” the report revealed.
इसी प्रकार, 2022-23 से चावल की वास्तविक खरीद लक्ष्य से कम रही है,” रिपोर्ट में बताया गया।
- During the **kharif marketing season** of 2024-25, the procurement of rice from **Andhra Pradesh, Karnataka, and Punjab** was 25.60 lakh tonnes, 0.003 lakh tonnes, and 116.13 lakh tonnes against the target of 35 lakh tonnes, 5.29 lakh tonnes, and 124 lakh tonnes, respectively, the panel said.
2024-25 के **खरीफ विपणन सत्र** के दौरान, **आंध्र प्रदेश, कर्नाटक और पंजाब** से चावल की खरीद क्रमशः 25.60 लाख टन, 0.003 लाख टन और 116.13 लाख टन रही, जबकि लक्ष्य क्रमशः 35 लाख टन, 5.29 लाख टन और 124 लाख टन था, समिति ने कहा।
- Similarly, during the **rabi marketing season** of 2025-26, the procurement of wheat was less than the target in the States of **Bihar, Gujarat, Punjab, and Uttar Pradesh**, it added.
इसी प्रकार, 2025-26 के **रबी विपणन सत्र** के दौरान, **बिहार, गुजरात, पंजाब और उत्तर प्रदेश** में गेहूं की खरीद लक्ष्य से कम रही, यह भी जोड़ा गया।

Multiple factors at play कई कारक प्रभावी

- The government told the panel that any fluctuation in estimated production and actual production resulted in variation in procurement.
सरकार ने समिति को बताया कि अनुमानित उत्पादन और वास्तविक उत्पादन में किसी भी उतार-चढ़ाव के कारण खरीद में परिवर्तन होता है।
- “Procurement depends on multiple factors like **production, market surplus, minimum support price (MSP), prevailing market rates, demand-supply situation, and participation of private traders**, etc., the government informed.
“खरीद कई कारकों पर निर्भर करती है जैसे **उत्पादन, बाजार अधिशेष, न्यूनतम समर्थन मूल्य (MSP), प्रचलित बाजार दरें, मांग-आपूर्ति स्थिति और निजी व्यापारियों की भागीदारी** आदि,” सरकार ने बताया।
- Noting these factors, the panel asked the government to strengthen its procurement planning and coordination with the States to minimise the gap between estimated and actual procurement of wheat and rice.
इन कारकों को ध्यान में रखते हुए, समिति ने सरकार से गेहूं और चावल की अनुमानित और वास्तविक खरीद के बीच अंतर कम करने के लिए अपनी खरीद योजना और राज्यों के साथ समन्वय मजबूत करने को कहा।
- “While noting the Department's submission that procurement levels are influenced by multiple factors, the Committee is concerned that actual procurement has consistently remained below estimates in recent years and below targets in several States,” the report said.
“यह स्वीकार करते हुए कि खरीद स्तर कई कारकों से प्रभावित होते हैं, समिति चिंतित है कि हाल के वर्षों में वास्तविक खरीद लगातार अनुमान से कम और कई राज्यों में लक्ष्य से भी नीचे रही है,” रिपोर्ट में कहा गया।
- The panel asked the Union government to review the methodology used for estimating procurement requirements, enhance **real-time monitoring** of production and market arrivals, and work closely with State governments — particularly in States where procurement has significantly fallen short of targets — to ensure that procurement operations are more **realistic, responsive and effective**.
समिति ने केंद्र सरकार से खरीद आवश्यकताओं के अनुमान की पद्धति की समीक्षा करने, उत्पादन और बाजार आगमन की **रियल-टाइम निगरानी** बढ़ाने और राज्य सरकारों के साथ — विशेषकर उन राज्यों में जहां खरीद



लक्ष्य से काफी कम रही है — मिलकर काम करने को कहा ताकि खरीद संचालन अधिक यथार्थवादी, उत्तरदायी और प्रभावी हो सके।

- It asked the government to apprise it of the corrective measures taken on the suggestions. समिति ने सरकार से सुझावों पर किए गए सुधारात्मक उपायों की जानकारी देने को कहा।

India's dual dependence on West Asia for urea production

GS III: Economy that the West Asian conflict threatens both domestic urea production and the stability of its global supply chain

MCB

DATA POINT

Nitika Francis

The ongoing conflict in West Asia has disrupted global trade, leading to LPG shortages and a surge in crude oil prices. Data show that the crisis could also affect India's supply of Liquefied Natural Gas (LNG), putting at risk the production of urea, a key fertilizer in the country's majorly agrarian economy.

The conflict has already started to impact India's urea supply. As of Sunday, industry sources told PTI that the country's urea plants are running at half capacity, with Petronet LNG Ltd, which operates India's largest liquefied natural gas receiving terminal, declaring force majeure amid disruptions to cargoes. The move triggered supply curtailments by state-owned gas distributors GAIL (India) Ltd, Indian Oil Corporation Ltd and Bharat Petroleum Corporation Ltd.

India is heavily dependent on imports for its LNG supply, exposing many of its sectors to global shocks such as the U.S.-Israel attacks on Iran. Data show that in 2025, India bought more than 50% of its natural gas from the international market (Chart 1). In fact, India is the fourth largest buyer of natural gas in the world, with an imported supply of 261 lakh metric tonnes in 2025.

A majority of these imports – more than 40% of it – are tied to long-term contracts with suppliers in Qatar (Chart 2). This supply may be in jeopardy as Qatar's LNG cargoes pass through the Strait of Hormuz, which has now become a central chokepoint in the Iran-Israel conflict. The UAE and Oman also ship LNG along this route, and both countries contribute to India's imported LNG supply. Overall, more than 60% of India's imported LNG could be affected by the closure of the Strait.

In India, natural gas is primarily used to produce ammonia, which

in turn is used to produce fertilizers. In FY26, about 30% of India's LNG supply was used for the production of fertilizers (Chart 3). Demand also comes from industry and gas-fired power and city gas networks which supply to households and vehicles.

LNG is the main feedstock for the production of urea, which is the most widely used fertilizer in India. Many urea plants use naphtha or fuel oil – both derived from crude oil – as their main input. However, as urea production is a highly energy-intensive process, these plants have switched to natural gas, which produces fewer emissions.

National urea consumption hit 387 lakh metric tonnes in 2025, following a decade of steady growth. While domestic production has also been increasing (India produced about 306 lakh metric tonnes of urea in 2025), it does not cover the country's demand. Due to this, India also relies on imports of urea.

Data indicate that the West Asian conflict threatens both domestic urea production and the stability of its supply chain. In 2025, India's urea imports exceeded 2,300 lakh metric tonnes, with a staggering 71% of these imports coming from West Asia (Chart 4). This total comprises 45% from Oman and a combined 26% from Saudi Arabia, Qatar, and the UAE, all of which rely on the Strait of Hormuz for transit.

Amidst this scenario, the Government of India issued the Natural Gas (Supply Regulation) Order, 2026, officially including the fertilizer sector in its priority list.

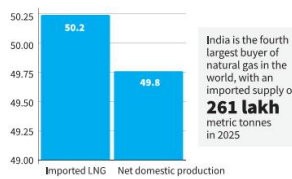
The government also stated that as of March 10, India's urea reserves have reached 61.51 lakh metric tonnes, about 10 lakh more than last year, ahead of the Kharif sowing season. However, only time can tell if India's import dependence for both domestic production and global supply trade will weather the ongoing geopolitical instability.



Distressed supply: A farmer sprinkles fertilizer on a paddy field in the Nagoun district, Assam

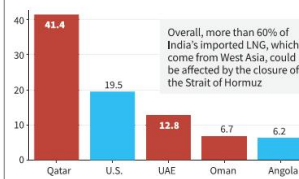
Crop hazard | The data for the charts were sourced from the Ministry of Trade and Commerce, the Department of Fertilizers, and the International Gas Union

Chart 1: The composition of India's LNG supply in 2025-26 (in %)



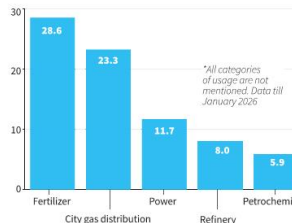
India is the fourth largest buyer of natural gas in the world, with an imported supply of 261 lakh metric tonnes in 2025

Chart 2: Country-wise share (%) of India's LNG imports in 2024-25



Overall, more than 60% of India's imported LNG, which come from West Asia, could be affected by the closure of the Strait of Hormuz

Chart 3: The distribution of LNG use in India in 2025-26 (in %)



*All categories of usage are not mentioned. Data till January 2026

Chart 4: Country-wise share (%) of India's urea imports in 2024-25



India's urea imports exceeded 2,300 lakh metric tonnes in 2024-25. The government also stated that as of March 10, India's urea reserves have reached 61.51 lakh metric tonnes, about 10 lakh more than last year

- Industry sources said that the country's urea plants are running at half capacity
- Natural gas is used to produce ammonia, which in turn is used to produce fertilizers
- LNG is the main feedstock for the production of urea, which is the most widely used fertilizer in India
- Chart 3 and 4 only include the top 5 exporting countries

23Mar. India's dual dependence on West Asia for urea production यूरिया उत्पादन के लिए पश्चिम एशिया पर भारत की दोहरी निर्भरता

Impact of West Asia Conflict on India's LNG and Urea Supply
पश्चिम एशिया संघर्ष का भारत की LNG और यूरिया आपूर्ति पर प्रभाव

- The ongoing conflict in West Asia has disrupted global trade, leading to LPG shortages and a surge in crude oil prices. पश्चिम एशिया में जारी संघर्ष ने वैश्विक व्यापार को बाधित किया है, जिससे LPG की कमी और कच्चे तेल की कीमतों में वृद्धि हुई है।
- Data show that the crisis could also affect India's supply of Liquefied Natural Gas (LNG), putting at risk the production of urea, a key fertilizer in the country's agrarian economy. आंकड़े बताते हैं कि यह संकट भारत की LNG आपूर्ति को भी प्रभावित कर सकता है, जिससे यूरिया उत्पादन खतरे में है, जो देश की कृषि अर्थव्यवस्था के लिए महत्वपूर्ण है।



- The conflict has already started to impact India's **urea supply**.
इस संघर्ष का असर भारत की **यूरिया आपूर्ति** पर पड़ना शुरू हो गया है।
- As of Sunday, industry sources told PTI that the **country's urea plants are running at half capacity, with Petronet LNG Ltd declaring force majeure amid disruptions to cargoes**.
उद्योग स्रोतों के अनुसार, देश के **यूरिया संयंत्र आधी क्षमता पर चल रहे हैं**, और **Petronet LNG Ltd** ने आपूर्ति बाधित होने के कारण **फोर्स मेज्योर** घोषित किया है।
- The move triggered supply curtailments by **GAIL (India) Ltd, Indian Oil Corporation Ltd and Bharat Petroleum Corporation Ltd**.
इस कदम के कारण **GAIL, IOC और BPCL** द्वारा आपूर्ति में कटौती की गई।
- **India is heavily dependent on imports for its LNG supply, exposing many sectors to global shocks such as the U.S.-Israel attacks on Iran**.
भारत अपनी LNG जरूरतों के लिए **आयात पर निर्भर** है, जिससे **अमेरिका-इजराइल के ईरान पर हमलों** जैसे वैश्विक झटकों का असर पड़ता है।
- Data show that in **2025, India bought more than 50% of its natural gas from the international market**.
आंकड़ों के अनुसार **2025** में भारत ने अपनी प्राकृतिक गैस का **50% से अधिक** हिस्सा **अंतरराष्ट्रीय बाजार** से खरीदा।
- **India is the fourth largest buyer of natural gas in the world, with an imported supply of 261 lakh metric tonnes in 2025**.
भारत दुनिया का **चौथा सबसे बड़ा प्राकृतिक गैस खरीदार** है, जिसने **2025** में **261 लाख मीट्रिक टन** गैस आयात की।
- **A majority of these imports — more than 40% — are tied to long-term contracts with suppliers in Qatar**.
इन आयातों में से **40% से अधिक कतर** के साथ दीर्घकालिक अनुबंधों से जुड़े हैं।
- This supply may be in jeopardy as LNG cargoes pass through the **Strait of Hormuz**, now a central **chokepoint** in the Iran-Israel conflict.
यह आपूर्ति खतरे में है क्योंकि LNG जहाज **हॉर्मुज जलडमरूमध्य** से गुजरते हैं, जो अब एक प्रमुख **चोकपॉइंट** बन गया है।
- The **UAE and Oman** also ship LNG along this route, contributing to India's imports.
UAE और ओमान भी इसी मार्ग से LNG भेजते हैं, जो भारत की आपूर्ति में योगदान करते हैं।
- **Overall, more than 60% of India's imported LNG could be affected by the closure of the Strait**.
कुल मिलाकर भारत की **60% से अधिक LNG आयात** इस मार्ग के बंद होने से प्रभावित हो सकती है।
- **In India, natural gas is primarily used to produce ammonia, which is used to produce fertilizers**.
भारत में प्राकृतिक गैस का उपयोग मुख्यतः **अमोनिया** बनाने में होता है, जिससे **उर्वरक** तैयार होते हैं।
- **In FY26, about 30% of India's LNG supply was used for the production of fertilizers**.
FY26 में भारत की LNG का लगभग **30%** उर्वरक उत्पादन में उपयोग हुआ।
- **Demand also comes from industry, gas-fired power plants, and city gas networks supplying households and vehicles**.
मांग **उद्योग, गैस आधारित बिजली संयंत्र और सिटी गैस नेटवर्क** से भी आती है।
- **LNG is the main feedstock for the production of urea, the most widely used fertilizer in India**.
LNG **यूरिया उत्पादन** का मुख्य **कच्चा माल** है, जो भारत में सबसे अधिक उपयोग किया जाने वाला उर्वरक है।
- **Many urea plants earlier used naphtha or fuel oil, but have shifted to natural gas due to lower emissions**.
पहले कई संयंत्र **नेफ्था या फ्यूल ऑयल** का उपयोग करते थे, लेकिन अब कम उत्सर्जन के कारण **प्राकृतिक गैस** पर निर्भर हैं।
- National urea consumption hit **387 lakh metric tonnes in 2025**, following steady growth.
भारत में **2025** में **यूरिया खपत 387 लाख मीट्रिक टन** तक पहुंच गई।
- Domestic production reached about **306 lakh metric tonnes**, but does not meet total demand.
घरेलू उत्पादन लगभग **306 लाख मीट्रिक टन** रहा, जो मांग को पूरा नहीं करता।
- Due to this, India relies on **imports of urea**.
इसलिए भारत **यूरिया आयात** पर निर्भर है।



- In **2025**, India's urea imports exceeded **2,300 lakh metric tonnes**, with **71%** coming from **West Asia**.
2025 में भारत का यूरिया आयात **2,300 लाख मीट्रिक टन** से अधिक था, जिसमें **71%** पश्चिम एशिया से आया।
- This includes **45% from Oman and 26% from Saudi Arabia, Qatar, and the UAE**.
इसमें **45%** ओमान से और **26%** सऊदी अरब, कतर और UAE से आया।
- All these supplies depend on the **Strait of Hormuz** for transit.
ये सभी आपूर्ति **हॉर्मुज जलडमरूमध्य** पर निर्भर हैं।
- The West Asian conflict threatens both **domestic urea production and supply chain stability**.
यह संघर्ष **घरेलू उत्पादन और आपूर्ति श्रृंखला** दोनों को खतरे में डालता है।
- The Government of India issued the **Natural Gas (Supply Regulation) Order, 2026, including the fertilizer sector in its priority list**.
भारत सरकार ने **Natural Gas (Supply Regulation) Order, 2026** जारी कर **उर्वरक क्षेत्र** को प्राथमिकता सूची में शामिल किया।
- As of **March 10**, India's urea reserves reached **61.51 lakh metric tonnes**, about **10 lakh more than last year**.
10 मार्च तक भारत का यूरिया भंडार **61.51 लाख मीट्रिक टन** था, जो पिछले वर्ष से लगभग **10 लाख अधिक** है।
- This is ahead of the **Kharif sowing season**.
यह **खरीफ बुवाई सीजन** से पहले की स्थिति है।
- However, only time can tell if India's **import dependence** will withstand ongoing **geopolitical instability**.
हालांकि, यह समय ही बताएगा कि भारत की **आयात निर्भरता** इस **भू-राजनीतिक अस्थिरता** का सामना कर पाएगी या नहीं।

What insurance numbers do not reveal

Insurance penetration and density are widely used indicators, but they show premium collection, not how well households are protected against loss of income; as a result, premium growth is often mistaken for progress, even when financial protection remains limited

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ECONOMIC NOTES

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India is often described as an "underinsured" country. This claim is usually backed by two numbers that appear regularly in official speeches, policy papers, and media commentary: life insurance penetration and density. Low values of these indicators are taken as proof that insurance coverage in India is inadequate and that large sections of the population remain unprotected.

