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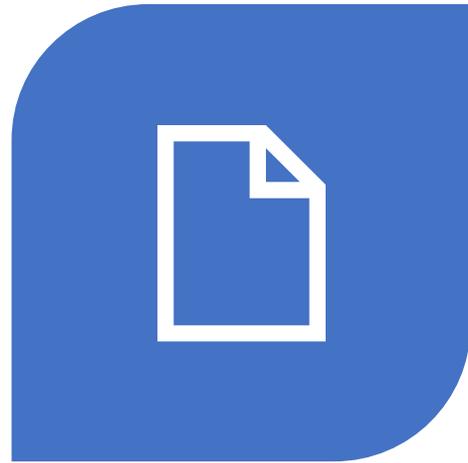
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**KOLKATA** Most West Bengal voters awaiting identification during the NRH of electoral rolls are from minority-dominated districts, according to data shared by the State's Chief Electoral Officer. » PAGE 8

**Courts too, must acknowledge errors Singhvi**

**NEW DELHI** If institutions, including courts, have erred, they must acknowledge the mistakes, senior advocate Abhinav Manu Singhvi said. » PAGE 8

# Iran bombs U.S. allies across West Asia

Iran vows revenge for the killing of Supreme Leader Khamenei; trades strikes with Israel | Trump warns against retaliation; Israel pledges 'non-stop' strikes against Iran's leaders, military | New leadership council begins work, says Iran; next Supreme Leader to be chosen in a few days

**Associated Press**  
**Assence: Erase Erases**  
TEHRAN (UPI) — Iran vowed revenge on Sunday after the killing of its Supreme Leader, and traded strikes with Israel as part of a widening war prompted by a U.S. and Israeli bombardment a day earlier.

U.S. President Donald Trump warned that any retaliation would lead to further escalation. He said he would "be talking" to Iranian leaders, but was vague on the timing and noted that much of the country's leadership was dead.

"They want to talk, and I have agreed to talk, so I will be talking to them. They should have done it sooner," he was quoted as saying by The Atlantic.

Blasts in Tehran sent a huge plume of smoke into the sky in an area where there are government buildings, Iranian state television said that it had been targeted by strikes.

"The technical team is assessing the damage," said the broadcaster.

Iranian authorities say more than 200 people have been killed since the start of the U.S. and Israeli strikes that killed Ayatollah Ali Khamenei and other senior leaders.

Earlier, Iran fired missiles at an ever-widening list of targets in Israel and Gulf Arab states in retaliation while Israel pledged "non-stop" strikes against Iran's leaders and military.

In Israel, 100 explosions caused by missile impacts or interceptions could be heard in Tel Aviv, Israeli rescue services said; some people were killed and 28 wounded in a strike that hit a synagogue



A video grab from Israeli military footage shows strikes on what it calls 'headquarters of the Iranian terror regime' in Tehran. AP

in the central town of Beit Shean, bringing the overall death toll in the country to 11. The U.S. military said three service members have been killed and five seriously wounded in the Iran operation.

Iran's President Mahmoud Ahmadinejad said in a pre-recorded message aired on state television that the new leadership council had begun its work.

Iran's Foreign Minister Abbas Mousavi said a new Supreme Leader would be chosen in a few to two days. Iran has named Ayatollah Aliakbar Akbari, a senior cleric, to its interim leadership council.

The interim council, which will also include the judiciary, will lead the country until the Assembly

of Experts "selects a permanent leader as soon as possible".

**Escalating tensions**  
"You have crossed our red line and must pay the price," Iran's parliamentary speaker, Mohammad Bagher Ghalibaf, said in a televised address on Sunday. "We will deliver such devastating blows that you yourselves will be driven to beg."

Mr. Trump warning against any retaliation said in a social media post, "They better not do that. If they do, we will hit them with a force that has never been seen before!"

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As U.S. and Israeli strikes have pounded Iran, the Islamic Republic has retaliated with missiles and drone attacks on Israel and nearby Arab Gulf countries, hitting U.S. forces.

Iran's Defense Minister Ismail Khatami said on Sunday that Israel will have "a non-stop air war" of strikes against military and leadership targets in Iran.

Shotgun from Iranian attacks on Abu Dhabi killed two people, state media said, and debris from aerial interceptions caused fires at the city's main port and on the facade of the Burj Al Arab hotel.

Attacks also extended into Oman — Iran's longtime interconnector with the West that had not been drawn into the fray previously.

**EDITORIAL**  
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**Festive colours**



Coating up: A vendor sells colour in a market ahead of Holi, in Nalluru on Sunday. The festival is set to be celebrated on March 8. AP

## Over 350 flights cancelled by Indian airlines; services to 11 nations halted

**JAGDIP Chandra**  
NEW DELHI

Indian airlines cancelled nearly 350 flights on Sunday, with Air India suspending 20 additional long-haul services to European destinations, including London, Zurich, Milan, Frankfurt and Copenhagen.

The cancellations add to the complete suspension of flights by all Indian carriers to 11 countries in West Asia, following air strikes in the region in the wake of the war between Israel, U.S. and Iran and an urgent advisory issued by the Directorate-General of Civil Aviation valid until March 2. Air India on Sunday announced 20 additional flight cancellations across Europe, taking the total number of long-haul and ultra-long-haul services



People cross a street as smoke rises from the site of a reported Iranian strike in Dubai. AP

**Indians among those injured in Iranian strikes**

**NEW DELHI** Several Indians were among those who have been injured in the missile and drone attacks by Iran in West Asia, authorities in the UAE and Oman said. Indian missions highlighted activities to address concerns of citizens scattered across West Asia. » PAGE 9

ed passengers, ensuring continued provision of consular services, according to *Khaleej Times*.

The Dubai Department of Economy and Tourism issued a formal directive to hotel managers, asking them to allow affected guests to extend their stay, in Abu Dhabi, authorities

issued a parallel order that gave a step further, confirming that the government would bear the accommodation costs for stranded guests, according to local media reports.

The Embassy of India in Muscat, Oman issued a public notice informing that Indian citizens in Gulf Cooperation Council (GCC) countries, who held valid resident cards, were eligible for a visa on arrival, enabling them to enter Oman and seek temporary shelter.

The advisory added that Indian passport holders with a valid visa or residence permit from the U.S., U.K., Canada, Japan and Schengen countries are also eligible for a visa on arrival, allowing entry into Oman for up to 10 days without a pre-arranged visa.

## At least 18 killed, 20 injured in explosion at Nagpur munitions factory

**The Hindu Bureau**  
MUMBAI

At least 18 people were killed and over 20 injured in an explosion at an ammunition manufacturing company in Bhatnagar village of Nagpur district in Maharashtra on Sunday.

Over 20 people are injured and have been shifted to nearby hospitals as well as Orange City Hospital. The bodies are yet to be identified. So far, 18 people were killed, Nagpur Rural Superintendent of Police Harsh Poddar told *The Hindu*, adding that the cause of the blast is yet to be ascertained.

The explosion occurred around 7.30 a.m. in the packing area of a factory owned by SHL Energy Limited, a mining and industrial explosives manufacturer, according to police officials. The police have filed an accidental death report and will register an FIR after a preliminary probe. The PMD has announced financial aid for the families of the deceased.

Citing Prime Minister Narendra Modi in a post on X, the PMO said: "An explosion at a factory in Nagpur is deeply distressing. My condolences to the families of the deceased. I pray for the speedy recovery of the injured. The local administration is assisting those affected. An ex-gratia of 12 lakh from PMO will be given to the next of kin of each deceased. The injured would be given 500,000."

The state government

has also announced financial assistance of 15 lakh to the kin of those who died in the explosion.

"Apart from this, the concerned company will also provide financial assistance to their families," said Maharashtra Chief Minister Devendra Fadnis, who said that a thorough investigation into the incident has been ordered.

He said that teams from the National and State Dis-



Tragic incidents: Rescue personnel at the site of the blast in Nagpur on Sunday. PTI

aster Response Forces (DRF), the Petroleum and Explosives Safety Organisation (PESO), and the Directorate of Industrial Safety and Health (DISH) had reached the spot.

"Safety audits needed" Revenue Minister Chandrababbar Nawalkale said. "The state would take action against the culprit, turning the incident extremely heart-breaking and unfortunate."

Rescue teams of DRF and SHRP have immediately reached the spot and relief work is going on a war footing. I myself am in constant touch with all the agencies and am monitoring the situation," Mr. Nawalkale posted on X.

SRL Energy extended its

condolences while noting that the exact cause of the explosion remains under investigation. "We are deeply saddened by the tragic incident at our facility in Bhatnagar district, and extend our heartfelt condolences to the families of those who have lost their lives," SRL Energy said in a statement.

Calling the blast "tragic", Nationalist Congress Party (NCP) leader and former Union Minister Anil Deshmukh alleged that negligence in the safety audits of firms manufacturing explosives has resulted in the increase of such blasts. Six months ago, Mr. Deshmukh had written to Mr. Fadnis, Union Minister, and PESO, urging them to conduct the safety audits of all such firms in Nagpur.

## 22 killed, over 120 hurt in Pak. protests on Iran strike

**Associated Press**  
KARACHI

Violent clashes between protesters and security forces in Pakistan's port city of Karachi and in the country's north on Sunday left at least 22 people dead and more than 120 others injured in pro-Iran demonstrations, authorities said.

At least 10 people were killed in Karachi when protesters tried to storm the U.S. Consulate. Police said at least 40 people were also wounded in the clashes.

**FULL REPORT ON**  
» PAGE 14

# Iran bombs U.S. allies across West Asia

Iran vows revenge for the killing of Supreme Leader Khamenei; trades strikes with Israel

Trump warns against retaliation; Israel pledges 'non-stop' strikes against Iran's leaders, military

New leadership council begins work, says Iran; next Supreme Leader to be chosen in a few days

**Associated Press**  
**Agence France-Presse**  
TEHRAN/DUBAI

Iran vowed revenge on Sunday after the killing of its Supreme Leader, and traded strikes with Israel as part of a widening war prompted by a U.S. and Israeli bombardment a day earlier.

U.S. President Donald Trump warned that any retaliation would only lead to further escalation. He said he would "be talking" to Iranian leaders but was vague on the timing and noted that much of the country's leadership was dead.

"They want to talk, and I have agreed to talk, so I will be talking to them. They should have done it sooner," he was quoted as saying by *The Atlantic*.

Blasts in Tehran sent a huge plume of smoke into

the sky in an area where there are government buildings. Iranian state television said that it had been targeted by strikes.

"The technical team is assessing the damage," said the broadcaster.

Iranian authorities say more than 200 people have been killed since the start of the U.S. and Israeli strikes that killed Ayatollah Ali Khamenei and other senior leaders.

Earlier, Iran fired missiles at an ever-widening list of targets in Israel and Gulf Arab states in retaliation while Israel pledged "non-stop" strikes against Iran's leaders and military.

In Israel, loud explosions caused by missile impacts or interceptions could be heard in Tel Aviv.

Israel's rescue services said nine people were killed and 28 wounded in a strike that hit a synagogue



A video grab from Israeli military footage shows strikes on what it calls 'headquarters of the Iranian terror regime' in Tehran. AFP

in the central town of Beit Shemesh, bringing the overall death toll in the country to 11. The U.S. military said three service members have been killed and five seriously wounded in the Iran operation.

Iran's President Masoud

Pezeshkian said in a pre-recorded message aired on state television that a new leadership council had begun its work.

Iran's Foreign Minister Abbas Araghchi said a new Supreme Leader would be chosen in "one or two

days". Iran has named Ayatollah Alireza Araf, a senior cleric, to its interim leadership council.

The interim council, which will also include the President and the head of the judiciary, will lead the country until the Assembly

of Experts "elects a permanent leader as soon as possible".

## Escalating tensions

"You have crossed our red line and must pay the price," Iran's parliamentary Speaker, Mohammad Bagher Qalibaf, said in a televised address on Sunday. "We will deliver such devastating blows that you yourselves will be driven to beg."

Mr. Trump warning against any retaliation said on a social media post, "They better not do that. If they do, we will hit them with a force that has never been seen before!"

He also said that the strikes had sunk nine Iranian naval vessels and partially destroyed Iran's navy headquarters.

As U.S. and Israeli strikes have pounded Iran, the Islamic Republic has

retaliated with missiles and drone attacks on Israel and nearby Arab Gulf countries hosting U.S. forces.

Israel's Defence Minister Israel Katz said on Sunday that Israel will have "a non-stop air train" of strikes against military and leadership targets in Iran.

Shrapnel from Iranian attacks on Abu Dhabi killed two people, state media said, and debris from aerial interceptions caused fires at the city's main port and on the facade of the Burj Al Arab hotel.

Attacks also extended into Oman – Iran's long-time interlocutor with the West that hadn't been drawn into the fray previously.