The problem is not that these numbers are wrong. The problem is that they are misunderstood – and then used to draw the wrong conclusions during public discourses.

In everyday economic language, penetration refers to how widely a product is used. Mobile phone penetration, for example, tells us what proportion of people or households have access to a phone. Density usually means how much of something exists per person.

In life insurance, however, these terms mean something quite different. Insurance penetration is defined as the total premium collected by insurers as a percentage of gross domestic product (GDP). Insurance density is the average premium paid per person, usually expressed in U.S. dollars. These definitions are internationally accepted and are useful for comparing the size of insurance markets across countries.

But these measures do not tell us what most people assume they do. They do not reveal how many families are insured, whether those families would be financially secure if the main earning member were to die, or whether insurance is serving its most important social purpose – protecting households against sudden loss of income.

What the numbers show
Premium-to-GDP, for instance, is essentially a measure of industry revenue relative to the size of the economy. It can move up or down for many reasons that have little to do with household protection. If the economy grows rapidly



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due to infrastructure spending or increased exports, insurance penetration can fall even if more people are buying insurance.

On the other hand, insurers can push high-premium products and raise penetration figures without meaningfully improving protection.

Regulatory changes can further distort the picture. When product rules or commission structures are modified, premium growth often slows temporarily as insurers recalibrate. Penetration may then appear to decline. This does not mean fewer families are insured – it simply reflects a shift in how insurance is sold and priced. Treating such movements as evidence of poor coverage leads to confused diagnosis and poor decision-making.

Insurance density has similar limitations. It is often used to compare India with richer countries, leading to the conclusion that Indians are underinsured because they spend less on insurance. But such comparisons ignore income levels and cost of living. A family paying a modest premium in India may be making a far greater financial commitment, relative to income, than a family paying a higher premium in a developed economy.

Premium vs protection
More importantly, both penetration and

density confuse how much is paid with how much protection is received. In India, insurance products have long been sold as savings instruments rather than as pure protection. As a result, premiums can be high even when the life cover provided is modest. Premiums rise, but the financial security of dependents does not improve proportionately.

This gap between premiums and protection becomes clearer when claims data are examined. According to the IRDAI Annual Report 2024-25, life insurers settled a little over 10 lakh individual death claims during the year, paying a total of about ₹3,000 crore. This translates to an average payout of roughly ₹3.3 lakh per claim, showing a 97% claim settlement ratio.

While this reflects efficient claim settlement, it also indicates the level of financial support that life insurance typically delivers to bereaved families. For most households, such an amount would replace income for only a short period, if at all. Yet these claim payouts fully count towards insurance penetration and density. The numbers look reassuring, even though the underlying protection is often thin. This is why headline indicators can suggest progress while households remain financially vulnerable.

This confusion matters because it shapes how the problem is framed.

Rethinking adequacy

When India is labelled "underinsured" on the basis of these metrics, the implied conclusion is that people lack awareness or access. In reality, many households – especially in the formal and semi-formal sectors – already own at least one life insurance policy, either individually or through employers. The real issue is not reach, but adequacy. Families may have insurance, but not enough to replace lost income if something goes wrong.

This is not an argument for abandoning penetration and density altogether. These indicators are useful for tracking the growth of the insurance industry and for making broad international comparisons. But they are poorly suited to guiding public policy aimed at household protection. When revenue-based measures are treated as indicators of social security, they obscure more than they reveal.

A more meaningful approach would begin with simpler, more direct questions: how many households actually have some form of life insurance cover – whether individual, employer-provided, or through government schemes? And for those that do, how much life cover do they have relative to their income? These questions focus on protection, not premium collection.

Such measures are often dismissed as difficult to compute. In reality, much of the required data already exists – in regulatory filings, census household counts, and records of group insurance schemes. The goal need not be perfect precision. For public policy, understanding broad gaps in protection is far more important than tracking exact premium flows.

As long as India continues to rely on penetration and density as shorthand for insurance adequacy, the debate will remain confused. Premium growth risks being mistaken for progress, and industry expansion will be equated with social security.

Clear thinking begins with clear measurement. In life insurance, that means shifting the focus from how much money is collected to how well families are protected.

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THE GIST

Insurance penetration and density are often misunderstood and do not reveal how many families are insured or whether they would be financially secure if the main earning member were to die.

The real issue is not reach but adequacy, as households may have life insurance but not enough cover to replace lost income, leaving them financially vulnerable.



23Mar. What insurance numbers do not reveal बीमा के आंकड़े क्या नहीं बताते

- India is often described as an **“underinsured” country**.
भारत को अक्सर **“अपर्याप्त बीमित देश”** कहा जाता है।
- This claim is usually backed by two numbers: **life insurance penetration and density**.
यह दावा आमतौर पर दो संकेतकों पर आधारित होता है: **बीमा पैठ (penetration)** और **घनत्व (density)**।
- Low values of these indicators are taken as proof that insurance coverage is **inadequate** and large sections remain **unprotected**.
इन संकेतकों के कम होने को बीमा कवरेज के **अपर्याप्त** होने और लोगों के **असुरक्षित** रहने का प्रमाण माना जाता है।
- The problem is not that these numbers are wrong, but that they are **misunderstood** and used to draw **wrong conclusions**.
समस्या यह नहीं कि ये आंकड़े गलत हैं, बल्कि यह कि इन्हें **गलत समझा** जाता है और **गलत निष्कर्ष** निकाले जाते हैं।
- In everyday economic language, **penetration refers to how widely a product is used**.
सामान्य आर्थिक भाषा में **पैठ** का अर्थ है किसी उत्पाद का कितना व्यापक उपयोग हो रहा है।
- For example, **mobile phone penetration shows how many people have access to phones**.
जैसे **मोबाइल फोन पैठ** बताती है कि कितने लोगों के पास फोन है।
- Density usually means how much of something exists per person**.
घनत्व का अर्थ होता है प्रति व्यक्ति किसी चीज़ की मात्रा।
- In life insurance, however, these terms have **different meanings**.
लेकिन जीवन बीमा में इन शब्दों के **अलग अर्थ** होते हैं।
- Insurance penetration is defined as total premium collected as a percentage of GDP**.
बीमा पैठ का अर्थ है कुल प्रीमियम का GDP के प्रतिशत के रूप में अनुपात।
- Insurance density is the average premium paid per person, usually in U.S. dollars**.
बीमा घनत्व प्रति व्यक्ति औसत प्रीमियम होता है, जिसे आमतौर पर अमेरिकी डॉलर में मापा जाता है।
- These definitions are **internationally accepted** and useful for comparing markets.
ये परिभाषाएँ **अंतरराष्ट्रीय स्तर पर मान्य** हैं और बाजार तुलना में उपयोगी हैं।
- But these measures do not show how many families are insured or whether they are financially secure**.
लेकिन ये नहीं बताते कि कितने **परिवार बीमित** हैं या वे **आर्थिक रूप से सुरक्षित** हैं।
- They also do not show whether insurance serves its purpose of protecting against **income loss**.
ये यह भी नहीं दिखाते कि बीमा **आय के नुकसान से सुरक्षा** प्रदान कर रहा है या नहीं।

What the numbers show ये आंकड़े क्या दर्शाते हैं

- Premium-to-GDP is a measure of industry revenue relative to the economy size**.
प्रीमियम-टू-GDP उद्योग की आय का अर्थव्यवस्था के आकार के सापेक्ष माप है।
- It can change due to factors unrelated to **household protection**.
यह **घरेलू सुरक्षा** से असंबंधित कारणों से बदल सकता है।
- If the economy grows rapidly due to **infrastructure or exports**, penetration may fall even if more people buy insurance.
यदि अर्थव्यवस्था **इन्फ्रास्ट्रक्चर या निर्यात** से तेजी से बढ़ती है, तो बीमा पैठ घट सकती है, भले ही अधिक लोग बीमा लें।
- Insurers can push high-premium products to raise penetration without improving protection**.
बीमा कंपनियाँ **उच्च प्रीमियम उत्पाद** बेचकर पैठ बढ़ा सकती हैं, बिना वास्तविक सुरक्षा बढ़ाए।
- Regulatory changes** can distort the picture as premium growth may slow temporarily.
नियामक बदलाव भी आंकड़ों को प्रभावित करते हैं क्योंकि प्रीमियम वृद्धि अस्थायी रूप से धीमी हो सकती है।
- Penetration may decline without any reduction in the number of **insured families**.
पैठ घट सकती है, जबकि **बीमित परिवारों** की संख्या कम नहीं होती।
- This reflects changes in how insurance is **sold and priced**.
यह बीमा के **बेचने और मूल्य निर्धारण** में बदलाव को दर्शाता है।



- Misinterpreting this leads to **poor policy decisions**.
इसे गलत समझने से **नीतिगत गलत निर्णय** होते हैं।
- **Insurance density** also has limitations.
बीमा घनत्व की भी सीमाएँ हैं।
- It is often used to compare India with **richer countries**, leading to conclusions of **underinsurance**.
इसे अक्सर **विकसित देशों** से तुलना के लिए उपयोग किया जाता है, जिससे भारत को कम बीमित माना जाता है।
- **Such comparisons ignore income levels and cost of living**.
ऐसी तुलना **आय स्तर** और **जीवन-यापन लागत** को नजरअंदाज करती है।
- A family paying a modest premium in India may be making a **greater financial commitment** relative to income than a richer country.
भारत में कम प्रीमियम देने वाला परिवार अपनी आय के अनुपात में अधिक **आर्थिक योगदान** कर सकता है, तुलना में विकसित देशों के परिवारों से।

Premium vs protection प्रीमियम बनाम सुरक्षा

- More importantly, both **penetration and density** confuse how much is paid with how much **protection** is received.
अधिक महत्वपूर्ण यह है कि **पैठ और घनत्व** इस बात को भ्रमित करते हैं कि कितना भुगतान किया गया और कितनी **सुरक्षा** प्राप्त हुई।
- In India, insurance products have long been sold as **savings instruments rather than as pure protection**.
भारत में बीमा उत्पाद लंबे समय से **बचत साधन** के रूप में बेचे जाते रहे हैं, न कि केवल सुरक्षा के रूप में।
- As a result, premiums can be high even when the **life cover** provided is modest.
परिणामस्वरूप, **जीवन बीमा कवरेज** कम होने के बावजूद प्रीमियम अधिक हो सकता है।
- Premiums rise, but the **financial security of dependents** does not improve proportionately.
प्रीमियम बढ़ते हैं, लेकिन आश्रितों की **आर्थिक सुरक्षा** उसी अनुपात में नहीं बढ़ती।
- **This gap between premiums and protection becomes clearer when claims data are examined**.
प्रीमियम और सुरक्षा के बीच का अंतर **क्लेम डेटा** देखने पर स्पष्ट होता है।
- **According to the IRDAI Annual Report 2024-25, life insurers settled a little over 10 lakh individual death claims, paying about ₹33,000 crore.**
IRDAI वार्षिक रिपोर्ट 2024-25 के अनुसार, जीवन बीमा कंपनियों ने **10 लाख से अधिक मृत्यु दावे** निपटाए और लगभग **₹33,000 करोड़** का भुगतान किया।
- This translates to an average payout of roughly **₹3.3 lakh per claim**, with a **97% claim settlement ratio**.
इसका औसत भुगतान लगभग **₹3.3 लाख प्रति दावा** है और **97% क्लेम निपटान दर** है।
- **While this reflects efficient claim settlement, it also indicates the level of financial support provided to families**.
यह **कुशल क्लेम निपटान** को दर्शाता है, लेकिन परिवारों को मिलने वाली **आर्थिक सहायता** के स्तर को भी दिखाता है।
- For most households, such an amount would replace income for only a **short period**, if at all.
अधिकांश परिवारों के लिए यह राशि केवल **कम समय** के लिए ही आय की भरपाई कर सकती है।
- Yet these payouts fully count towards **insurance penetration and density**.
फिर भी ये भुगतान पूरी तरह **बीमा पैठ और घनत्व** में शामिल होते हैं।
- The numbers look **reassuring**, even though the underlying protection is often **thin**.
आंकड़े **संतोषजनक** दिखते हैं, जबकि वास्तविक सुरक्षा अक्सर **कमजोर** होती है।
- This is why headline indicators can suggest **progress** while households remain **financially vulnerable**.
यही कारण है कि प्रमुख संकेतक **प्रगति** दिखाते हैं, जबकि परिवार **आर्थिक रूप से असुरक्षित** रहते हैं।
- This confusion matters because it shapes how the problem is **framed**.
यह भ्रम महत्वपूर्ण है क्योंकि यह समस्या को समझने के तरीके को प्रभावित करता है।



Rethinking adequacy पर्याप्तता पर पुनर्विचार

- When India is labelled “**underinsured**”, the conclusion is that people lack **awareness or access**.
जब भारत को “**कम बीमित**” कहा जाता है, तो निष्कर्ष निकलता है कि लोगों में **जागरूकता या पहुंच की कमी** है।
- In reality, many households already own at least **one life insurance policy**.
वास्तव में, कई परिवारों के पास पहले से कम से कम **एक जीवन बीमा पॉलिसी** होती है।
- The real issue is not reach, but **adequacy**.
असली समस्या पहुंच नहीं बल्कि **पर्याप्तता** है।
- Families may have insurance, but not enough to **replace lost income**.
परिवारों के पास बीमा होता है, लेकिन **आय के नुकसान की भरपाई** के लिए पर्याप्त नहीं होता।
- This is not an argument for abandoning **penetration and density**.
इसका अर्थ यह नहीं कि **पैठ और घनत्व** को छोड़ दिया जाए।
- **These indicators are useful for tracking industry growth and international comparisons.**
ये संकेतक **उद्योग वृद्धि और अंतरराष्ट्रीय तुलना** के लिए उपयोगी हैं।
- **But they are poorly suited for guiding public policy on household protection.**
लेकिन ये **घरेलू सुरक्षा से जुड़ी सार्वजनिक नीति** के लिए उपयुक्त नहीं हैं।
- When **revenue-based measures** are treated as indicators of **social security**, they obscure reality.
जब **राजस्व आधारित संकेतकों** को **सामाजिक सुरक्षा** माना जाता है, तो वे वास्तविकता को छिपा देते हैं।
- A better approach would ask how many households actually have **life insurance cover**.
बेहतर तरीका यह होगा कि देखा जाए कितने परिवारों के पास वास्तव में **जीवन बीमा कवरेज** है।
- And how much cover they have relative to their **income**.
और उनके पास उनकी **आय के अनुपात में कितना कवरेज** है।
- These questions focus on **protection**, not premium collection.
ये प्रश्न **सुरक्षा** पर केंद्रित हैं, न कि प्रीमियम संग्रह पर।
- Such measures are often seen as **difficult to compute**, but data already exists.
इन्हें अक्सर **गणना में कठिन** माना जाता है, जबकि डेटा पहले से उपलब्ध है।
- Data sources include **regulatory filings, census data, and group insurance records**.
डेटा स्रोतों में **नियामक फाइलिंग, जनगणना और समूह बीमा रिकॉर्ड** शामिल हैं।
- The goal need not be perfect precision, but understanding **protection gaps**.
लक्ष्य पूर्ण सटीकता नहीं बल्कि **सुरक्षा की कमी को समझना** होना चाहिए।
- As long as India relies on **penetration and density**, the debate will remain **confused**.
जब तक भारत **पैठ और घनत्व** पर निर्भर रहेगा, बहस **भ्रमित** रहेगी।
- **Premium growth** may be mistaken for progress, and **industry expansion** for social security.
प्रीमियम वृद्धि को प्रगति और **उद्योग विस्तार** को सामाजिक सुरक्षा समझ लिया जाएगा।
- Clear thinking begins with **clear measurement**.
स्पष्ट सोच की शुरुआत **स्पष्ट मापन** से होती है।
- In life insurance, this means shifting focus from **money collected** to how well families are **protected**.
जीवन बीमा में इसका मतलब है ध्यान **पैसे के संग्रह** से हटाकर परिवारों की **सुरक्षा** पर केंद्रित करना।

IRDAI - Insurance Regulatory and Development Authority of India

- IRDAI is the **statutory regulatory body** that regulates and promotes the insurance industry in India.
- It was established under the **IRDA Act, 1999**.
- It ensures the **orderly growth and protection of policyholders' interests**.