## EDITORIAL

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# Iran strikes on Israel kill 9; three U.S. service members dead, 5 hurt

Iran's Revolutionary Guards launch large-scale attack, causing explosions in Riyadh, Dubai, Abu Dhabi, Doha, Manama, Jerusalem, Tel Aviv, with Saudi Arabia intercepting missiles; Pentagon denies Iran's claim of striking *USS Abraham Lincoln*

Agence France-Presse

Reuters

DUBAI

Iran strikes on Israel killed at least nine persons and left 11 missing in the city of Beit She mesh on Sunday, first responders said, as Iran vowed revenge after the killing of its Supreme Leader. Another 28 were wounded, the Magen David Adom emergency service said. The police said there was a direct hit on a building.

Three members of the U.S. military have been killed and five others seriously wounded in the operation against Iran, the



**Slipping past Dome:** An explosion caused by a projectile impact after Iran launched missiles into Israel, in Tel Aviv. REUTERS

Pentagon said on Sunday, announcing the first American deaths in the U.S.-Israeli campaign.

Iran's Revolutionary Guards announced a

"large-scale" attack on Sunday, and blasts were heard in Riyadh, Dubai, Abu Dhabi, Doha, Manama, Jerusalem and Tel Aviv.

Iran's President Masoud Pezeshkian declared Khamenei's killing a "declaration of war against Muslims" and warned: "Iran considers it its legitimate duty and right to avenge the perpetrators and masterminds of this historic crime."

U.S. defence systems intercepted at least two drones over the city of Erbil in northern Iraq, as sirens sounded from the American consulate.

Saudi Arabia intercepted Iranian missiles targeting Riyadh's international airport and the Prince Sultan Airbase, which houses U.S. military personnel, a Gulf source said, adding

that the interception did not disrupt navigation or cause any human or material losses. Dubai, Abu Dhabi, Kuwait and Manama airports were also targeted by attacks.

Meanwhile, The Pentagon denied Iran's claim to have struck the aircraft carrier *USS Abraham Lincoln* with ballistic missiles in the Gulf. "The Lincoln was not hit. The missiles launched didn't even come close," U.S. Central Command said on X.

Elsewhere, OPEC+ agreed a modest oil output boost of 2,06,000 barrels per day for April as the U.S.-Israeli war on Iran disrupted oil flows.

# TOP-LEVEL HUDDLE BECAME **SITTING TARGET FOR ISRAEL**

Photos: ANI/NYT

- **CIA had been tracking Ayatollah Ali Khamenei for months.** Learned of meeting of top Iranian officials Saturday morning in the heart of Tehran, where Khamenei would be present
- US and Israel were to launch the strikes at night, but **changed the timing once they got intel** on the meeting
- **US honed the intel it had gathered on the Iranian leadership for the June 2025 strikes** that killed key Iranian military leaders and scientists and damaged nuclear site. Using US intel and its own, Israel executed the operation

- **Fighter jets took off from Israel around 6am; long-range missiles struck the Tehran compound around 9.40am**
- While top national security officials were in one building, **Khamenei was in another**
- Besides Khamenei, Iran confirmed 5 deaths: **IRGC chief Gen Mohd Pakpour, military council head Ali Shamkhani, nat'l intel chief Gholamreza Rezaian, chief of staff of armed forces Abdolrahim Mousavi, and defence minister Aziz Nasirzadeh**



Mourners gather in Tehran Sunday to protest against Khamenei's killing

## **MOURNING, CELEBRATION & CONCERN AS ATTACKS WIDEN**

- Khamenei, Iran's supreme leader for nearly four decades, **turned it into a regional power**, with its foreign policy centred on unswerving hostility towards US and Israel
- Taking over from Ayatollah Khomeini, founder of the Islamic Republic, Khamenei blocked attempts at reforms at home, labelled public demands for change as "sedition" and **squelched dissent with arrests and executions**
- Abroad, he **trained and armed militias** in Gaza Strip, Iraq, Lebanon and Yemen

- Khamenei's death mourned and celebrated alike in Tehran, while protests break out in Pak and Baghdad. Demonstrations held in Srinagar, Delhi and Hyderabad as well
- **Saudi Arabia and UAE stepped up criticism of Iran's retaliatory strikes** across the Gulf. **'Return to your senses,' a senior foreign policy adviser to the UAE president said.** Saudi Arabia's foreign ministry said Iran's attacks needed a 'firm' international response



Protesters at Srinagar's Lal Chowk on Sunday

# WHY THE STRAIT OF HORMUZ MATTERS

*The narrow waterway between Iran and Oman acts as a critical global oil artery.*

**20-21m**

barrels per day (bpd) of crude oil and petroleum liquids pass through it – **about 20% of global oil trade**



**20-30%**

of **global LNG trade** is through this route

**Why it's critical for India**

**2.6 million**

bpd, nearly half of **India's imports transit via the Strait**

**50%-plus**

of LNG moves through this route. India's natural gas consumption pegged at **196 million standard cubic meters per day**

# Brent prices flare up; Russian cargoes come back in focus

● Every \$10 rise to up annual import bill by \$14 billion

**SAURAV ANAND**  
New Delhi, March 1

**THE WAR THAT** erupted in West Asia on February 28 has triggered an oil shock that is now rippling through global markets and straight into India's economic calculus.

Brent crude prices had surged from around \$65 per barrel to \$72-73 on Friday, the highest since July, buoyed by growing concern over the potential attacks that arrived a day later.

On Sunday, prices jumped 10% to about \$80 a barrel over the counter, oil traders told Reuters, jolting energy markets and placing the Strait of Hor-

## OIL TURMOIL

Brent crude prices  
(\$ per barrel)



Source: Investing.com

muz — the narrow artery carrying nearly half of India's crude imports — under the spotlight.

**Continued on Page 2**

## Opec+ agrees on modest oil output boost

**REUTERS**  
London/Moscow, March 1

**OPEC+ AGREED A** modest oil output boost of 206,000 barrels per day for April on Sunday just as the US-Israeli war on Iran and Tehran's retaliation disrupted oil flows from key members of the producer group in West Asia.

Opec+ has a history of raising oil output to cushion disruptions but analysts said the group currently has little spare capacity.

**Continued on Page 11**

**Q. Consider the following statements about a West Asia escalation involving Iran–Israel–U.S.:**

1. Heightened risk around the Strait of Hormuz can raise global oil prices and shipping insurance costs even without a complete blockade.

2. Such a conflict has negligible implications for India's economy because India's oil dependence on West Asia is minimal.

3. Leadership uncertainty in Iran can add a "risk premium" to energy markets and regional security calculations.

Which of the statements given above is/are correct?

(a) 1 and 3 only

(b) 1 only

(c) 2 and 3 only

(d) 1, 2 and 3

# Why key to coconut cultivation today is sustainability, not productivity

The 'Coconut Promotion Scheme' must not be limited to distributing high-yield seedlings but must prioritise the development and mass multiplication of climate-resilient varieties for farms along the east coast and in peninsular regions, and wilt-tolerant varieties for coconut-growing regions along the west coast

By Harish Kumar

**T**he 2020-27 Union Budget announced a 'Coconut Promotion Scheme' with the primary aim of improving productivity by rejuvenating old, non-productive gardens with high yielding coconut varieties and establishing new plantations along the coast. The farming community has welcomed the announcement.

The Coconut Development Board (CDB) is already implementing a similar scheme, which has helped rejuvenate old gardens and expanded cultivation into non-traditional areas, including in parts of Gujarat, Assam, and other non-peninsular regions — sufficient to partially offset the widespread destruction of coconut palms in Kerala and Tamil Nadu by disease.

**Heat and disease**  
India is the world's largest producer and consumer of coconuts. The domestic price of coconut and tender coconut remains far higher than prevailing international prices even though the productivity per palm in India is already higher than in Sri Lanka, the Philippines, and Indonesia. In places like Anaimalai in Tamil Nadu, Dwarf's Tall Hybrid palm regularly produces 250 to 300 tender coconuts per tree.

Today, climate change and disease are greater concerns than productivity. Research by the Central Plantations Crops Research Institute (CPCRI) has projected that temperatures in regions with plantations may rise by 1.6-2.4°C by 2050 and up to 3.2 °C by 2070. Higher temperature without a significant change in the rainfall levels will increase the vapour pressure deficit and intensify drought stress.

Studies have also found that large parts of interior peninsular India, including parts of Karnataka and Andhra Pradesh, along with the south interior region of Tamil Nadu and the east coast could become less suitable for coconut cultivation in the coming decades as a result.

**Expanded scope**  
The CPCRI has found that coconut can still be cultivated along the Western Ghats belt in Kerala, coastal Karnataka, and western Tamil Nadu even during the high temperature regimes. However, these regions are beset by pest with diseases in Alappuzha and Pollachi districts, the coconut landscapes have been completely devastated.

Therefore, the new 'Coconut Promotion Scheme' must not be limited to distributing high-yield seedlings but must prioritise the development and mass multiplication of climate-resilient varieties for farms along the east coast and in peninsular regions, and wilt-tolerant varieties for the traditional coconut-growing regions along the west coast.

Large tracts of land vested with the



A coconut farm at Pannaiyappatti near Pollachi in Coimbatore district, TAMIL NADU

State horticulture departments and universities can be used to establish mother palm gardens. Similarly, the State should consider strengthening research in institutions like the CPCRI and the Tamil Nadu Agricultural University, so that they can identify and breed heat-tolerant, drought-resilient, and disease-resistant genotypes.

Farmer producer organisations (FPOs), cooperatives, and credible private nurseries should also be established to mass produce these resilient seedlings.

The aspect of the scheme to enhance productivity entails distributing free or subsidised inputs. Many such schemes often distribute biological inputs, microbial formulations, micro-nutrients, etc. But in practice, they are often substandard or poorly stored, reducing the overall viability.

Instead, the state should consider direct benefit transfers, since farmers must be trained to decide whether they need irrigation systems, soil amendments, labour for rejuvenation or other improvements.

**Failed take-off**  
The third area that merits a serious rethink is pricing value. In many coconut-growing regions today, production barely meets strong domestic demand for culinary purposes. The domestic price of coconut has increased three-fold since 2024. Encouraging FPOs to invest in processing units during lean supply periods without also ensuring means of marketing channels will only expose them to financial risk. The equipment already applied under such schemes often lies idle.

The 'Cluster Development Programme' implemented by the National Horticulture Board (NHB) has an outlay of about ₹150

**Studies show that parts of interior peninsular India, including Karnataka and AP, along with southern TN, and the east coast could be less suitable for coconut cultivation due to climate change and diseases**

crore for three verticals: production, value addition, and marketing. However, the programme didn't take off because its high investment barriers prevented FPOs and cooperatives from being meaningful participants as implementing agencies. Even after repeated stakeholder consultations and deadline extensions, private firms were not interested in being the implementing agencies.

The CDB is already implementing schemes that provide a 25% capital subsidy to the industry involved in coconut value addition, so there is no reason for them to subscribe to the same variant of the scheme implemented by the NHB, that too with numerous compliance requirements, including inspection and auditing regulations. The subsidy percentage also varies across the verticals, confounding farmers and investors alike.

The banana cluster in southern Tamil Nadu is another example of an enterprise that remains largely on paper.

**Smaller but better**  
The government must evaluate these experiences in good faith, including by adopting fool-proof metrics to measure the success of schemes rather than resorting to official reports and stage-managed interactions with farmers. Consistently large, centrally designed clusters may not be the answer. Instead, smaller pilot

models anchored in a genuine cooperative spirit with hand-holding — for example, marketing partnerships with experienced FMCG players like Arul or PTC — could be tested in locations such as Tiptur (which grows ball coconuts), Anaimalai (tender coconuts), and Pollachi (coconut oil). Smaller but better designed projects can yield more useful lessons as well.

Overhauling the 'Coconut Promotion Scheme' with the 'Cluster Development Programme' could also eventually help fund the multiplication of better coconut saplings.

**Steal crises**  
Farmers rarely have the institutional voice that large industries possess. Policies are often drafted based on official briefings rather than ground realities. A single visit to affected areas like Alappuzha and Pollachi will reveal that root with disease is destroying livelihoods and that climate stress is no longer theoretical.

The 'Coconut Promotion Scheme' is an opportunity to study and develop climate-resilient and disease-resistant coconut varieties, and to acknowledge that enhancing productivity alone won't secure the future. Climate-resilience, with resistance, direct trust in farmers, and honest evaluation of past failures must guide implementation of the scheme.

If these principles are adopted in full spirit, the scheme can protect India's leadership in coconut cultivation for decades. If not, however, it will be yet another well-intentioned allocation that doesn't address the real crises facing coconut cultivation.