Headquarters



- Located in **Hyderabad, Telangana**

Objectives

- Protect the **interests of policyholders**
- Ensure **fair practices** in the insurance sector
- Promote **competition and efficiency**
- Develop the insurance market in India

Functions of IRDAI

- Grants **licenses to insurance companies and intermediaries**
- Regulates **premium rates, terms, and conditions**
- Ensures **financial stability of insurers**
- Monitors **investment of funds by insurance companies**
- Redresses **grievances of policyholders**
- Promotes **insurance awareness and penetration**

Powers of IRDAI

- Can **issue guidelines and regulations**
- Has authority to **inspect and audit insurers**
- Can **penalize companies for violations**

Significance

- Ensures **transparency and trust** in the insurance sector
- Supports **financial inclusion**
- Strengthens **economic stability**

PATRIOTIC IAS



As West Asia war threatens gas supply, remembering a gas grid India never built

India's push for the **National Coal Gasification Mission** to secure energy independence recalls a visionary 1955 proposal by Syed Husain Zaheer, initially dismissed by policymakers. Zaheer's plan for a national gas grid was vindicated by the 1973 global oil shock

CSIR/Economy
Dinesh C Sharma

MOQ

The ongoing war in West Asia has plunged the world into a deep energy crisis. In India, the availability of domestic fuel, LPG, has been hit due to the disruption in supplies from the Persian Gulf. The global energy crisis is reminiscent of the Oil Shock of 1973, when members of the Organisation of Petroleum Exporting Countries (OPEC) cut oil production and slashed exports to protest the U.S. support for Israel in the Yom Kippur War. India responded by exploring alternative sources of energy, offshore oilfields in Bombay High, and experimenting with new technologies.

One technological option that found a second life this way was coal gasification.

The idea of using gasified coal to meet some of India's fuel needs first emerged in 1955 when Syed Husain Zaheer, director of the Regional Research Laboratory Hyderabad (RRLH) – now the CSIR-Indian Institute of Chemical Technology (IICT) – and later director-general of CSIR, submitted a plan to Prime Minister Jawaharlal Nehru for a cross-country national gas grid. The plan envisaged the use of fuel gas produced from gasifying of coal and its supply through pipelines for domestic and industrial use. Zaheer believed fuel gas of high calorific value could be produced by completely gasifying non-caking fuels such as shale coal, lignite, and bituminous coal, all found in India.

'Town Gas Supply Scheme'

The technology involved gasifying coal using high pressure to form hydrocarbons and using oxygen to maintain a high thermal efficiency. It started with converting the sulphur present in the coal to hydrogen sulphide (H₂S) and small amounts of carbonyl sulphide (COS). Sulphur compounds are then removed from the gas stream and the separated acid gas is further processed to recover elemental sulphur.

The gas was further cleaned using water scrubbing to remove any remaining

particulate matter.

In the 1940s, coal gasification was used at a commercial scale to provide town gas for street lighting in Europe and the U.S. But the concept's techno-economic feasibility had yet to be established for Indian coal.

Initially, Zaheer proposed a "Town Gas Supply Scheme" for Hyderabad based on gasifying coal found in the Singareni collieries and piping it to the city. If a gasification plant were established at Kothagudem, gas could be supplied not only to Hyderabad but also to towns along the 290-km-long route, per the plan. Based on surveys of fuel consumption, population and demand projections, family income, and fuel demand trends, Zaheer proposed a pressure gasification plant of 7.5 million cubic feet capacity, and suggested the gas pipeline could be laid along the railway track to facilitate easy maintenance and inspections.

Tough going

To demonstrate the technology's feasibility, pilot studies were needed, which in turn required funding. Zaheer's idea did not find any takers in the Central government or the CSIR. On the energy front, the policy focus at the time was on finding petroleum reserves and the development of nuclear energy, besides harnessing hydroelectric power from large dams. So in 1961, Zaheer urged Nehru to make a policy decision to establish several plants for manufacturing town gas based on coal gasification in select coal belts and linking them through a countrywide grid. Nehru liked the plan and observed that it was "a modern and more economical method, and it will bring enormous relief to the railways". But the Ministry of Steel, Mines and Fuel pointed to the "infeasibility of the plan for transporting gas over long distances". The Planning Commission, the Coal Council, and the CSIR, as well, remained cold to the proposal and were reluctant to fund a pilot plant to test coal gasification.

When Nehru appointed Zaheer the CSIR director-general in 1962, Zaheer got a chance to implement his idea to develop

a pilot plant at RRLH. But the going was not easy as the plan required importing equipment. The wars of 1962 and 1965 did not help, delaying the procurement of machinery from Germany, and there was a massive cost overrun due to the devaluation of the rupee.

The project came to a halt as soon as Zaheer's term ended in 1966. His successor, Atma Ram, formed a committee to review the project. The panel gave an adverse report saying "it would not be advisable to establish and operate the plant in a manner proposed by RRLH" and suggested that the imported equipment be disposed of.

Back then, there was strong opposition to CSIR labs setting up pilot plants to demonstrate technologies they had developed. This was despite the RRLH having already been running a successful semi-commercial pilot plant on another coal technology: low temperature carbonisation. Following the RRLH model, the National Chemicals Laboratory in Pune and the Indian Institute of Petroleum in Dehradun erected pilot plants as well.

'Had we listened...'

After several reviews and controversies, the coal gasification project at RRLH received the go-ahead in 1972 and the crates of imported machinery were opened seven years after they had landed in Hyderabad. The project also received an unexpected boost: the Oil Shock in October 1973. The shortage of petroleum products sent the government scurrying for alternative fuels, recognising that "in the perspective of the country's long-term energy requirements, consideration should be given to installing small to medium coal gasification plants to produce gas".

"It is now abundantly clear that a coal-based energy strategy is the only realistic course for us," Prime Minister Indira Gandhi announced, recognising the past mistakes. In her inaugural speech at the Indian Science Congress session at Bhubaneswar in January 1977, she admitted, "Had we listened, in the early

'60s, to Dr. Husain Zaheer's plea, and based our chemical feedstock policy not merely on oil but on the abundant coal reserves, we would have withstood the oil crisis with much less strain."

However, by the time RRLH erected the coal gasification pilot plant, the technology had moved to the next level. The pilot plant was used as a test bed for research on the integrated gasification combined cycle (IGCC), in collaboration with Bharat Heavy Electricals Limited (BHEL), which commissioned the first such plant in 1985. Unlike coal gasification to produce town gas, IGCC combines gas production from coal with electricity generation. The syngas produced by gasifying coal was used to run a power plant generating electricity. Gas-fired turbines were used to produce electricity and the excess heat was routed to steam-driven turbines.

Second wind

Although India began early with fuel R&D with national laboratories engaged in coal, petroleum, and geophysics research, the funding was suboptimal and projects lacked the necessary industrial linkages. Policymakers and competing interests failed to see the need for long-term research in this area.

Interest in clean coal technologies has been revived as climate action has intensified. The National Coal Gasification Mission, which India launched in 2021, aims to gasify 100 million tonnes of coal by 2030. "The adoption of gasification technology in India will revolutionise the coal sector, reducing reliance on imports of natural gas, methanol, ammonia and other essential products," according to a government statement.

Massive investments to the tune of ₹85,000 crore have been committed to the Mission. Coal India Limited and BHEL also floated a new company, Bharat Coal Gasification & Chemicals Limited, in 2024 to work on clean coal technologies. (Dinesh C. Sharma is a New Delhi-based journalist and author, and has written books on India's post-1947 science and technology journey)

23Mar. As West Asia war threatens gas supply, remembering a gas grid India never built

जब पश्चिम एशिया का युद्ध गैस आपूर्ति को खतरे में डालता है, भारत द्वारा कभी न बनाए गए गैस ग्रिड की याद करना

Coal Gasification and Energy Crisis Context

कोयला गैसीकरण और ऊर्जा संकट का संदर्भ

- The ongoing war in **West Asia** has plunged the world into a **deep energy crisis**. **पश्चिम एशिया** में चल रहा युद्ध दुनिया को **गंभीर ऊर्जा संकट** में डाल चुका है।
- In India, the availability of domestic fuel, **LPG**, has been hit due to disruption in supplies from the **Persian Gulf**. भारत में घरेलू ईंधन **LPG** की उपलब्धता **फारस की खाड़ी** से आपूर्ति बाधित होने के कारण प्रभावित हुई है।
- The global energy crisis is reminiscent of the **Oil Shock of 1973**. यह वैश्विक ऊर्जा संकट **1973 के तेल संकट** की याद दिलाता है।
- Members of **OPEC** cut oil production and exports to protest U.S. support for Israel in the **Yom Kippur War**. **OPEC** के सदस्यों ने **यॉम किप्पुर युद्ध** में अमेरिका के इज़राइल समर्थन के विरोध में तेल उत्पादन और निर्यात घटाया।



- India responded by exploring alternative energy sources, including **offshore oilfields in Bombay High and new technologies**.
भारत ने **बॉम्बे हाई के अपतटीय तेल क्षेत्रों** और नई तकनीकों की खोज के माध्यम से प्रतिक्रिया दी।
- One such technology revived was coal gasification**.
ऐसी ही एक तकनीक थी **कोयला गैसीकरण**।
- The idea first emerged in **1955** by **Syed Husain Zaheer**, director of **RRL Hyderabad (now CSIR-IICT)**.
यह विचार **1955** में **सैयद हुसैन ज़हीर**, **RRL हैदराबाद (अब CSIR-IICT)** के निदेशक द्वारा सामने आया।
- He later became **Director-General of CSIR** and submitted a plan to **Jawaharlal Nehru**.
बाद में वे **CSIR के महानिदेशक** बने और उन्होंने **जवाहरलाल नेहरू** को योजना प्रस्तुत की।
- The plan proposed a **national gas grid using gas from coal for domestic and industrial use**.
इस योजना में कोयले से गैस बनाकर घरेलू और औद्योगिक उपयोग हेतु **राष्ट्रीय गैस ग्रिड** का प्रस्ताव था।
- He believed high calorific fuel gas could be produced from **shale coal, lignite, and bituminous coal**.
उनका मानना था कि **शेल कोयला, लिग्नाइट और बिटुमिनस कोयला** से उच्च ऊष्मीय मान वाली गैस बनाई जा सकती है।

'Town Gas Supply Scheme'

'टाउन गैस सप्लाई स्कीम'

- The technology involved **gasifying coal at high pressure to form hydrocarbons**.
इस तकनीक में कोयले को **उच्च दबाव** पर गैसीकृत कर हाइड्रोकार्बन बनाया जाता था।
- Oxygen was used to maintain high thermal efficiency**.
ऑक्सीजन का उपयोग उच्च **तापीय दक्षता** बनाए रखने के लिए किया जाता था।
- Sulphur in coal was converted into H₂S and COS**.
कोयले में मौजूद सल्फर को **H₂S** और **COS** में परिवर्तित किया जाता था।
- Sulphur compounds were removed and processed to recover **elemental sulphur**.
सल्फर यौगिकों को हटाकर **तत्विय सल्फर** प्राप्त किया जाता था।
- Gas was cleaned using water scrubbing to remove particulate matter**.
गैस को **वाटर स्क्रबिंग** द्वारा साफ किया जाता था।
- In the **1940s**, coal gasification was used commercially in **Europe and the U.S.** for town gas.
1940 के दशक में **यूरोप और अमेरिका** में कोयला गैसीकरण का उपयोग शहर गैस के लिए किया जाता था।
- However, its **techno-economic feasibility** for Indian coal was uncertain.
लेकिन भारतीय कोयले के लिए इसकी **तकनीकी-आर्थिक व्यवहार्यता** स्पष्ट नहीं थी।
- Zaheer proposed a scheme for **Hyderabad** using coal from **Singareni collieries**.
ज़हीर ने **हैदराबाद** के लिए **सिंगरेनी कोलियरियों** के कोयले से योजना प्रस्तावित की।
- A plant at **Kothagudem** could supply gas along a **290 km route**.
कोठागुडेम में संयंत्र से **290 किमी मार्ग** तक गैस आपूर्ति संभव थी।
- He proposed a **7.5 million cubic feet capacity** gasification plant.
उन्होंने **7.5 मिलियन क्यूबिक फीट क्षमता** का संयंत्र प्रस्तावित किया।
- Pipelines could be laid along **railway tracks** for maintenance ease.
पाइपलाइन को **रेलवे ट्रैक** के साथ बिछाने का सुझाव दिया गया।

Tough going

कठिन रास्ता

- Pilot studies were needed, requiring **funding**.
पायलट अध्ययन के लिए **वित्तीय सहायता** आवश्यक थी।
- The plan found no support from the **Central government or CSIR**.
इस योजना को **केंद्र सरकार या CSIR** का समर्थन नहीं मिला।
- Policy focus was on petroleum exploration, nuclear energy, and hydroelectric power**.
नीति का ध्यान **पेट्रोलियम खोज, परमाणु ऊर्जा और जलविद्युत** पर था।
- In **1961**, Zaheer urged Nehru to establish multiple gasification plants and a **national grid**.
1961 में ज़हीर ने नेहरू से कई संयंत्र और **राष्ट्रीय ग्रिड** बनाने का आग्रह किया।



- Nehru supported the idea, calling it **modern and economical**.
नेहरू ने इसे **आधुनिक और किफायती** बताया।
- The **Ministry of Steel, Mines and Fuel** cited **infeasibility of long-distance gas transport**.
इस्पात, खनन और ईंधन मंत्रालय ने लंबी दूरी गैस परिवहन को अव्यवहारिक बताया।
- The **Planning Commission, Coal Council, and CSIR** did not support funding a pilot plant.
योजना आयोग, कोयला परिषद और CSIR ने पायलट संयंत्र के लिए समर्थन नहीं दिया।
- In **1962**, Zaheer became **CSIR Director-General** and pursued a pilot plant at **RRLH**.
1962 में ज़हीर **CSIR महानिदेशक** बने और **RRLH** में पायलट संयंत्र शुरू किया।
- The **project faced challenges due to imported equipment requirements**.
परियोजना में **आयातित उपकरणों** की आवश्यकता के कारण कठिनाई आई।
- The wars of **1962 and 1965** delayed procurement from **Germany**.
1962 और 1965 के युद्धों ने जर्मनी से मशीनरी लाने में देरी की।
- There was a **massive cost overrun** due to **rupee devaluation**.
रुपये के अवमूल्यन के कारण भारी **लागत वृद्धि** हुई।
- The project came to a halt as soon as **Zaheer's term ended in 1966**.
परियोजना **1966 में ज़हीर का कार्यकाल समाप्त होते ही** रुक गई।
- His successor, **Atma Ram**, formed a committee to review the project.
उनके उत्तराधिकारी **आत्मा राम** ने परियोजना की समीक्षा के लिए एक समिति बनाई।
- **The panel gave an adverse report saying "it would not be advisable to establish and operate the plant in a manner proposed by RRLH"**.
समिति ने नकारात्मक रिपोर्ट दी कि **RRLH के प्रस्तावित तरीके से संयंत्र स्थापित और संचालित करना उचित नहीं होगा**।
- It suggested that the **imported equipment be disposed of**.
इसने सुझाव दिया कि **आयातित उपकरणों को निपटा दिया जाए**।
- Back then, there was strong opposition to **CSIR labs setting up pilot plants**.
उस समय **CSIR प्रयोगशालाओं द्वारा पायलट संयंत्र स्थापित करने** का कड़ा विरोध था।
- This was despite the **RRLH** having already been running a successful **semi-commercial pilot plant** on low temperature carbonisation.
यह तब भी था जब **RRLH** पहले से ही **लो टेम्परेचर कार्बोनाइजेशन** पर एक सफल **अर्ध-व्यावसायिक पायलट संयंत्र** चला रहा था।
- Following the **RRLH** model, the **National Chemicals Laboratory, Pune** and **Indian Institute of Petroleum, Dehradun** erected pilot plants.
RRLH मॉडल का अनुसरण करते हुए **नेशनल केमिकल्स लेबोरेटरी, पुणे** और **इंडियन इंस्टीट्यूट ऑफ पेट्रोलियम, देहरादून** ने भी पायलट संयंत्र बनाए।

'Had we listened...'