*Dr. Rajesh Kumar is managing director, Pollachi Nutmeg Farmer Producer Company. He is also a former Farmer Awardee. rajkrcn@gmail.com*

## THE GIST

India is the world's largest producer and consumer of coconuts. However, the domestic price of coconut and tender coconut remain far higher than prevailing international prices

The 2020-27 Union Budget announced a 'Coconut Promotion Scheme' with the primary aim of improving productivity by rejuvenating old, non-productive gardens with high yielding coconut varieties and establishing new plantations along the coast

Today, climate change and disease are greater concerns than productivity for coconut cultivation in the country

Climate resilience, with resistance, direct trust in farmers, and honest evaluation of past failures must guide implementation of the scheme

## BIG SHOT



The Atacama Large Millimeter/submillimeter Array (ALMA) has mapped the Central Molecular Zone, a region at the core of our galaxy rich in dense and intricate gas clouds. This image was released on February 26. Scientists have been able to observe this region of the Milky Way in detail for the first time, where star formation could provide keys to understanding the origins of the universe. [https://www.eso.org/en/press-rel/pr01\\_20-014](https://www.eso.org/en/press-rel/pr01_20-014)

## WHAT IS IT?

### Salar de Pajonales: Mars analogue

**O**ne of the best places to practice hunting for life on Mars could be in the Atacama Desert in Chile. Scientists recently studied the Salar de Pajonales, an incredibly dry and freezing salt flat located 3.5 km above sea level. Together with the fact that it is hit by ultraviolet radiation, the Salar is a near-perfect analogue of the conditions on Mars.

The scientists focused on rocks made of gypsum, a mineral (CaSO<sub>4</sub>·2H<sub>2</sub>O) found on both earth and Mars. Specifically, they looked at layered rock structures built by microbes over long spans of time called stromatolites. They found that this mineral has acted like a protective shelter for life in the Salar in two ways.

First, they found living microbes hiding just millimetres beneath the rock's surface. Because gypsum is translucent, it allows enough sunlight for the microbes to subsist on but blocks harmful radiation and traps small amounts of moisture. The resulting conditions allow life to survive in an otherwise hostile environment. Second, deeper inside the stromatolites, the team first found chemical fingerprints of ancient life, meaning after the microbes died, the gypsum



A view of the Salar de Pajonales from the International Space Station's Expedition 66 crew sealed their remains and preserved them.

The study is important because scientists know Mars has large deposits of gypsum, and orbiters and satellites could look there in future. If gypsum can protect microbes and preserve fossils in the earth's most extreme desert, it is reasonable to think it could be holding secrets of ancient Martian life as well.

**For feedback and suggestions** for 'Science', please write to [letters@thehindu.co.in](mailto:letters@thehindu.co.in) with the subject 'Science'.

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R. Ranjit Kumar

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The Coconut Development Board (CDB) is already implementing a similar scheme, which has helped rejuvenate old gardens and expanded cultivation into non-traditional areas, including in parts of Odisha, Assam, and other non-peninsular regions – sufficient to partially offset the widespread destruction of coconut palms in Kerala and Tamil Nadu by disease.

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Studies have also found that large parts of interior peninsular India, including parts of Karnataka and Andhra Pradesh, along with the south interior region of Tamil Nadu and the east coasts could become less suitable for coconut cultivation in the coming decades as a result.

## Expanded scope

The CPCRI has found that coconut can still be cultivated along the Western Ghats belt in Kerala, coastal Karnataka, and western Tamil Nadu even during the high temperature regimes. However, these regions are beset by root wilt disease; in Alappuzha and Pollachi districts, the coconut landscape has been completely devastated.

Therefore, the new 'Coconut Promotion Scheme' must not be limited to distributing high-yield seedlings but must prioritise the development and mass multiplication of climate-resilient varieties for farms along the east coast and in peninsular regions, and wilt-tolerant varieties for the traditional coconut-growing regions along the west coast.

Large tracts of land vested with the



A coconut farm at Poesaripatti near Pollachi in Coimbatore district, Karnataka.

State horticulture departments and universities can be used to establish mother palm gardens. Similarly, the State should consider strengthening research in institutions like the CPCRI and the Tamil Nadu Agricultural University, so that they can identify and breed heat-tolerant, drought-resilient, and disease-resistant genotypes.

Farmer producer organisations (FPOs), cooperatives, and credible private nurseries should also be enabled to mass-produce these resilient seedlings.

The aspect of the scheme to enhance productivity entails distributing free or subsidised inputs. Many such schemes often distribute biological inputs, microbial formulations, micro-nutrients, etc. But in practice, they are often substandard or poorly stored, reducing the microbial viability.

Instead, the State should consider direct benefit transfers, since farmers must be trusted to decide whether they need irrigation systems, soil amendments, labour for rejuvenation or other improvements.

## Failed take-off

The third area that merits a serious rethink is adding value. In many coconut-growing regions today, production barely meets strong domestic demand for culinary purposes. The domestic price of coconut has increased three-fold since 2024. Encouraging FPOs to invest in processing units during lean supply periods without also assuring them of marketing channels will only expose them to financial risk. The equipment already supplied under such schemes often lies idle.

The 'Cluster Development Programme' implemented by the National Horticulture Board (NHB) has an outlay of about ₹150

**Studies show that parts of interior peninsular India, including Karnataka and A.P., along with southern T.N. and the east coast could be less suitable for coconut cultivation due to climate change and diseases**

crore for three verticals: production, value addition, and marketing. However, the programme didn't take off because its high investment barriers prevented FPOs and cooperatives from being meaningful participants as implementing agencies. Even after repeated stakeholder consultations and deadline extensions, private firms were not interested in being the implementing agencies.

The CDB is already implementing schemes that provide a 25% capital subsidy to the industry involved in coconut value addition, so there is no reason for them to subscribe to the same variant of the scheme implemented by the NHB, that too with numerous compliance requirements, including inspection and auditing regulations. The subsidy percentage also varies across the verticals, confusing farmers and investors alike.

The banana cluster in southern Tamil Nadu is another example of an enterprise that remains largely on paper.

## Smaller but better

The government must evaluate these experiences in good faith, including by adopting fool-proof metrics to measure the success of schemes rather than resorting to official reports and stage-managed interactions with farmers.

Large, centrally designed clusters may not be the answer. Instead, smaller pilot

models anchored in a genuine cooperative spirit with hand-holding – for example, marketing partnerships with experienced FMCG players like Amul or ITC – could be tested in locations such as Tiptur (which grows hill copra), Anaimalai (tender coconuts), and Pollachi (coconut oil). Smaller but better designed projects can yield more useful lessons as well.

Downfalling the 'Coconut Promotion Scheme' with the 'Cluster Development Programme' could also eventually help fund the multiplication of better coconut saplings.

## Real crises

Farmers rarely have the institutional voice that large industries possess. Policies are often drafted based on official briefings rather than ground realities. A simple visit to affected areas like Alappuzha and Pollachi will reveal that root wilt disease is destroying livelihoods and that climate stress is no longer theoretical.

The 'Coconut Promotion Scheme' is an opportunity to study and develop climate-resilient and disease-resistant coconut varieties, and to acknowledge that enhancing productivity alone won't secure the future. Climate resilience, wilt resistance, direct trust in farmers, and honest evaluation of past failures must guide implementation.

If these principles are adopted in full spirit, the scheme can protect India's leadership in coconut cultivation for decades. If not, however, it will be yet another well-intentioned allocation that doesn't address the real crises facing coconut cultivators.

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## THE GIST

India is the world's largest producer and consumer of coconuts. However, the domestic prices of coconut and tender coconut remain far higher than prevailing international prices.

The 2026-27 Union Budget announced a 'Coconut Promotion Scheme' with the primary aim of improving productivity by rejuvenating old, non-productive gardens with high yielding coconut varieties and establishing new plantations along the coast.

Today, climate change and disease are greater concerns than productivity for coconut cultivation in the country.

Climate resilience, wilt resistance, direct trust in farmers, and honest evaluation of past failures must guide implementation of the scheme.

## 1) What the article is saying

- **Central message**
  - Coconut cultivation today must be built around **sustainability (climate + disease resilience)**, not just higher yields.
  - Productivity-focused expansion without resilience can **increase risk of future crop failure**.
- **Policy context mentioned**
  - The **Union Budget 2026–27** announced a **“Coconut Promotion Scheme”** aimed at improving productivity by **rejuvenating old/low-performing gardens** and encouraging new plantations.
  - The article argues the scheme must **go beyond distributing high-yield seedlings**.

## 2) Why “productivity-first” is risky now

- **Climate stress**
  - Rising heat and erratic rainfall increase **drought stress**, reduce suitable areas, and weaken palms—making them more vulnerable to pests/diseases.
- **Disease stress**
  - Diseases (example highlighted: **root wilt**) can devastate livelihoods; climate stress makes such outbreaks more damaging.

### 3) What should be done differently (recommended approach)

- **Seed/variety strategy must be climate-smart**
  - Don't focus only on "high-yield".
  - Prioritise **climate-resilient varieties** for east coast + peninsular regions.
  - Prioritise **wilt-tolerant varieties** for west coast coconut belts.
- **Strengthen research + multiplication system**
  - Build/expand **mother palm gardens**, and strengthen breeding for:
    - heat tolerance
    - drought resilience
    - disease resistance
  - Enable rapid multiplication through **FPOs/cooperatives + credible nurseries**.
- **Fix implementation design**
  - Many schemes fail due to "input distribution" mind-set (biological inputs, micro-nutrients etc.) with poor storage/quality.
  - Consider **direct benefit support** so farmers can choose what they need (irrigation, soil improvement, labour for rejuvenation, etc.).
- **Value chain: don't over-trust "big clusters"**
  - Large centrally-designed clusters may remain "on paper" due to high barriers and weak farmer participation.
  - Prefer **small, well-designed pilots** with clear, fool-proof metrics and genuine handholding.

# India-EU To Grant Each Other 'Most Favoured Nation' Status



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- India and the European Union are set to grant each other **'Most Favoured Nation'** status for five years from the date the Free Trade Agreement (FTA) comes into effect.
  - **What is 'Most Favoured Nation' status?**
    - According to the World Trade Organization (WTO), the MFN principle guarantees **non-discriminatory trade** by requiring countries to treat all trading partners equally.
    -

## Core Principle:

- If a country grants a special favour such as a lower customs duty to one trading partner, it must extend the same benefit to all other WTO members.
- **Countries cannot normally discriminate** between their trading partners.
- MFN ensures **equality, predictability, and transparency** in international trade.

The MFN principle is foundational to the multilateral trading system and is embedded in key WTO agreements:

- MFN is enshrined in Article 1 of the **General Agreement on Tariffs and Trade (GATT)**.
- MFN is a priority principle under Article 2 of the **General Agreement on Trade in Services (GATS)**.
- MFN is reflected in Article 4 of the **Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)** Agreement.

# National Science Day 2026



- National Science Day is celebrated every year on 28th February to commemorate the discovery of the 'Raman Effect' made by the physicist Sir C.V. Raman.

## About

- Sir C.V. Raman was awarded the **Nobel Prize in 1930** for the discovery of the Raman Effect.
- **The first celebration** took place on **February 28, 1987**, marking the beginning of a tradition that continues to inspire generations.
- **The objective** of the observation of National Science Day is to spread the message of the importance of science and its application among the people.
- **Theme for 2026: "Women in Science: Catalyzing Viksit Bharat"**

### About C V Raman

- He founded the **Indian Journal of Physics in 1926**.
- He became the **first Indian director of the Indian Institute of Science (IISc) in 1933**.
- He established the Raman Research Institute in **1948**.
- In **1954**, the Government of India honored him with the Bharat Ratna.

### Raman Effect

- When a beam of light passes through a **transparent medium** (such as a liquid or gas), a small fraction of the **scattered light changes in wavelength**.
- This change occurs due to the **interaction of light with the vibrational and rotational energy levels** of the molecules in the medium.

# 16th Finance Commission (FC): Push to Urban Local Governments



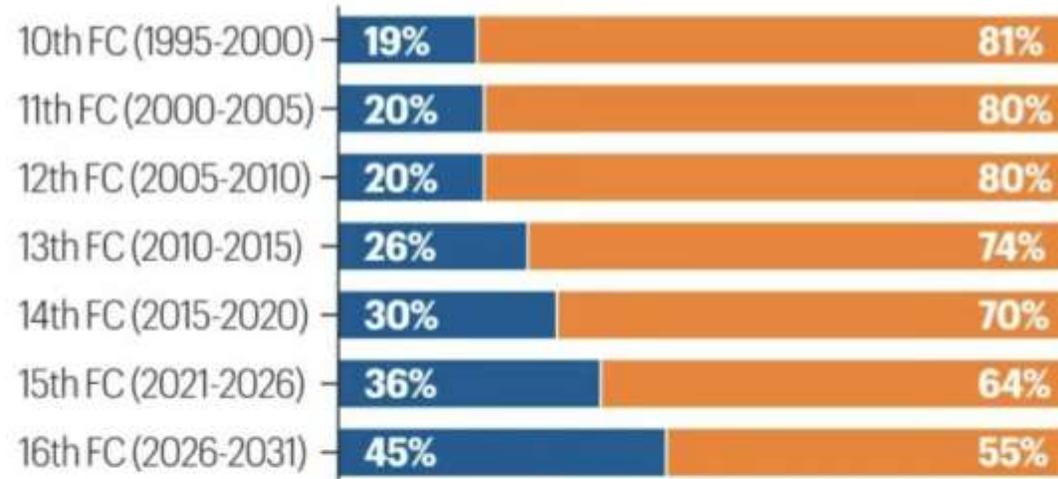
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- Recently, the 16th Finance Commission (FC) report, tabled in Parliament, has significantly enhanced the share of grants to Urban Local Bodies (ULBs), signalling a structural shift in India's fiscal federalism in favour of urban governance.