'काश हमने सुना होता...'

- After several reviews and controversies, the project received the go-ahead in **1972**.
कई समीक्षाओं और विवादों के बाद परियोजना को **1972** में मंजूरी मिली।
- The crates of imported machinery were opened **seven years after** they had landed in **Hyderabad**.
आयातित मशीनरी के बक्से **हैदराबाद पहुंचने के सात साल बाद** खोले गए।
- The **project received a boost from the Oil Shock in October 1973**.
परियोजना को **अक्टूबर 1973 के तेल संकट** से बढ़ावा मिला।
- The shortage of petroleum led the government to consider **coal gasification plants**.
पेट्रोलियम की कमी ने सरकार को **कोयला गैसीकरण संयंत्रों** पर विचार करने को प्रेरित किया।
- The government recognised the need for **small to medium coal gasification plants**.
सरकार ने **छोटे से मध्यम गैसीकरण संयंत्रों** की आवश्यकता को स्वीकार किया।
- **Indira Gandhi** stated that a **coal-based energy strategy** was essential.
इंदिरा गांधी ने कहा कि **कोयला आधारित ऊर्जा रणनीति** आवश्यक है।
- In **January 1977**, at **Indian Science Congress, Bhubaneswar**, she acknowledged past mistakes.
जनवरी 1977 में **भुवनेश्वर में भारतीय विज्ञान कांग्रेस** में उन्होंने पिछली गलतियों को स्वीकार किया।



- She admitted that had they listened to **Dr. Husain Zaheer** in early **1960s**, India would have faced less strain during the oil crisis.
उन्होंने स्वीकार किया कि यदि **1960 के दशक की शुरुआत में डॉ. हुसैन ज़हीर** की बात मानी होती, तो भारत को कम कठिनाई होती।
- By the time the pilot plant was erected, the technology had advanced further.
जब तक पायलट संयंत्र बना, तब तक तकनीक आगे बढ़ चुकी थी।
- The plant was used for research on **Integrated Gasification Combined Cycle (IGCC)**.
इस संयंत्र का उपयोग **इंटीग्रेटेड गैसीफिकेशन कंबाईंड साइकिल (IGCC)** पर शोध के लिए किया गया।
- This was done in collaboration with **Bharat Heavy Electricals Limited (BHEL)**.
यह कार्य **भारत हेवी इलेक्ट्रिकल्स लिमिटेड (BHEL)** के सहयोग से हुआ।
- BHEL commissioned the first IGCC plant in **1985**.
1985 में BHEL ने पहला IGCC संयंत्र स्थापित किया।
- IGCC combines gas production from coal with **electricity generation**.
IGCC कोयले से गैस उत्पादन को **बिजली उत्पादन** के साथ जोड़ता है।
- The **syngas** produced was used to run power plants.
उत्पन्न **सिनगैस** का उपयोग बिजली संयंत्र चलाने में हुआ।
- **Gas-fired turbines** and **steam-driven turbines** were used.
गैस टरबाइन और **भाप टरबाइन** का उपयोग किया गया।

Second wind दूसरी गति

- **India had early fuel R&D in coal, petroleum, and geophysics.**
भारत में प्रारंभिक **ईंधन अनुसंधान एवं विकास** कोयला, पेट्रोलियम और भूभौतिकी में हुआ।
- **However, funding was suboptimal and projects lacked industrial linkages.**
लेकिन **वित्तपोषण अपर्याप्त था** और परियोजनाओं में औद्योगिक जुड़ाव नहीं था।
- **Policymakers failed to recognise the need for long-term research.**
नीति निर्माताओं ने **दीर्घकालिक अनुसंधान** की आवश्यकता को नहीं पहचाना।
- Interest in **clean coal technologies** has revived due to **climate action**.
जलवायु कार्रवाई के कारण **स्वच्छ कोयला तकनीकों** में रुचि फिर बढ़ी है।
- The **National Coal Gasification Mission (2021)** aims to gasify **100 million tonnes of coal by 2030**.
राष्ट्रीय कोयला गैसीकरण मिशन (2021) का लक्ष्य **2030 तक 100 मिलियन टन कोयला गैसीकरण** करना है।
- The technology will reduce reliance on imports of **natural gas, methanol, ammonia**.
यह तकनीक **प्राकृतिक गैस, मेथनॉल और अमोनिया** के आयात पर निर्भरता कम करेगी।
- Investments of about **₹85,000 crore** have been committed.
लगभग **₹85,000 करोड़** का निवेश किया गया है।
- **Coal India Limited** and **BHEL** formed **Bharat Coal Gasification & Chemicals Limited in 2024**.
कोल इंडिया लिमिटेड और **BHEL** ने **2024 में भारत कोल गैसीफिकेशन एंड केमिकल्स लिमिटेड** बनाई।
- The company will work on **clean coal technologies**.
यह कंपनी **स्वच्छ कोयला तकनीकों** पर कार्य करेगी।



NSEIX opens doors to U.S. stocks for Indian investors

From Apple to Alphabet, some of the world's biggest technology giants could soon find their way into Indian portfolios through NSEIX's Global Access platform

GS III: Economy

UNCLE SAM CALLING

Vaishali R. Venkat

For decades, buying U.S. stocks has been a Herculean task for most Indian investors. Strict remittance rules, a maze of paperwork, an arduous hunt for reliable and cost-effective overseas brokers, steep account-opening charges and the list of challenges goes on. On top of that, there are lingering concerns over overseas shareholdings' safety.

With technological advances, financial innovation and regulatory reforms, buying U.S. firms' shares from India may soon be an app/website away.

Thanks to the NSE International Exchange Global Access (NSEIX-GA). With NSEIX-GA, the line between Dalal Street and Wall Street blurs, bringing some of Silicon Valley's most valuable firms within Indian portfolios' reach.

Fully regulated

The NSEIX Global Access IFSC Ltd. is a subsidiary of NSE International Exchange (NSEIX), which in turn is owned by the National Stock Exchange (NSE) of India. It's a fully regulated entity operating from Gujarat International Finance Tec-City (GIFT City), Gandhinagar, under the regulatory framework of the International Financial Services Centres Authority (IFSCA). It enables investors to access global



Any Indian resident over age 18 can open an account with the NSEIX GA for free, through official website nseixga.com and get digitally onboarded

securities via IFSC ecosystem.

No paperwork

You can now directly buy stocks listed on the New York Stock Exchange (NYSE) and Nasdaq via NSEIX-GA which acts as a super broker.

Any Indian resident above 18 years of age can open an account with the NSEIX-GA for free, through official website nseixga.com and experience fully-digital onboarding. PAN/Aadhaar card details could be automatically fetched via Digilocker with the KYC process done digitally.

No demat account

There is no need to open a separate demat account. Once an account is opened with the NSEIX-GA, individuals can start investing via the app or website. Investors can download NSEIX global access' mobile app with both Android and iOS versions available. Financial experts say the NSEIX Global Access' initiative would democratise how Indians gain access to international bourses. The NSEIX-GA, being a government-promoted institution, ensures the security



The entire technology platform/ process is designed in a manner that trades would be executed and settled in real time based on nations' market timings

of overseas holdings.

More foreign markets

Currently, the NSEIX-GA is ready with the offerings of U.S. stocks, especially NYSE and NASDAQ with plans afoot to connect with several other big global bourses. It is likely that almost 30 big foreign markets would be included soon. Plans are on to include Europe, the U.K., Japan, Korea and Australian markets too. With this, investors would have huge choice to diversify holdings.

An official said, "For a hassle-free back-end process, we have tied up with many countries as well as foreign brokers. The entire technology platform and the process is designed in a manner that trades would be executed and settled in real time based on the market timings of the respective countries."

For instance, the U.S. equity trades ideally follow T+1 settlement viz. trades would be settled one business day after execution. Therefore, funds or U.S. Securities become fully settled only after this settlement cycle completes."

Investors can remit mo-

ney from their bank accounts to the NSEIX-GA account in Gandhinagar Gift city and once the funds get reflected in the account, investors get trading limits power to buy shares.

Fractional investing

NSEIX-GA allows fractional investing viz. Indian investors can buy a portion/fraction of a U.S.-listed share rather than purchasing the entire stock. This can be particularly useful since many leading U.S. stocks trade at high prices.

Tax, RBI scheme

Capital gains on U.S. equities are not taxed in the U.S under the India-U.S. tax treaty. They are taxable only in India. Dividends attract a 25% U.S. withholding tax which can be later claimed as a foreign tax credit in India. Also, overseas investments are made under the Liberalised Remittance Scheme (LRS) which permits individuals to remit up to \$2.50 lakh/financial year. No Tax Collected at Source (TCS) applies on foreign remittances up to ₹10 lakh in a financial year while amounts above this attract TCS. Investors must also report overseas investments and income in Indian tax returns. Investors must, however, approach global markets with careful research, awareness of risks and understanding of cross-border regulations.

(The writer is an NISM & CRISIL-certified Wealth Manager and certified in NISM's Research Analyst module)

23Mar. NSEIX opens doors to U.S. stocks for Indian investors NSEIX ने भारतीय निवेशकों के लिए अमेरिकी शेयरों के दरवाजे खोले

- From **Apple to Alphabet**, some of the world's biggest technology giants could soon find their way into Indian portfolios through **NSEIX's Global Access platform**
Apple से Alphabet तक, दुनिया की सबसे बड़ी तकनीकी कंपनियां जल्द ही **NSEIX के Global Access प्लेटफॉर्म** के जरिए भारतीय निवेशकों के पोर्टफोलियो में शामिल हो सकती हैं



- For decades, buying U.S. stocks has been a **Herculean task** for most Indian investors. दशकों तक, अमेरिकी शेयर खरीदना अधिकांश भारतीय निवेशकों के लिए एक **कठिन कार्य** रहा है।
- Strict remittance rules, a maze of paperwork, an arduous hunt for reliable and cost-effective overseas brokers, steep account-opening charges and the list of challenges goes on. कड़े रेमिटेंस नियम, कागजी कार्रवाई की जटिलता, भरोसेमंद और किफायती विदेशी ब्रोकर खोजने की कठिन प्रक्रिया, उच्च खाता खोलने के शुल्क—चुनौतियों की सूची लंबी रही है।
- On top of that, there are lingering concerns over overseas shareholdings' safety. इसके अलावा, विदेशी शेयरों की सुरक्षा को लेकर भी चिंताएं बनी रहती हैं।
- With technological advances, financial innovation and regulatory reforms, buying U.S. firms' shares from India may soon be an app/website away. तकनीकी प्रगति, वित्तीय नवाचार और नियामकीय सुधारों के साथ, भारत से अमेरिकी कंपनियों के शेयर खरीदना जल्द ही एक ऐप/वेबसाइट जितना आसान हो सकता है।
- Thanks to the **NSE International Exchange Global Access (NSEIX-GA)**. यह संभव हुआ है **NSE इंटरनेशनल एक्सचेंज ग्लोबल एक्सेस (NSEIX-GA)** के कारण।
- With NSEIX-GA, the line between **Dalal Street and Wall Street** blurs, bringing some of Silicon Valley's most valuable firms within Indian portfolios' reach. NSEIX-GA के साथ **दलाल स्ट्रीट और वॉल स्ट्रीट** के बीच की दूरी कम हो जाती है, जिससे सिलिकॉन वैली की प्रमुख कंपनियां भारतीय निवेशकों की पहुंच में आ जाती हैं।

Fully regulated पूरी तरह विनियमित

- The NSEIX Global Access IFSC Ltd. is a subsidiary of **NSE International Exchange (NSEIX)**, which in turn is owned by the **National Stock Exchange (NSE)** of India. NSEIX Global Access IFSC Ltd., **NSE इंटरनेशनल एक्सचेंज (NSEIX)** की सहायक कंपनी है, जो आगे **नेशनल स्टॉक एक्सचेंज (NSE)** के स्वामित्व में है।
- It's a fully regulated entity operating from **Gujarat International Finance Tec-City (GIFT City), Gandhinagar**, under the regulatory framework of the **International Financial Services Centres Authority (IFSCA)**. यह एक पूरी तरह से विनियमित संस्था है, जो **गुजरात इंटरनेशनल फाइनेंस टेक-सिटी (GIFT City), गांधीनगर** से **IFSCA** के नियामकीय ढांचे के तहत संचालित होती है।
- It enables investors to access global securities via the IFSC ecosystem. यह निवेशकों को **IFSC इकोसिस्टम** के माध्यम से वैश्विक प्रतिभूतियों तक पहुंच प्रदान करता है।

No paperwork कोई कागजी कार्रवाई नहीं

- You can now directly buy stocks listed on the **New York Stock Exchange (NYSE)** and **Nasdaq** via NSEIX-GA which acts as a super broker. अब आप सीधे **NYSE** और **Nasdaq** पर सूचीबद्ध शेयर NSEIX-GA के माध्यम से खरीद सकते हैं, जो एक सुपर ब्रोकर की तरह कार्य करता है।
- Any Indian resident above 18 years of age can open an account with the NSEIX-GA for free, through official website nseixga.com and experience fully digital onboarding. 18 वर्ष से अधिक आयु का कोई भी भारतीय निवासी NSEIX-GA के साथ मुफ्त में खाता खोल सकता है और पूरी तरह डिजिटल ऑनबोर्डिंग का अनुभव कर सकता है।
- PAN/Aadhaar card details could be automatically fetched via **Digilocker** with the **KYC process** done digitally. PAN/आधार विवरण **Digilocker** के माध्यम से स्वतः प्राप्त किए जा सकते हैं और **KYC प्रक्रिया** डिजिटल रूप से पूरी होती है।

No demat account डीमैट खाता आवश्यक नहीं

- There is no need to open a separate demat account. अलग से डीमैट खाता खोलने की आवश्यकता नहीं है।



- Once an account is opened with the NSEIX-GA, individuals can start investing via the app or website.
NSEIX-GA के साथ खाता खुलने के बाद, निवेशक ऐप या वेबसाइट के माध्यम से निवेश शुरू कर सकते हैं।
- Investors can download NSEIX global access' mobile app with both Android and iOS versions available.
निवेशक NSEIX ग्लोबल एक्सेस का मोबाइल ऐप डाउनलोड कर सकते हैं, जो Android और iOS दोनों पर उपलब्ध है।
- Financial experts say the NSEIX Global Access' initiative would democratise how Indians gain access to international bourses.
वित्तीय विशेषज्ञों का कहना है कि NSEIX Global Access पहल भारतीयों के लिए अंतरराष्ट्रीय बाजारों तक पहुंच को लोकतांत्रिक बनाएगी।
- The NSEIX-GA, being a government-promoted institution, ensures the security of overseas holdings.
सरकार समर्थित संस्था होने के कारण NSEIX-GA विदेशी निवेश की सुरक्षा सुनिश्चित करता है।

More foreign markets अधिक विदेशी बाजार

- Currently, the NSEIX-GA is ready with the offerings of U.S. stocks, especially NYSE and NASDAQ with plans afoot to connect with several other big global bourses.
वर्तमान में NSEIX-GA अमेरिकी शेयरों, विशेषकर NYSE और NASDAQ, के साथ तैयार है और अन्य वैश्विक बाजारों से जुड़ने की योजना बना रहा है।
- It is likely that almost 30 big foreign markets would be included soon.
संभावना है कि जल्द ही लगभग 30 बड़े विदेशी बाजार शामिल किए जाएंगे।
- Plans are on to include Europe, the U.K., Japan, Korea and Australian markets too.
यूरोप, यू.के., जापान, कोरिया और ऑस्ट्रेलिया के बाजारों को भी शामिल करने की योजना है।
- With this, investors would have huge choice to diversify holdings.
इससे निवेशकों को अपने निवेश में विविधता लाने के लिए व्यापक विकल्प मिलेंगे।
- An official said, "For a hassle-free back-end process, we have tied up with many countries as well as foreign brokers.
एक अधिकारी ने कहा, "सुगम बैक-एंड प्रक्रिया के लिए हमने कई देशों और विदेशी ब्रोकरों के साथ साझेदारी की है।
- The entire technology platform and the process is designed in a manner that trades would be executed and settled in real time based on the market timings of the respective countries."
पूरा तकनीकी प्लेटफॉर्म इस तरह डिजाइन किया गया है कि लेनदेन संबंधित देशों के बाजार समय के अनुसार वास्तविक समय में निष्पादित और निपटाए जाएं।"
- For instance, the U.S. equity trades ideally follow **T+1 settlement** viz. trades would be settled one business day after execution.
उदाहरण के लिए, अमेरिकी इक्विटी लेनदेन **T+1 सेटलमेंट** का पालन करते हैं, यानी निष्पादन के एक कार्यदिवस बाद निपटान होता है।
- Therefore, funds or U.S. Securities become fully settled only after this settlement cycle completes."
इसलिए, धन या अमेरिकी प्रतिभूतियां इस सेटलमेंट चक्र के पूरा होने के बाद ही पूरी तरह से निपटती हैं।"
- Investors can remit money from their bank accounts to the NSEIX-GA account in Gandhinagar Gift city and once the funds get reflected in the account, investors get trading limits power to buy shares.
निवेशक अपने बैंक खाते से गांधीनगर GIFT सिटी में NSEIX-GA खाते में धन भेज सकते हैं और राशि जमा होने के बाद उन्हें शेयर खरीदने के लिए ट्रेडिंग लिमिट मिलती है।

Fractional investing आंशिक निवेश

- NSEIX-GA allows fractional investing viz. Indian investors can buy a portion/fraction of a U.S.-listed share rather than purchasing the entire stock.



NSEIX-GA आंशिक निवेश की अनुमति देता है, जिससे भारतीय निवेशक पूरे शेयर के बजाय उसका एक हिस्सा खरीद सकते हैं।

- This can be particularly useful since many leading U.S. stocks trade at high prices. यह विशेष रूप से उपयोगी है क्योंकि कई प्रमुख अमेरिकी शेयरों की कीमत बहुत अधिक होती है।

Tax, RBI scheme कर, RBI योजना

- Capital gains on U.S. equities are not taxed in the U.S under the **India-U.S. tax treaty**. अमेरिकी शेयरों पर पूंजीगत लाभ पर अमेरिका में **भारत-अमेरिका कर संधि** के तहत कर नहीं लगता।
- They are taxable only in India. इन पर कर केवल भारत में लगाया जाता है।
- Dividends attract a **25% U.S. withholding tax** which can be later claimed as a foreign tax credit in India. लाभांश पर **25% अमेरिकी विदहोल्डिंग टैक्स** लगता है जिसे बाद में भारत में विदेशी कर क्रेडिट के रूप में समायोजित किया जा सकता है।
- Also, overseas investments are made under the **Liberalised Remittance Scheme (LRS)** which permits individuals to remit up to **\$2.50 lakh/financial year**. विदेशी निवेश **लिबरलाइज्ड रेमिटेंस स्कीम (LRS)** के तहत किया जाता है, जो प्रति वित्तीय वर्ष **\$2.50 लाख** तक भेजने की अनुमति देता है।
- No Tax Collected at Source (**TCS**) applies on foreign remittances up to ₹10 lakh in a financial year while amounts above this attract TCS. वित्तीय वर्ष में ₹10 लाख तक की विदेशी रेमिटेंस पर **TCS** नहीं लगता, जबकि इससे अधिक पर TCS लागू होता है।
- Investors must also report overseas investments and income in Indian tax returns. निवेशकों को अपने विदेशी निवेश और आय को भारतीय कर रिटर्न में भी रिपोर्ट करना होगा।
- Investors must, however, approach global markets with careful research, awareness of risks and understanding of **cross-border regulations**. हालांकि, निवेशकों को वैश्विक बाजारों में निवेश करते समय सावधानीपूर्वक शोध, जोखिमों की समझ और **सीमापार नियमों** की जानकारी रखनी चाहिए।



Old Mangalore Port likely to get a jetty via Sagarmala



Fresh move: Fishing boats docked at Old Mangalore Port amid crisis of LPG supply affecting fishing operations. PTI

GS II: Economy
A.J. Vinayak

In a bid to provide improved cargo and cruise terminal services to ships from Lakshadweep, the Karnataka Maritime Board (KMB) has proposed to develop at Old Mangalore Port a dedicated jetty with allied infrastructure facilities, under the Sagarmala project.

Lakshadweep islands depend on shipping services from the mainland to meet their day-to-day needs. Given its strategic location, Mangaluru supplies foodgrains and construction material to Lakshadweep.

An attempt to establish a dedicated jetty at Old Mangalore Port was first made a decade ago.

In 2013, during one of his visits to Mangaluru, Lakshadweep Member of Parliament Hamdulla Sayeed had sought the establishment of a dedicated wharf at Old Mangalore Port to cater to the needs of the islands' inhabitants.

A draft proposal submitted by the Lakshadweep administration that year had sought the construction of a 300-metre wharf at Old Mangalore Port.

A revival

A decade on, the project is finally moving ahead.

The proposal for the dedicated jetty was approved under the Union government's Sagarmala project in 2022.

KMB then awarded the work to a Bengaluru company in 2023. KMB's project proposal estimates the cost of construction at ₹65 crore.

This includes a 303.6 metre berth for cargo handling, and 76 metre berth for a passenger terminal. It also envisages dredging up to 7 metre depth to accommodate ships.

Smooth cargo movement

The dedicated berth aims to facilitate faster berthing and smooth cargo movement, apart from ensuring reliable supply of essential goods to the residents of Lakshadweep islands. It aims at improving the overall service quality for Lakshadweep vessels.

However, stakeholders in Mangaluru point to the immediate need to carry out dredging activities in Old Mangalore Port. This issue came up for discussion at a recent environmental public hearing, chaired by Dakshina Kannada Deputy Commissioner H.V. Darshan, in Mangaluru. The hearing was held after Coastal Regulation Zone (CRZ) clearance was received for the construction of the berth.

लक्षद्वीप द्वीपसमूह

आवश्यकताओं को पूरा करने के लिए मुख्यभूमि से शिपिंग सेवाओं पर निर्भर करता है।

- Given its strategic location, Mangaluru supplies foodgrains and construction material to Lakshadweep. अपने रणनीतिक स्थान के कारण, मैंगलुरु लक्षद्वीप को खाद्यान्न और निर्माण सामग्री की आपूर्ति करता है।
- An attempt to establish a dedicated jetty at Old Mangalore Port was first made a decade ago. ओल्ड मैंगलोर पोर्ट पर एक समर्पित जेट्टी स्थापित करने का प्रयास पहली बार एक दशक पहले किया गया था।
- In 2013, during one of his visits to Mangaluru, Lakshadweep Member of Parliament Hamdulla Sayeed had sought the establishment of a dedicated wharf at Old Mangalore Port to cater to the needs of the islands' inhabitants. 2013 में, मैंगलुरु की अपनी एक यात्रा के दौरान, लक्षद्वीप के सांसद हमदुल्ला सईद ने द्वीपवासियों की आवश्यकताओं को पूरा करने के लिए ओल्ड मैंगलोर पोर्ट पर एक समर्पित घाट (व्हार्फ) स्थापित करने की मांग की थी।
- A draft proposal submitted by the Lakshadweep administration that year had sought the construction of a 300-metre wharf at Old Mangalore Port.

Priority for dredging

Old Mangalore Port is located in the Bunder area of Mangaluru town. Apart from serving a range of needs for the Lakshadweep islands over several decades, Bunder area has also been a mainstay for the region's fishing sector. Old Mangalore Port is a major fish landing centre. At the public hearing, Abdul Lateef, who represented Bunder in the city corporation council, said lack of dredging has impacted fishing boats. He called for immediate dredging in the Old Mangalore Port area to enable overall development.

Agreeing with this, A.K. Usman, a Bunder resident, said the number of Lakshadweep-bound vessels calling at Old Mangalore Port reduced significantly in recent years due to the absence of dredging.

He sought top priority for dredging at Old Mangalore Port before commencing work on the dedicated berth project.

G.G. Mohandas Prabhu, an animal feed wholesaler at Bunder, told *businessline* that his trade with Lakshadweep has plummeted in the last two years due to the drop in ship arrivals.

He has many clients in Lakshadweep, but they currently prefer to source materials from Bypeeru in Kerala, he rued.

He hoped that the proposed project, could help put Mangaluru's trade and commerce with Lakshadweep back on track. At the public hearing, Chethan Bengre, a representative of trawl boat owners, wanted to know why the project was delayed despite being approved by the Central government three years ago. Darshan responded that the project would gain momentum soon.

Tourism potential

KMB expects the dedicated berth at Old Mangalore Port to save time and money for Lakshadweep vessels through hassle-free cargo movement, and support allied industries.

The board also foresees the berth giving a fillip to the region's tourism sector with the development of luxury water-based attractions.

(The writer is with *The Hindu businessline*)

23Mar. Old Mangalore Port likely to get a jetty via Sagarmala सागरमाला के माध्यम से ओल्ड मैंगलोर पोर्ट को जेट्टी मिलने की संभावना

In a bid to provide improved cargo and cruise terminal services to ships from Lakshadweep, the Karnataka Maritime Board (KMB) has proposed to develop at Old Mangalore Port a dedicated jetty with allied infrastructure facilities, under the Sagarmala project.

लक्षद्वीप से आने वाले जहाजों को बेहतर कार्गो और कूज टर्मिनल सेवाएं प्रदान करने के लिए, कर्नाटक मैरीटाइम बोर्ड (KMB) ने सागरमाला परियोजना के तहत ओल्ड मैंगलोर पोर्ट पर सहायक अवसंरचना सुविधाओं के साथ एक समर्पित जेट्टी विकसित करने का प्रस्ताव रखा है।

Lakshadweep islands depend on shipping services from the mainland to meet their day-to-day needs. अपनी दैनिक



उस वर्ष लक्षद्वीप प्रशासन द्वारा प्रस्तुत एक प्रारूप प्रस्ताव में ओल्ड मैंगलोर पोर्ट पर **300 मीटर लंबा घाट** बनाने की मांग की गई थी।

A revival पुनरुत्थान

- A decade on, the project is finally moving ahead.
एक दशक बाद, यह परियोजना अंततः आगे बढ़ रही है।
- The proposal for the dedicated jetty was approved under the Union government's Sagarmala project in 2022.
समर्पित जेट्टी का प्रस्ताव 2022 में केंद्र सरकार की **सागरमाला परियोजना** के तहत स्वीकृत किया गया था।
- KMB then awarded the work to a Bengaluru company in 2023.
इसके बाद KMB ने 2023 में इस कार्य को एक **बेंगलुरु की कंपनी** को सौंप दिया।
- KMB's project proposal estimates the cost of construction at ₹65 crore.
KMB के परियोजना प्रस्ताव के अनुसार निर्माण लागत लगभग **₹65 करोड़** आंकी गई है।
- This includes a 303.6 metre berth for cargo handling, and 76 metre berth for a passenger terminal.
इसमें **303.6 मीटर का कार्गो बर्थ** और **76 मीटर का यात्री टर्मिनल बर्थ** शामिल है।
- It also envisages dredging up to 7 metre depth to accommodate ships.
इसमें जहाजों को समायोजित करने के लिए **7 मीटर गहराई तक ड्रेजिंग** की भी परिकल्पना की गई है।

Smooth cargo movement सुचारु कार्गो आवागमन

- The dedicated berth aims to facilitate faster berthing and smooth cargo movement, apart from ensuring reliable supply of essential goods to the residents of Lakshadweep islands.
यह समर्पित बर्थ **तेजी से बर्थिंग** और **सुचारु कार्गो आवागमन** सुनिश्चित करने के साथ-साथ लक्षद्वीप के निवासियों को आवश्यक वस्तुओं की **विश्वसनीय आपूर्ति** सुनिश्चित करने का लक्ष्य रखता है।
- It aims at improving the overall service quality for Lakshadweep vessels.
इसका उद्देश्य लक्षद्वीप के जहाजों के लिए **समग्र सेवा गुणवत्ता** में सुधार करना है।
- However, stakeholders in Mangaluru point to the immediate need to carry out dredging activities in Old Mangalore Port.
हालांकि, मैंगलुरु के हितधारक ओल्ड मैंगलोर पोर्ट में **तत्काल ड्रेजिंग कार्य** की आवश्यकता पर जोर देते हैं।
- This issue came up for discussion at a recent environmental public hearing, chaired by Dakshina Kannada Deputy Commissioner H.V. Darshan, in Mangaluru.
यह मुद्दा हाल ही में मैंगलुरु में आयोजित एक **पर्यावरणीय जनसुनवाई** में उठा, जिसकी अध्यक्षता दक्षिण कन्नड़ के उपायुक्त **एच.वी. दर्शन** ने की।
- The hearing was held after Coastal Regulation Zone (CRZ) clearance was received for the construction of the berth.
यह जनसुनवाई **तटीय विनियमन क्षेत्र (CRZ)** की स्वीकृति मिलने के बाद आयोजित की गई थी।

Priority for dredging ड्रेजिंग को प्राथमिकता

- Old Mangalore Port is located in the Bunder area of Mangaluru town.
ओल्ड मैंगलोर पोर्ट मैंगलुरु शहर के **बंदर क्षेत्र** में स्थित है।
- Apart from serving a range of needs for the Lakshadweep islands over several decades, Bunder area has also been a mainstay for the region's fishing sector.
कई दशकों से लक्षद्वीप की विभिन्न आवश्यकताओं को पूरा करने के अलावा, बंदर क्षेत्र **मछली पकड़ने के क्षेत्र** का भी मुख्य आधार रहा है।
- Old Mangalore Port is a major fish landing centre.
ओल्ड मैंगलोर पोर्ट एक प्रमुख **मछली उतारने का केंद्र** है।
- At the public hearing, Abdul Lateef, who represented Bunder in the city corporation council, said lack of dredging has impacted fishing boats.