## Key Highlights of the 16th FC For ULBs

- **Increased Share for Urban Local Bodies:** Share of grants to ULBs increased to **45%**; (36% in 15th FC, & 26% in 13th FC).
- **Sharp Rise in Absolute Allocation:** Recommended grants to ULBs: **₹3.56 lakh crore**;

### • A bigger share for urban local govts

● Grants for urban local govts      ● Grants for rural local govts



SOURCE: JANAAGRAHA

- More than double the 15th FC's ₹1.55 lakh crore;
- Nearly 15 times higher than the 13th FC allocation;
- It marks the largest ever fiscal support to urban governance in India.

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- **Rationale Behind Increasing Share in 16th FC**
  - **Cities As Growth Pole:** Cities contribute nearly **two-thirds of India's GDP**, making them engines of economic growth.
    - India adds millions to its urban population annually due to migration and natural growth.
  - **Rising Urbanisation & Growing Urban Population:** Urbanisation in India is steadily increasing, demanding higher fiscal capacity at the city level.
    - **Census 2011: 31%** population urban;
    - **Projected urbanisation by 2031: 41%**
    - **Global comparison:** China (45%); Indonesia (54%); and Brazil (87%)

- 
- **Data Gaps in Urbanisation: A World Bank report (2015)** suggested up to **78% of the population** living in cities and urban clusters.
    - Lack of credible and **updated data (next Census awaited)** affects policy planning and fiscal allocations.
    - The 16th FC's higher allocation **pre-emptively addresses future urban growth**, even if Census 2027 shows urbanisation at higher levels (e.g., 48%).

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- **Major Urban Challenges & Concerns**

- **Uneven Distribution Across States:** The grants are distributed based on a **population-based formula**, leading to significant inter-state variation.

- **Major Gainers:** Kerala (Over 400% increase); and **Maharashtra** (Over 300% increase);

- **Limited Gains / Reductions:** **Odisha** (13% increase); **Bihar** (8% decrease);

- It reflects demographic changes and formula-based allocation rather than uniform distribution.

- **Water Supply & Sanitation:** Intermittent water supply in most cities; high Non-Revenue Water (NRW) losses; and sewage treatment gaps.

- **Urban Housing & Slums:** ~65 million people living in slums (2011 Census); rapid expansion of informal settlements; and inadequate affordable housing.

- 
- **Urban Transport & Congestion:** Traffic congestion in Tier-1 & Tier-2 cities; rising air pollution; and weak public transport integration.
  - **Weak Finances of ULBs:** Limited own-source revenue, heavy dependence on state transfers, poor property tax coverage, and weak municipal bond market.
  - **Weak Implementation of 74th Constitutional Amendment:** Many States have not fully devolved the **18 functions** listed in the Twelfth Schedule.
    - State governments retain control over urban planning, water supply boards, and development authorities.
    - **Capacity Deficit:** Shortage of trained urban planners, limited digital governance integration, and poor data systems.
  - **Climate Vulnerability:** Urban flooding (e.g., Chennai, Bengaluru), heat waves, and coastal vulnerability

Varanasi Sets  
Guinness Record  
With 2.5 Lakh  
Saplings

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Topic	English	श्रीमन्त्र
Event	Varanasi entered the Guinness World Records by planting over 2.5 lakh saplings within one hour.	अवधुतु दूह ङु इडु त्रुडु रवळु 2.5 चरुदु दूहु शुरु इ हुडु चरुडुघु शुधुन अडुबु प्रघुडुबु रवळु त्रु षु प्रगुडु
Date	The plantation drive was conducted on 1 March 2026.	अवधुतु शुरुगुतु 1 रवुडु 2026 डुगु ङुगुशुलु शुगुतु णुगुडु
Organising Authority	The initiative was undertaken by Varanasi Municipal Corporation.	सुदु हणुचु डुगु ङुगुशुलु अवधुतु दूह षुणुघु शुणुगु त्रुघुतुशुगुतु णुगुडु
Location	The plantation was carried out in the Domari area along the Ganga riverfront.	अवधुतु मडुकरुह लुडु रवळु णुतुणु षुलु कु लु हघु शुगुतु णुगुडु
Total Saplings	Approximately 2.51 lakh saplings were planted in 60 minutes.	चणुकुणु 2.51 चरुदु हुडु 60 शुरुडु रवळु चणुडु णुडुडु
Previous Record	The previous record was held by China with 1.53 lakh saplings planted in one hour.	सुदु दूह हणुचु गणु प्रघुडुबु दूह कु हवुदु वु, नुणुडु इडु त्रुडु रवळु 1.53 चरुदु हुडु चणुडु णुडु वुडु
Participation	More than 20,000 residents participated in the drive.	सुदु शुरुगुतु रवळु 20,000 दूह शुरु इ षुणुगुशुलु डु करुणु शुगुतु
Project Name	The plantation is part of the “Namo Van” urban forest project.	गणु अवधुतु “षुडुतु अडु” त्रुणुघु अडु हणुगुशुलु डुगु शुरुगुतु णुडु

Land Area	The project spans nearly 350 bighas of land.	गण हप्रघरुणुप्र चणकण 350 ँहलर वरुणव रवळ ँघरुह इरुह णरुहु
Plantation Method	The Miyawaki method was used for dense plantation.	दुलरु ँलरुवुहर् कुशुघडु शुरुवणुकरुह हुरुणु इरु ँहगुरुणु शुगुवणु णुगुवुहु
Species Type	Native species were planted to improve biodiversity.	नुन शुरुशुरुणु लरु ँवरुडु कुशुघडु वुडुह वुनुरुवणुगुरुणु कु हुरुणु चणुवरुडु णुडुहु
Tree Composition	Around 2.5 lakh Miyawaki saplings, 10,000 timber trees and 40,000 fruit-bearing trees planned.	चणकण 2.5 चरुदु शुरुवणुकरुह हुरुणु 10,000 चडुनुह ँरुकरु हुरुणु ँघ 40,000 ँ चरुवरुघ हुरुणु चणुवरुडु वुनुरुडु इरु गुरुणुप्र णुहु
Environmental Objective	To increase green cover, improve air quality and strengthen the Ganga riverbank ecosystem.	णुणुणु षुणुघरु ँवरुणु, ँरुणुणुणु ँरुणु वुशुवरुघणु ँघ णुणुणु लरु कु हुरुणुणुणु लरुणु इरुणु रवणुणु इघणुवरुहु
Urban Significance	It is one of the largest coordinated urban afforestation drives in recent years.	गण णुणुणु कु ँरुडु रवळ दु ँदु ँनु दु रवणुणुणु टुणुणुणु ँणुणुणुणु शुरुवणुणुणु रवळ दु इडु णुहु