जनसुनवाई में, नगर निगम परिषद में बंदर का प्रतिनिधित्व करने वाले **अब्दुल लतीफ** ने कहा कि ड्रेजिंग की कमी ने **मछली पकड़ने वाली नौकाओं** को प्रभावित किया है।

- He called for immediate dredging in the Old Mangalore Port area to enable overall development.
उन्होंने समग्र विकास के लिए ओल्ड मैंगलोर पोर्ट क्षेत्र में **तत्काल ड्रेजिंग** की मांग की।
- Agreeing with this, A.K. Usman, a Bunder resident, said the number of Lakshadweep-bound vessels calling at Old Mangalore Port reduced significantly in recent years due to the absence of dredging.
इससे सहमत होते हुए, बंदर निवासी **ए.के. उस्मान** ने कहा कि ड्रेजिंग की कमी के कारण हाल के वर्षों में ओल्ड मैंगलोर पोर्ट पर आने वाले लक्षद्वीप जाने वाले जहाजों की संख्या **काफी कम हो गई है**।
- He sought top priority for dredging at Old Mangalore Port before commencing work on the dedicated berth project.
उन्होंने समर्पित बर्थ परियोजना शुरू करने से पहले ओल्ड मैंगलोर पोर्ट पर **ड्रेजिंग को सर्वोच्च प्राथमिकता** देने की मांग की।
- G.G. Mohandas Prabhu, an animal feed wholesaler at Bunder, told businessline that his trade with Lakshadweep has plummeted in the last two years due to the drop in ship arrivals.
बंदर में पशु आहार के थोक व्यापारी **जी.जी. मोहनदास प्रभु** ने बताया कि जहाजों की संख्या में कमी के कारण पिछले दो वर्षों में लक्षद्वीप के साथ उनका व्यापार **काफी गिर गया है**।
- He has many clients in Lakshadweep, but they currently prefer to source materials from Bepore in Kerala, he rued.
उन्होंने कहा कि उनके लक्षद्वीप में कई ग्राहक हैं, लेकिन वे अब सामग्री के लिए **केरल के बेपोर** को प्राथमिकता देते हैं।
- He hoped that the proposed project, could help put Mangaluru's trade and commerce with Lakshadweep back on track.
उन्होंने आशा व्यक्त की कि प्रस्तावित परियोजना मैंगलुरु के लक्षद्वीप के साथ **व्यापार और वाणिज्य** को फिर से पटरी पर ला सकती है।
- At the public hearing, Chethan Bengre, a representative of trawl boat owners, wanted to know why the project was delayed despite being approved by the Central government three years ago.
जनसुनवाई में, ट्रॉल बोट मालिकों के प्रतिनिधि **चेतन बेंग्रे** ने पूछा कि केंद्र सरकार द्वारा तीन साल पहले मंजूरी मिलने के बावजूद परियोजना में देरी क्यों हुई।
- Darshan responded that the project would gain momentum soon.
दर्शन ने उत्तर दिया कि परियोजना जल्द ही **गति पकड़ेगी**।

Tourism potential पर्यटन की संभावनाएं

- KMB expects the dedicated berth at Old Mangalore Port to save time and money for Lakshadweep vessels through hassle-free cargo movement, and support allied industries.
KMB को उम्मीद है कि ओल्ड मैंगलोर पोर्ट पर समर्पित बर्थ **बिना बाधा के कार्गो आवागमन** के माध्यम से लक्षद्वीप के जहाजों का समय और पैसा बचाएगा तथा संबंधित उद्योगों को समर्थन देगा।
- The board also foresees the berth giving a fillip to the region's tourism sector with the development of luxury water-based attractions.
बोर्ड को यह भी उम्मीद है कि यह बर्थ **लक्ज़री जल-आधारित आकर्षणों** के विकास के साथ क्षेत्र के **पर्यटन क्षेत्र** को बढ़ावा देगा।



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23Mar Auction of 19 blocks of critical minerals set to begin today
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Auction of 19 blocks of critical minerals set to begin today

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Press Trust of India
NEW DELHI

The government will launch the seventh tranche of auctions for critical and strategic minerals on Monday, placing 19 blocks on sale across several States.

The development assumes significance as the government aims to bolster India's self-reliance in clean energy, advanced technologies, fertilizers, and strategic sectors amid global supply chain disruptions.

So far, the government has conducted six rounds of auctions, with 46 critical and strategic mineral blocks already sold.

"Building on this momentum, the seventh tranche will offer 19 blocks across several States under mining lease and composite licence," the Union Ministry of Mines said in a statement.

Critical minerals are important for the country's economic development and mineral security.

The global transition towards clean energy and advanced technologies has significantly increased the demand for minerals, including lithium, graphite,

including lithium, graphite, rare earth elements, tungsten, vanadium, titanium, and other rare metals.



Critical minerals are crucial for India's economic development and mineral security.

rare earth elements, tungsten, vanadium, titanium, and other rare metals.

Their limited availability and geographical concentration pose challenges to resilient supply chains worldwide.

"Union Minister of Coal and Mines G. Kishan Reddy, along with the Minister of State for Coal and Mines Satish Chandra Dubey, will launch the 7th tranche of auction of critical and strategic mineral blocks on March 23," the Ministry said.

In a separate statement, the Ministry said that it would organise the National District Mineral Foundation Summit 2026 on Monday and Tuesday here.

23Mar. Auction of 19 blocks of critical minerals set to begin today

महत्वपूर्ण खनिजों के 19 ब्लॉकों की नीलामी आज से शुरू

- The government will launch the seventh tranche of auctions for critical and strategic minerals on Monday, placing 19 blocks on sale across several States.

सरकार सोमवार को महत्वपूर्ण और रणनीतिक खनिजों के लिए सातवें चरण की नीलामी शुरू करेगी, जिसमें कई राज्यों में 19 ब्लॉकों को बिक्री के लिए रखा जाएगा।

- The development assumes significance as the government aims to bolster India's self-reliance in clean energy, advanced technologies, fertilizers, and strategic sectors amid global supply chain disruptions.

यह विकास महत्वपूर्ण है क्योंकि सरकार वैश्विक आपूर्ति श्रृंखला में व्यवधानों के बीच स्वच्छ ऊर्जा, उन्नत प्रौद्योगिकियों, उर्वरकों और रणनीतिक क्षेत्रों में भारत की आत्मनिर्भरता को मजबूत करना चाहती है।

- So far, the government has conducted six rounds of auctions, with 46 critical and strategic mineral blocks already sold.

अब तक, सरकार छह दौर की नीलामी कर चुकी है, जिसमें 46 महत्वपूर्ण और रणनीतिक खनिज ब्लॉक पहले ही बेचे जा चुके हैं।

- "Building on this momentum, the seventh tranche will offer 19 blocks across several States under mining lease and composite licence," the Union Ministry of Mines said in a statement. "इस गति को आगे बढ़ाते हुए, सातवां चरण कई राज्यों में खनन पट्टा और समेकित लाइसेंस के तहत 19 ब्लॉकों की पेशकश करेगा," केंद्रीय खान मंत्रालय ने एक बयान में कहा।

- Critical minerals are important for the country's economic development and mineral security.

महत्वपूर्ण खनिज देश के आर्थिक विकास और खनिज सुरक्षा के लिए महत्वपूर्ण हैं।

- The global transition towards clean energy and advanced technologies has significantly increased the demand for minerals,



स्वच्छ ऊर्जा और उन्नत प्रौद्योगिकियों की ओर वैश्विक परिवर्तन ने लिथियम, ग्रेफाइट, दुर्लभ पृथ्वी तत्व, टंगस्टन, वैनाडियम, टाइटेनियम और अन्य दुर्लभ धातुओं सहित खनिजों की मांग को काफी बढ़ा दिया है।

- Their limited availability and **geographical concentration** pose challenges to **resilient supply chains** worldwide.
इनकी सीमित उपलब्धता और **भौगोलिक संकेंद्रण** विश्वभर में लचीली आपूर्ति श्रृंखलाओं के लिए चुनौती पैदा करते हैं।
- “Union Minister of Coal and Mines **G. Kishan Reddy**, along with the Minister of State for Coal and Mines **Satish Chandra Dubey**, will launch the 7th tranche of auction of critical and strategic mineral blocks on March 23,” the Ministry said.
“कोयला और खान मंत्री **जी. किशन रेड्डी**, राज्य मंत्री **सतीश चंद्र दुबे** के साथ, 23 मार्च को महत्वपूर्ण और रणनीतिक खनिज ब्लॉकों की 7वीं नीलामी शुरू करेंगे,” मंत्रालय ने कहा।
- In a separate statement, the Ministry said that it would organise the **National District Mineral Foundation Summit 2026** on Monday and Tuesday here.
एक अलग बयान में मंत्रालय ने कहा कि वह सोमवार और मंगलवार को यहां **नेशनल डिस्ट्रिक्ट मिनरल फाउंडेशन समिट 2026** का आयोजन करेगा।

India must use the **AYUSH** opportunity

GS III: S&T

MGB

The 2026-27 Union Budget and India's new Free Trade Agreement (FTA) with the European Union (EU) signals Ayurveda's ambitious leap into the global mainstream. The Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homoeopathy (AYUSH) Ministry's budget has nearly doubled in the past five years, reaching ₹4,408 crore this year. Further, Finance Minister Nirmala Sitharaman has announced three new All-India Institutes of Ayurveda, aiming to set top standards for traditional medicine, similar to how AIIMS leads modern medicine in India. These institutes will not just treat patients, they will teach and conduct advanced research as well. The Budget also turbo-charges the National AYUSH Mission, raising its funding by 66% to modernise dispensaries, establish AYUSH clinics inside government hospitals, and upgrade drug-testing laboratories. Together, these measures reflect an effort to bring traditional medicine into the mainstream health ecosystem rather than treat it as an alternative silo.

Global reach

If the Budget gives Ayurveda depth within India, the India-EU FTA gives it global reach. In EU countries that don't specifically regulate traditional medicine, the trade deal allows Indian AYUSH practitioners to provide their services using qualifications obtained in India. It guarantees that Indian companies can open Ayurvedic clinics across Europe without the fear of sudden policy reversal. It also sets up a system where Indian safety certifications could eventually be accepted in Europe, which means that products approved in India might not need extra testing.

However, this policy is also a moment which will test whether the country can merge faith in heritage with the discipline of evidence. For this is not just an economic expansion; it is a



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For Ayurveda and other AYUSH systems to enter the global mainstream credibly, they must submit to rigorous, independent, and transparent scientific evaluation

structural repositioning of Ayurveda within India's health system and the global market. When the alternative moves from local clinics to international markets, it enters regulatory and scientific arenas that demand proof. These treatments, understood as Traditional, Complementary, and Alternative Medicine (TCAM), will be evaluated within stringent regulatory and vigilance frameworks. This is precisely the moment when regulatory harmonisation becomes essential. If AYUSH products are to circulate in EU markets, they must meet international standards of safety, manufacturing quality, and claims regulation. Global ambition demands scientific accountability.

Need for scientific evidence

If claims outpace evidence, India risks legal disputes, reputational damage, and the reinforcement of stereotypes about 'unscientific traditionalism.' For Ayurveda and other AYUSH systems to enter the global mainstream credibly, they must submit to rigorous, independent, and transparent scientific evaluation conducted by third-party research organisations. At present, many assessments are funded, designed, or overseen by the same Ministry that promotes AYUSH, creating a structural conflict of interest. Global credibility requires independently funded clinical trials, transparent methodologies, peer-reviewed publications, and the willingness to publish negative findings.

A common defensive move in debates around traditional medicine or cultural knowledge is to frame scientific scrutiny as colonial bias or Western epistemic dominance. Certainly, the history of colonial medicine in India involved the marginalisation and delegitimisation of local systems of healing. While that history should not be forgotten, it does not follow that all demands for empirical evaluation are acts of epistemic domination. Demanding evidence is not cultural betrayal, and

scientific evaluation does not diminish tradition.

Coexisting systems

Furthermore, TCAM systems endure not simply because of cultural loyalty, but because they carry different imaginations of the body, health, and illness. To engage with TCAM seriously is to recognise that they are not merely collections of remedies but coherent epistemologies. Systems such as Ayurveda are organised around ontological commitments about what the body is, how it is constituted, and how disorder emerges. The body in Ayurveda, for instance, is not a collection of discrete organs but an interdependent system embedded in environment, diet, season, and social life. Health is a state of equilibrium across physiological, psychological, and ecological registers, and illness is a disturbance in patterned relations rather than a discrete lesion.

This stands in contrast to modern medicine, which has historically been grounded in anatomical localisation. Biomedicine excels at identifying specific causal mechanisms and intervening with precision at targeted sites. TCAM systems, by contrast, often operate through systemic logics. But the question is not biomedicine versus TCAM. The conceptual frames in TCAM do not need to replace biomedicine to be valuable. They can function as counterpoints that expand questions about what it means to be healthy. They offer alternative models of embodiment – models in which the body is ecological and dynamic.

Thus, the goal is not substitution but dialogue. In that dialogue lies the possibility of strengthening scientific inquiry across the spectrum of care. Therefore, public investment should fund intellectual openness and scientific freedom. Global ambition will be sustained not by assertion, but by evidence, transparency and the courage to be rigorously examined.



23Mar. India must use the AYUSH opportunity भारत को AYUSH अवसर का उपयोग करना चाहिए

- Ayurveda Expansion through Budget and FTA
बजट और FTA के माध्यम से आयुर्वेद का विस्तार
- The **2026-27 Union Budget** and India's new **Free Trade Agreement (FTA)** with the **European Union (EU)** signals **Ayurveda's ambitious leap into the global mainstream**.
2026-27 का केंद्रीय बजट और भारत का **यूरोपीय संघ (EU)** के साथ नया **FTA** आयुर्वेद के **वैश्विक मुख्यधारा में प्रवेश** का संकेत देता है।
- The **AYUSH Ministry's budget** has nearly doubled in the past five years, reaching **₹4,408 crore** this year.
AYUSH मंत्रालय का बजट पिछले **5 वर्षों** में लगभग दोगुना होकर इस वर्ष **₹4,408 करोड़** हो गया है।
- Further, **Finance Minister Nirmala Sitharaman** has announced **three new All-India Institutes of Ayurveda**, aiming to set top standards for **traditional medicine**, similar to how **AIIMS** leads modern medicine in India.
वित्त मंत्री निर्मला सीतारमण ने **तीन नए अखिल भारतीय आयुर्वेद संस्थान** स्थापित करने की घोषणा की है, जो **पारंपरिक चिकित्सा** के उच्च मानक स्थापित करेंगे, जैसे **AIIMS** आधुनिक चिकित्सा में करता है।
- These institutes will not just treat patients, they will **teach and conduct advanced research** as well.
ये संस्थान केवल इलाज ही नहीं करेंगे, बल्कि **शिक्षा और उन्नत शोध** भी करेंगे।
- The Budget also **turbo-charges the National AYUSH Mission**, raising its funding by **66%** to modernise **dispensaries**, establish **AYUSH clinics inside government hospitals**, and upgrade **drug-testing laboratories**.
बजट ने **राष्ट्रीय आयुष मिशन** को भी गति दी है, इसकी फंडिंग **66%** बढ़ाकर **डिस्पेंसरी आधुनिकीकरण**, **सरकारी अस्पतालों में AYUSH क्लिनिक**, और **दवा परीक्षण प्रयोगशालाओं के उन्नयन** के लिए।
- Together, these measures reflect an effort to bring **traditional medicine into the mainstream health ecosystem** rather than treat it as an alternative silo.
ये सभी उपाय **पारंपरिक चिकित्सा को मुख्य स्वास्थ्य प्रणाली में शामिल करने** का प्रयास दर्शाते हैं, न कि इसे अलग विकल्प के रूप में रखने का।

Global reach वैश्विक विस्तार

- If the Budget gives Ayurveda **depth within India**, the **India-EU FTA** gives it **global reach**.
यदि बजट आयुर्वेद को भारत में **गहराई** देता है, तो **भारत-EU FTA** उसे **वैश्विक विस्तार** देता है।
- In **EU countries** that don't specifically regulate traditional medicine, the trade deal allows **Indian AYUSH practitioners** to provide their services using **qualifications obtained in India**.
उन **EU देशों** में जहां पारंपरिक चिकित्सा का विशेष नियमन नहीं है, यह समझौता **भारतीय AYUSH चिकित्सकों** को अपनी **भारतीय योग्यता** के आधार पर सेवाएं देने की अनुमति देता है।
- It guarantees that **Indian companies** can open **Ayurvedic clinics across Europe** without the fear of sudden **policy reversal**.
यह सुनिश्चित करता है कि **भारतीय कंपनियां** पूरे **यूरोप में आयुर्वेदिक क्लिनिक** खोल सकें बिना अचानक **नीतिगत बदलाव** के डर के।
- It also sets up a system where **Indian safety certifications** could eventually be accepted in Europe, which means that products approved in India might not need **extra testing**.
यह एक ऐसी व्यवस्था बनाता है जहां **भारतीय सुरक्षा प्रमाणन** को यूरोप में स्वीकार किया जा सकता है, जिससे भारत में स्वीकृत उत्पादों को अतिरिक्त **परीक्षण** की आवश्यकता नहीं होगी।
- However, this policy is also a moment which will test whether the country can merge **faith in heritage** with the discipline of **evidence**.
हालांकि, यह नीति इस बात की परीक्षा भी है कि क्या देश **परंपरा में विश्वास** और **वैज्ञानिक प्रमाण** को साथ ला सकता है।
- For this is not just an **economic expansion**; it is a **structural repositioning of Ayurveda** within India's health system and the global market.



यह केवल **आर्थिक विस्तार** नहीं है, बल्कि भारत की स्वास्थ्य प्रणाली और वैश्विक बाजार में आयुर्वेद की **संरचनात्मक पुनर्स्थापना** है।

- When the alternative moves from **local clinics** to **international markets**, it enters **regulatory and scientific arenas** that demand proof.
जब यह स्थानीय क्लिनिक से **अंतरराष्ट्रीय बाजार** में जाता है, तो यह **नियामक और वैज्ञानिक क्षेत्रों** में प्रवेश करता है जहां प्रमाण आवश्यक होता है।
- These treatments, understood as **Traditional, Complementary, and Alternative Medicine (TCAM)**, will be evaluated within **stringent regulatory and vigilance frameworks**.
इन उपचारों को **TCAM (पारंपरिक, पूरक और वैकल्पिक चिकित्सा)** के रूप में कड़े **नियामक और निगरानी ढांचे** में परखा जाएगा।
- This is precisely the moment when **regulatory harmonisation** becomes essential.
यही वह समय है जब **नियामक सामंजस्य (harmonisation)** आवश्यक हो जाता है।
- If **AYUSH products** are to circulate in **EU markets**, they must meet **international standards of safety, manufacturing quality, and claims regulation**.
यदि **AYUSH उत्पादों** को **EU बाजार** में जाना है, तो उन्हें **सुरक्षा, निर्माण गुणवत्ता और दावों के अंतरराष्ट्रीय मानकों** को पूरा करना होगा।
- **Global ambition** demands **scientific accountability**.
वैश्विक महत्वाकांक्षा के लिए **वैज्ञानिक जवाबदेही** आवश्यक है।

Need for scientific evidence वैज्ञानिक प्रमाण की आवश्यकता

- If claims outpace **evidence**, India risks **legal disputes, reputational damage**, and the reinforcement of stereotypes about **'unscientific traditionalism.'**
यदि दावे **प्रमाण** से आगे बढ़ते हैं, तो भारत को **कानूनी विवाद, प्रतिष्ठा हानि** और **'अवैज्ञानिक परंपरावाद'** की छवि का जोखिम होगा।
- For **Ayurveda and other AYUSH systems** to enter the global mainstream credibly, they must submit to **rigorous, independent, and transparent scientific evaluation** conducted by **third-party research organisations**.
आयुर्वेद और अन्य AYUSH प्रणालियों को वैश्विक स्तर पर स्वीकार्य बनने के लिए **कठोर, स्वतंत्र और पारदर्शी वैज्ञानिक मूल्यांकन** से गुजरना होगा, जो **तृतीय पक्ष संस्थाओं** द्वारा किया जाए।
- At present, many assessments are funded, designed, or overseen by the same **Ministry that promotes AYUSH**, creating a **structural conflict of interest**.
वर्तमान में कई मूल्यांकन उसी **मंत्रालय** द्वारा किए जाते हैं जो AYUSH को बढ़ावा देता है, जिससे **हितों का टकराव** पैदा होता है।
- Global credibility requires **independently funded clinical trials, transparent methodologies, peer-reviewed publications**, and the willingness to publish **negative findings**.
वैश्विक विश्वसनीयता के लिए **स्वतंत्र रूप से वित्तपोषित क्लिनिकल ट्रायल, पारदर्शी विधियां, पीयर-रिव्यू प्रकाशन, और नकारात्मक परिणामों** को प्रकाशित करने की इच्छा आवश्यक है।
- A common defensive move in debates around traditional medicine or cultural knowledge is to frame **scientific scrutiny** as **colonial bias** or **Western epistemic dominance**.
पारंपरिक चिकित्सा पर बहस में अक्सर **वैज्ञानिक जांच** को **औपनिवेशिक पूर्वाग्रह** या **पश्चिमी ज्ञान वर्चस्व** के रूप में प्रस्तुत किया जाता है।
- Certainly, the history of **colonial medicine in India** involved the marginalisation and delegitimisation of **local systems of healing**.
निश्चित रूप से, भारत में **औपनिवेशिक चिकित्सा इतिहास** में **स्थानीय चिकित्सा प्रणालियों** को हाशिये पर डाला गया।
- While that history should not be forgotten, it does not follow that all demands for **empirical evaluation** are acts of **epistemic domination**.
हालांकि इस इतिहास को भूलना नहीं चाहिए, लेकिन हर **वैज्ञानिक परीक्षण** को **ज्ञान वर्चस्व** नहीं कहा जा सकता।
- Demanding **evidence** is not **cultural betrayal**, and scientific evaluation does not diminish **tradition**.
प्रमाण की मांग सांस्कृतिक विश्वासघात नहीं है, और वैज्ञानिक मूल्यांकन **परंपरा** को कम नहीं करता।



Coexisting systems

सह-अस्तित्व वाली प्रणालियाँ

- Furthermore, **TCAM systems** endure not simply because of **cultural loyalty**, but because they carry different **imaginings of the body, health, and illness**.
इसके अलावा, **TCAM प्रणालियाँ** केवल **सांस्कृतिक निष्ठा** के कारण नहीं बल्कि शरीर, स्वास्थ्य और रोग के अलग **दृष्टिकोण** के कारण बनी रहती हैं।
- To engage with TCAM seriously is to recognise that they are not merely **collections of remedies** but **coherent epistemologies**.
TCAM को समझने का मतलब यह मानना है कि ये केवल **उपचारों का संग्रह** नहीं बल्कि **सुसंगत ज्ञान प्रणाली** हैं।
- Systems such as **Ayurveda** are organised around **ontological commitments** about what the body is, how it is constituted, and how disorder emerges.
आयुर्वेद जैसी प्रणालियाँ शरीर की प्रकृति, संरचना और रोग की उत्पत्ति के बारे में **दार्शनिक सिद्धांतों** पर आधारित हैं।
- The body in Ayurveda is not a collection of **discrete organs** but an **interdependent system** embedded in **environment, diet, season, and social life**.
आयुर्वेद में शरीर अलग-अलग अंगों का समूह नहीं बल्कि **पर्यावरण, आहार, मौसम और समाज** से जुड़ा **परस्पर निर्भर तंत्र** है।
- Health is a state of **equilibrium** across physiological, psychological, and ecological registers, and illness is a **disturbance in patterned relations** rather than a discrete lesion.
स्वास्थ्य **संतुलन की स्थिति** है और रोग **संबंधों के असंतुलन** का परिणाम है, न कि केवल किसी एक अंग की समस्या।
- This stands in contrast to **modern medicine**, which has historically been grounded in **anatomical localisation**.
यह **आधुनिक चिकित्सा** से अलग है, जो मुख्यतः **अंग-विशिष्ट दृष्टिकोण** पर आधारित है।
- **Biomedicine** excels at identifying **specific causal mechanisms** and intervening with precision at **targeted sites**.
बायोमेडिसिन विशिष्ट कारणों की पहचान और लक्षित उपचार में उत्कृष्ट है।
- **TCAM systems**, by contrast, often operate through **systemic logics**.
इसके विपरीत, **TCAM प्रणालियाँ** व्यापक **सिस्टम आधारित दृष्टिकोण** पर काम करती हैं।
- But the question is not **biomedicine versus TCAM**.
लेकिन प्रश्न **बायोमेडिसिन बनाम TCAM** नहीं है।
- The conceptual frames in TCAM do not need to replace **biomedicine** to be valuable.
TCAM को मूल्यवान होने के लिए **बायोमेडिसिन** को प्रतिस्थापित करने की आवश्यकता नहीं है।
- They can function as **counterpoints** that expand questions about what it means to be **healthy**.
वे **वैकल्पिक दृष्टिकोण** के रूप में कार्य कर सकते हैं जो **स्वास्थ्य की परिभाषा** को व्यापक बनाते हैं।
- They offer alternative models of **embodiment** — models in which the body is **ecological and dynamic**.
वे शरीर को **पर्यावरणीय और गतिशील प्रणाली** के रूप में देखने का विकल्प प्रदान करते हैं।
- Thus, the goal is not **substitution but dialogue**.
इसलिए लक्ष्य **प्रतिस्थापन नहीं बल्कि संवाद** है।
- In that dialogue lies the possibility of strengthening **scientific inquiry** across the spectrum of care.
इस संवाद में **वैज्ञानिक अनुसंधान** को मजबूत करने की संभावना है।
- Therefore, public investment should fund **intellectual openness** and **scientific freedom**.
इसलिए सार्वजनिक निवेश को **बौद्धिक खुलापन** और **वैज्ञानिक स्वतंत्रता** को बढ़ावा देना चाहिए।
- Global ambition will be sustained not by **assertion**, but by **evidence, transparency**, and the courage to be **rigorously examined**.
वैश्विक सफलता केवल दावों से नहीं बल्कि **प्रमाण, पारदर्शिता** और **कठोर परीक्षण की स्वीकार्यता** से प्राप्त होगी।



GS Paper III: Environment,

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How agriPV can turn India's farms into dual-purpose powerhouses
एग्रीपीवी कैसे भारत के खेतों को दोहरे उद्देश्य वाले पावरहाउस में बदल सकता है

How agriPV can turn India's farms into dual-purpose powerhouses

India's ambitious energy transition goals – to have 300 GW of installed solar capacity by 2030 and achieve net-zero emissions by 2070 – put land at a premium, and utility-scale solar projects require large tracts of land while agriculture is already under pressure from competing land use. **agri-photovoltaics can ameliorate this conflict**

GS III: Environment
Shantanu Roy

In the 2026-27 Budget, the outlay for the PM-KUSUM scheme nearly doubled to ₹5,000 crore, signalling the government's renewed emphasis on increasing solar power production centred on India's farmers. Specifically, the scheme aims to provide energy and water security to farmers, enhance incomes, and decarbonise the farm sector through decentralised solar pumps and power plants.

But as the scheme evolves, India also faces a question: how can solar be expanded on agricultural land without compromising food security?

Agri-photovoltaics (agriPV) is emerging as a promising answer to this question. AgriPV integrates solar systems with farming, allowing farmers to generate electricity and cultivate crops on the same parcel of land. The panels are mounted at a suitable height to allow farm operations below, and are spaced between crop rows or integrated into greenhouses to minimise conflict between agricultural production and energy generation.

Selecting right crops

The designs vary by crop and region. Elevated systems have panels mounted a few metres above ground to allow crops to grow below. Row-based systems have panels positioned between crop rows to minimise shading. Vertical systems use upright panels that can capture sunlight from both sides. Greenhouse-integrated systems feature solar panels on roofs or walls to maintain a controlled growing environment. The suitability of a design also depends on the local climate, irrigation practices, and the crop. So systematic and region-specific planning is essential to optimise both agricultural and energy yields.

Careful crop selection is also key to the success of agriPV systems because the amount of sunlight available changes based on how solar panels are placed. Shade-tolerant crops generally perform well in partially shaded areas under solar panels while crops that need more sunlight grow better in the spaces between rows of panels.

Crop selection also varies across India's diverse agro-climatic regions. For instance, suitable crop options include tomato, onion, garlic, turmeric, ginger, leafy vegetables, and tuls in Madhya Pradesh, and ragi, jowar, grapes, tomato, potato, chillies, banana, and brinjal in Karnataka and Maharashtra – all of which can perform well in agriPV systems.

Beyond technical considerations such as crop selection, the scalability of agriPV hinges on developing viable business models. Farmers can own and operate agriPV systems, use a portion of the electricity generated, and sell the surplus. With the help of Farmer Producer Organisations or cooperatives, multiple



Sheep graze under rows of solar panels on a farm. Representative image. PUBLIC DOMAIN

farmers can also aggregate land and collectively develop projects, enhancing their bargaining power and access to finance. Private developers could also lease farmland and share revenues or pay fixed rents to farmers. Alternatively, State governments or public agencies could develop agriPV systems to support local energy needs.

Why agriPV matters for India
India's ambitious energy transition goals – to have 300 GW of installed solar capacity by 2030 and achieve net-zero emissions by 2070 – put land at a premium. Utility-scale solar projects require large tracts of land while agriculture is already under pressure from competing land uses.

AgriPV can ameliorate this conflict. With more than half of India's land under agriculture, dual-use deployment is valuable. And in an economy that depends heavily on agriculture, the technology's appeal lies in both farmers diversifying their incomes and producing clean energy. Farmers can earn from selling electricity, leasing land or sharing revenues while continuing to cultivate.

AgriPV also delivers environmental co-benefits. In certain agro-climatic conditions, partial shading can reduce evapotranspiration – the combined loss of water to the atmosphere through evaporation and plant transpiration – and soils retain more moisture, thus enhancing the overall water-use efficiency. Solar panels can also protect crops against extreme heat, rainfall, and hail. By lowering the farm's need for diesel, such systems can also support

AgriPV's large-scale adoption in India faces economic, regulatory, and institutional barriers, which include high capital costs, lack of regulatory clarity and lack of design benchmarks

rural entrepreneurship and local economic growth. AgriPV can power ancillary services as well, including cold storage, food processing units, and chaff cutters, strengthening rural value chains. However, this requires clear governance frameworks, tariffs, and accessible finance.

Status in India

There are around 50 pilot agriPV installations nationwide, with various panel-crop combinations and economic feasibility under evaluation. Recent policy discussions have also increasingly referenced agriPV but large-scale replication has yet to commence. Both policymakers and experts need more empirical evidence across agro-climatic zones to say which configurations, crop matrices, and financial frameworks are most suitable.

The technology's large-scale adoption in India does face economic, regulatory, and institutional barriers. Elevated structures and specialised mounting systems significantly increase capital costs, well above those of conventional solar systems. A crop's responses to shading can vary and poorly designed systems may even reduce agricultural yields.

System ownership between farmers

and developers could also raise doubts, particularly if long-term land rights and revenue-sharing arrangements are not fully clear. Land classification, grid connectivity, and tariffs hinge on regulatory clarity and the lack of design benchmarks adds to investor uncertainty.

Policy pathways

With the right policy support, agriPV has the potential to scale beyond pilot projects. Recent consultations on PM-KUSUM 2.0 have indicated that the government may include agriPV in a proposed 'National Agri-photovoltaics Mission' as a dedicated 10-GW component, with viability gap funding to offset the capital costs. Such measures could remarkably improve the bankability of agriPV projects and reduce the financial risk. Clearly recognising dual-use configurations within PM-KUSUM 2.0 could help align agriPV with farmer-centric solarisation. States can reinforce this by identifying suitable clusters, streamlining approvals, and integrating agriPV into farmer training and advisory programmes.

As India rapidly advances in its energy transition, agriPV offers a pathway for renewable energy to complement agricultural productivity. Its inclusion under PM-KUSUM 2.0 could move it from scattered pilots to a more structured, scalable model, strengthening farmer incomes and easing land pressures.

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THE GIST

Agri-photovoltaics (AgriPV) integrates solar systems with farming, allowing farmers to generate electricity and cultivate crops on the same parcel of land

The panels are mounted at a suitable height to allow farm operations below, and are spaced between crop rows or integrated into greenhouses to minimise conflict between agricultural production and energy generation

In an economy that depends heavily on agriculture, the technology's appeal lies in both farmers diversifying their incomes and producing clean energy

Recent consultations on PM-KUSUM 2.0 have indicated that the government may include agriPV in a proposed 'National Agri-photovoltaics Mission' as a dedicated 10-GW component, with viability gap funding to offset the capital costs

23Mar. How agriPV can turn India's farms into dual-purpose powerhouses

एग्रीपीवी कैसे भारत के खेतों को दोहरे उद्देश्य वाले पावरहाउस में बदल सकता है

- In the 2026-27 Budget, the outlay for the PM-KUSUM scheme nearly doubled to ₹5,000 crore, signalling the government's renewed emphasis on increasing solar power production centred on India's farmers.

2026-27 बजट में PM-KUSUM योजना के लिए आवंटन लगभग दोगुना होकर ₹5,000 करोड़ हो गया, जो भारत के किसानों पर केंद्रित सौर ऊर्जा उत्पादन बढ़ाने पर सरकार के नए जोर को दर्शाता है।



- Specifically, the scheme aims to provide **energy and water security** to farmers, enhance **incomes**, and **decarbonise** the farm sector through decentralised **solar pumps** and power plants.
विशेष रूप से, यह योजना किसानों को **ऊर्जा और जल सुरक्षा** प्रदान करने, उनकी **आय बढ़ाने**, और विकेन्द्रीकृत **सोलर पंप** और पावर प्लांट के माध्यम से कृषि क्षेत्र को **डीकार्बोनाइज** करने का लक्ष्य रखती है।
- But as the scheme evolves, India also faces a question: **how can solar be expanded on agricultural land without compromising food security?**
लेकिन जैसे-जैसे यह योजना विकसित हो रही है, भारत के सामने यह सवाल भी है कि कृषि भूमि पर **सौर ऊर्जा** का विस्तार **खाद्य सुरक्षा** से समझौता किए बिना कैसे किया जाए?
- Agri-photovoltaics (agriPV)** is emerging as a promising answer to this question.
एग्री-फोटोवोल्टिक्स (agriPV) इस प्रश्न का एक आशाजनक समाधान बनकर उभर रहा है।
- AgriPV integrates solar systems with farming, allowing farmers to generate electricity and cultivate crops on the same parcel of land.**
AgriPV सौर प्रणालियों को खेती के साथ जोड़ता है, जिससे किसान एक ही भूमि पर **बिजली** उत्पन्न कर सकते हैं और **फसलें** उगा सकते हैं।
- The panels are mounted at a suitable height to allow farm operations below, and are spaced between **crop rows** or integrated into **greenhouses** to minimise conflict between agricultural production and energy generation.
पैनल उचित ऊँचाई पर लगाए जाते हैं ताकि नीचे खेती की जा सके, और उन्हें **फसल की कतारों** के बीच या **ग्रीनहाउस** में लगाया जाता है ताकि कृषि उत्पादन और ऊर्जा उत्पादन के बीच संघर्ष कम हो।

Selecting right crops उचित फसल का चयन

- The designs vary by **crop** and **region**.
डिज़ाइन **फसल** और **क्षेत्र** के अनुसार भिन्न होते हैं।
- Elevated systems** have panels mounted a few metres above ground to allow crops to grow below.
ऊँचे (Elevated) सिस्टम में पैनल जमीन से कुछ मीटर ऊपर लगाए जाते हैं ताकि नीचे फसलें उग सकें।
- Row-based systems** have panels positioned between crop rows to minimise shading.
रो-आधारित सिस्टम में पैनल फसल की कतारों के बीच लगाए जाते हैं ताकि छाया कम हो।
- Vertical systems** use upright panels that can capture sunlight from both sides.
वर्टिकल सिस्टम सीधे खड़े पैनलों का उपयोग करते हैं जो दोनों तरफ से सूर्य प्रकाश प्राप्त कर सकते हैं।
- Greenhouse-integrated systems** feature solar panels on roofs or walls to maintain a controlled growing environment.
ग्रीनहाउस-इंटीग्रेटेड सिस्टम में छत या दीवारों पर सोलर पैनल लगाए जाते हैं ताकि नियंत्रित वातावरण में खेती हो सके।
- The suitability of a design also depends on the local **climate**, **irrigation practices**, and the **crop**.
किसी डिज़ाइन की उपयुक्तता स्थानीय **जलवायु**, **सिंचाई पद्धति**, और **फसल** पर भी निर्भर करती है।
- So systematic and region-specific planning is essential to optimise both agricultural and energy yields.
इसलिए कृषि और ऊर्जा दोनों के उत्पादन को बेहतर बनाने के लिए व्यवस्थित और क्षेत्र-विशिष्ट योजना आवश्यक है।
- Careful crop selection** is also key to the success of agriPV systems because the amount of **sunlight** available changes based on how solar panels are placed.
सावधानीपूर्वक **फसल चयन** agriPV की सफलता के लिए महत्वपूर्ण है क्योंकि सोलर पैनल की स्थिति के अनुसार **सूर्य प्रकाश** की मात्रा बदलती है।
- Shade-tolerant crops** generally perform well in partially shaded areas under solar panels while crops that need more sunlight grow better in the spaces between rows of panels.
छाया-सहिष्णु फसलें सोलर पैनलों के नीचे आंशिक छाया में अच्छी तरह उगती हैं, जबकि अधिक धूप वाली फसलें पैनलों की कतारों के बीच बेहतर बढ़ती हैं।
- Crop selection also varies across India's diverse agro-climatic regions.**
फसल चयन भारत के विभिन्न **कृषि-जलवायु क्षेत्रों** के अनुसार भी बदलता है।



- For instance, suitable crop options include **tomato, onion, garlic, turmeric, ginger, leafy vegetables, and tulsii** in **Madhya Pradesh**, and **ragi, jowar, grapes, tomato, potato, chillies, banana, and brinjal** in **Karnataka and Maharashtra** — all of which can perform well in agriPV systems.
उदाहरण के लिए, **मध्य प्रदेश** में **टमाटर, प्याज, लहसुन, हल्दी, अदरक, पत्तेदार सब्जियां और तुलसी** उपयुक्त हैं, जबकि **कर्नाटक और महाराष्ट्र** में **रागी, ज्वार, अंगूर, टमाटर, आलू, मिर्च, केला और बैंगन** agriPV में अच्छे परिणाम देते हैं।
- Beyond technical considerations such as **crop selection**, the scalability of agriPV hinges on developing viable **business models**.
फसल चयन जैसे तकनीकी पहलुओं के अलावा agriPV का विस्तार व्यवहार्य **व्यापार मॉडल** विकसित करने पर निर्भर करता है।
- Farmers can own and operate agriPV systems, use a portion of the **electricity** generated, and sell the **surplus**.
किसान agriPV सिस्टम के मालिक और संचालक बन सकते हैं, उत्पन्न **बिजली** का उपयोग कर सकते हैं और अतिरिक्त **बिजली** बेच सकते हैं।
- With the help of **Farmer Producer Organisations** or cooperatives, multiple farmers can also **aggregate land** and collectively develop projects, enhancing their **bargaining power** and access to **finance**.
किसान उत्पादक संगठन (FPOs) या सहकारी समितियों की मदद से किसान अपनी भूमि को जोड़कर सामूहिक रूप से परियोजनाएँ विकसित कर सकते हैं, जिससे उनकी **सौदेबाजी शक्ति** और **वित्त** तक पहुंच बढ़ती है।
- **Private developers** could also lease farmland and share revenues or pay fixed rents to farmers.
निजी डेवलपर्स भी कृषि भूमि लीज पर लेकर किसानों को राजस्व साझा कर सकते हैं या निश्चित किराया दे सकते हैं।
- Alternatively, **State governments** or public agencies could develop agriPV systems to support local energy needs.
वैकल्पिक रूप से, **राज्य सरकारें** या सार्वजनिक एजेंसियां स्थानीय ऊर्जा आवश्यकताओं को पूरा करने के लिए agriPV सिस्टम विकसित कर सकती हैं।

Why agriPV matters for India भारत के लिए agriPV का महत्व

- India's ambitious **energy transition goals** — to have **300 GW** of installed solar capacity by **2030** and achieve **net-zero emissions by 2070** — put land at a **premium**.
भारत के महत्वाकांक्षी **ऊर्जा संक्रमण लक्ष्य** — **2030 तक 300 GW** सौर क्षमता और **2070 तक नेट-जीरो उत्सर्जन** — भूमि पर **दबाव** बढ़ाते हैं।
- **Utility-scale solar projects** require large tracts of land while **agriculture** is already under pressure from competing land uses.
यूटिलिटी-स्तरिय सौर परियोजनाओं को बड़े भूमि क्षेत्र की आवश्यकता होती है, जबकि **कृषि** पहले से ही प्रतिस्पर्धी भूमि उपयोग के दबाव में है।
- **AgriPV** can ameliorate this conflict.
AgriPV इस संघर्ष को कम कर सकता है।
- With more than half of India's land under **agriculture**, **dual-use deployment** is valuable.
भारत की आधे से अधिक भूमि **कृषि** के अंतर्गत होने के कारण **द्वि-उपयोग (dual-use)** बहुत मूल्यवान है।
- And in an economy that depends heavily on **agriculture**, the technology's appeal lies in both farmers diversifying their **incomes** and producing **clean energy**.
और एक ऐसी अर्थव्यवस्था में जो **कृषि** पर निर्भर है, यह तकनीक किसानों को **आय विविधीकरण** और **स्वच्छ ऊर्जा उत्पादन** दोनों में मदद करती है।
- Farmers can earn from selling **electricity**, leasing land or sharing **revenues** while continuing to cultivate.
किसान **बिजली बेचकर**, भूमि लीज पर देकर या **राजस्व साझा** करके आय अर्जित कर सकते हैं, जबकि खेती जारी रखते हैं।
- **AgriPV** also delivers environmental **co-benefits**.
AgriPV पर्यावरणीय **सह-लाभ** भी प्रदान करता है।



- In certain **agro-climatic conditions**, partial shading can reduce **evapotranspiration** — the combined loss of water to the atmosphere through evaporation and plant transpiration — and soils retain more **moisture**, thus enhancing the overall **water-use efficiency**.
कुछ कृषि-जलवायु परिस्थितियों में आंशिक छाया **evapotranspiration** (वाष्पीकरण और पौधों के वाष्पोत्सर्जन द्वारा जल हानि) को कम करती है और मिट्टी में अधिक नमी बनी रहती है, जिससे **जल उपयोग दक्षता** बढ़ती है।
- **Solar panels** can also protect crops against **extreme heat, rainfall, and hail**.
सोलर पैनल फसलों को **अत्यधिक गर्मी, वर्षा और ओलावृष्टि** से भी बचा सकते हैं।
- By lowering the farm's need for **diesel**, such systems can also support **rural entrepreneurship** and local **economic growth**.
खेती में **डीजल** की आवश्यकता कम करके, यह प्रणाली **ग्रामीण उद्यमिता** और स्थानीय **आर्थिक विकास** को बढ़ावा देती है।
- **AgriPV** can power ancillary services as well, including **cold storage, food processing units, and chaff cutters**, strengthening **rural value chains**.
AgriPV कोल्ड स्टोरेज, फूड प्रोसेसिंग यूनिट और चाफ कटर जैसी सहायक सेवाओं को भी ऊर्जा प्रदान कर सकता है, जिससे **ग्रामीण मूल्य श्रृंखला** मजबूत होती है।
- However, this requires clear **governance frameworks, tariffs, and accessible finance**.
हालांकि, इसके लिए स्पष्ट **शासन ढांचा, टैरिफ** और **सुलभ वित्त** की आवश्यकता है।

Status in India भारत में स्थिति

- There are around **50 pilot agriPV installations** nationwide, with various panel-crop combinations and **economic feasibility** under evaluation.
देशभर में लगभग **50 पायलट agriPV परियोजनाएँ** हैं, जिनमें विभिन्न पैनल-फसल संयोजन और उनकी **आर्थिक व्यवहार्यता** का मूल्यांकन किया जा रहा है।
- Recent **policy discussions** have also increasingly referenced agriPV but large-scale replication has yet to commence.
हाल की **नीतिगत चर्चाओं** में agriPV का उल्लेख बढ़ा है, लेकिन बड़े पैमाने पर इसका विस्तार अभी शुरू नहीं हुआ है।
- Both **policymakers and experts** need more **empirical evidence** across agro-climatic zones to say which configurations, crop matrices, and financial frameworks are most suitable.
नीतिनिर्माताओं और विशेषज्ञों को विभिन्न कृषि-जलवायु क्षेत्रों में अधिक **व्यावहारिक साक्ष्य** की आवश्यकता है ताकि उपयुक्त संरचना, फसल संयोजन और वित्तीय ढांचा निर्धारित किया जा सके।
- The technology's large-scale adoption in India does face **economic, regulatory, and institutional barriers**.
इस तकनीक के बड़े पैमाने पर अपनाने में **आर्थिक, नियामक और संस्थागत बाधाएँ** हैं।
- **Elevated structures** and specialised mounting systems significantly increase **capital costs**, well above those of conventional solar systems.
ऊँची संरचनाएँ और विशेष माउंटिंग सिस्टम **पूंजी लागत** को काफी बढ़ाते हैं, जो पारंपरिक सौर प्रणालियों से अधिक है।
- A crop's responses to **shading** can vary and poorly designed systems may even reduce **agricultural yields**.
फसलों की **छाया के प्रति प्रतिक्रिया** अलग-अलग होती है और खराब डिज़ाइन वाली प्रणालियाँ **उत्पादन कम** कर सकती हैं।
- **System ownership** between farmers and developers could also raise doubts, particularly if long-term **land rights** and **revenue-sharing arrangements** are not fully clear.
किसानों और डेवलपर्स के बीच **स्वामित्व** को लेकर संदेह हो सकता है, खासकर यदि **भूमि अधिकार** और **राजस्व साझेदारी** स्पष्ट न हो।
- **Land classification, grid connectivity, and tariffs** hinge on regulatory clarity and the lack of design benchmarks adds to **investor uncertainty**.
भूमि वर्गीकरण, ग्रिड कनेक्टिविटी और टैरिफ नियामक स्पष्टता पर निर्भर करते हैं और डिज़ाइन मानकों की कमी निवेशक अनिश्चितता बढ़ाती है।



Policy pathways नीतिगत मार्ग

- With the right **policy support**, agriPV has the potential to scale beyond **pilot projects**.
उचित नीतिगत समर्थन के साथ agriPV पायलट परियोजनाओं से आगे बढ़ सकता है।
- Recent consultations on **PM-KUSUM 2.0** have indicated that the government may include agriPV in a proposed '**National Agri-photovoltaics Mission**' as a dedicated **10-GW** component, with **viability gap funding** to o• set the capital costs.
हाल की **PM-KUSUM 2.0** चर्चाओं में संकेत मिला है कि सरकार '**राष्ट्रीय एग्री-फोटोवोल्टिक्स मिशन**' के तहत **10 GW** क्षमता के रूप में agriPV को शामिल कर सकती है, जिसमें **viability gap funding** दी जाएगी।
- Such measures could remarkably improve the **bankability** of agriPV projects and reduce the **• nancial risk**.
ऐसे उपाय agriPV परियोजनाओं की **बैंक योग्यता** बढ़ा सकते हैं और **वित्तीय जोखिम** कम कर सकते हैं।
- Clearly recognising **dual-use con• gurations** within **PM-KUSUM 2.0** could help align agriPV with **farmer-centric solarisation**.
PM-KUSUM 2.0 में **द्वि-उपयोग संरचनाओं** को मान्यता देने से agriPV को **किसान-केंद्रित सौरकरण** से जोड़ा जा सकता है।
- States can reinforce this by identifying suitable **clusters**, streamlining approvals, and integrating agriPV into **farmer training and advisory programmes**.
राज्य उपयुक्त **क्लस्टर** पहचानकर, स्वीकृति प्रक्रिया सरल बनाकर और agriPV को **किसान प्रशिक्षण कार्यक्रमों** में शामिल करके इसे मजबूत कर सकते हैं।
- As India rapidly advances in its **energy transition**, agriPV o• ers a pathway for **renewable energy** to complement **agricultural productivity**.
जैसे-जैसे भारत **ऊर्जा संक्रमण** में आगे बढ़ रहा है, agriPV **नवीकरणीय ऊर्जा** को **कृषि उत्पादकता** के साथ जोड़ने का मार्ग प्रदान करता है।
- Its inclusion under **PM-KUSUM 2.0** could move it from scattered **pilots** to a more structured, scalable model, strengthening **farmer incomes** and easing **land pressures**.
PM-KUSUM 2.0 में शामिल होने से यह बिखरे हुए **पायलट प्रोजेक्ट्स** से आगे बढ़कर एक संरचित और विस्तार योग्य मॉडल बन सकता है, जिससे **किसानों की आय** बढ़ेगी और **भूमि पर दबाव** कम होगा।