Topic	English	Hindi
Miyawaki Method Origin	Developed by Japanese botanist Akira Miyawaki in the 1970s.	शुभकर सिंह द्वारा 1970 के दशक में विकसित किया गया मिवाकी विधि 1970 के दशक में विकसित की गई।
Key Feature of Miyawaki	Creates dense forests that grow 10 times faster and are 30 times denser than conventional plantations.	गणित द्वारा दिखाया गया है कि ये वन्यजीव 10 गुना तेजी से बढ़ते हैं और 30 गुना घनत्व वाले होते हैं।
Ganga River Importance	Ganga is India's longest river (about 2,525 km) and holds cultural, ecological and economic significance.	गंगा भारत की सबसे लंबी नदी है (लगभग 2,525 किलोमीटर) और सांस्कृतिक, पारिस्थितिक और आर्थिक महत्व रखती है।
Urban Forestry	Urban forests help reduce urban heat island effect and absorb carbon dioxide.	शहरी वन्यजीव शहरी गर्मी द्वीप प्रभाव को कम करते हैं और कार्बन डायऑक्साइड को अवशोषित करते हैं।

Guinness World Records Guinness World Records is headquartered in London, UK.

गिन्नेस अष्ट्र प्रकृत्युत्तर इव रक्षकचक्र चत्रदृष्ट, गन्धर्वसङ्घः श्रद्धात्रणम्ब्र खळ सल पङ्क

India's Afforestation Efforts India's forest and tree cover is about 24% of its geographical area (as per recent India State of Forest Reports).

क्रवधर् इव अष्ट इत्रत्र आल षत्रधर् इत्य क्रवधर्षाड् ल् इव चणकण 24% पङ्क (पङ्कगत्र अष्ट प्रकृत्युत्तर कुं श्रद्धात्रघा)दृ

Constitutional Provision Article 48A and Article 51A(g) of the Indian Constitution emphasize environmental protection.

क्रवधर्हग द्त्रभ्रश्रवष्ट कुं श्रद्धा 48A अघ 51A(g) द्त्रगत्रअधर् द्त्रधर्ल् द्त्रघ ष च ल्ङ्क पङ्कदृ

Related Schemes Green India Mission and National Afforestation Programme promote tree plantation.

इहष्ट स्रभ्रगत्र श्रवट्ट ष अघ घर्नमहग अष्टदधर् इवगत्रद्वर आलधर् इत्य ष प्रवत्र ल्ङ्क पङ्कदृ

- Consider the following statements regarding the Varanasi plantation drive:
- The record was achieved using the Miyawaki plantation method.
- The previous world record for plantation in one hour was held by Japan.
- The plantation drive is part of the Namoo Van urban forest project.
- Which of the statements given above is/are correct?
  - A) 1 and 3 only
  - B) 1 and 2 only
  - C) 2 and 3 only
  - D) 1, 2 and 3

# Micron Opens World's Largest Semiconductor Clean Room in Gujarat



Topic	English	શ્રાવણ
Event	Micron Technology commenced operations at its advanced memory ATMP facility in Gujarat.	મિક્રોન ટેકનોલોજી એ એડવાન્સડ મેમરી સેમિકન્ડક્ટર રિસર્ચ કેન્દ્રને સંપૂર્ણપણે ATMP ઉત્પાદન યુનિટમાં રૂંદાવવાનું શરૂ કર્યું છે.
Date	Operations began in February 2026.	ઉત્પાદન યુનિટનું શરૂઆતી ઇન્ડિયા 2026 સરકાર દ્વારા
Location	Sanand, Gujarat.	સાનંદ, ગુજરાત
Significance	India's first advanced memory Assembly, Testing, Marking and Packaging (ATMP) facility.	કર્ણાટક અને હૃદય કેન્દ્ર સંપૂર્ણપણે શરૂ કરવામાં આવેલ છે, જે એડવાન્સડ મેમરી એસેમ્બલી, ટેસ્ટિંગ, માર્કિંગ અને પેકેજિંગ (ATMP) ઉત્પાદન યુનિટ છે.
Inauguration	Inaugurated by Prime Minister Narendra Modi.	ભારતીય પ્રધાનમંત્રી શ્રી નરેન્દ્ર મોદી દ્વારા ઉદ્ઘાટન કરવામાં આવ્યું છે.
Clean Room Size	5,00,000 square feet raised-floor clean room — largest single semiconductor assembly clean room globally.	5,00,000 ચોરસ ફીટ ઊંચાઈવાળું સુવિધામય સ્વચ્છ કોચ — સર્વવ્યાપક અને સુવિધામય કોચ — સર્વવ્યાપક અને સુવિધામય કોચ
Clean Room Rating	Class 1000 rating (max 1,000 particles per cubic metre).	ક્લેસ 1000 યુનિટ (બેઝીલ દરેક ઘનમીટરમાં 1,000 ડર્) છે
Export & Market	Exports to form major share; domestic demand also served.	આયાતોને મુખ્ય ભાગ આપવામાં આવેલ છે; ઘરેલું માંગ પણ સંતોષવામાં આવેલ છે.
Target Production	Expected to scale close to 1 billion units annually by 2027.	2027 સુધી આયાતોને નજીક 1 બિલિયન યુનિટ્સની વાર્ષિક ઉત્પાદન ક્ષમતા સુધી વધારવાનો આશય છે.

Air Circulation	Air circulated 120 times per hour.	ॐ त्रं 120 ंवघ ञ्रघ्रहृषघ्रु त्रदघ्रु ड
Production Type	DRAM and NAND flash memory assembly and testing.	DRAM ञघ्र NAND च रकृकृह इह श्रुळं चह ञघ्र हघ्रहृल् ड
First Shipment	First finished DRAM module shipped to Dell Technologies.	हृणचत्र लघ्रघ्र DRAM रकृकृघ्र Dell Technologies इह वरुत्र णघ्रवृ
Investment	Total investment of about \$2.7 billion in two phases.	इह दघ्रइत्र रकृ चणकण 2.7 शघ्र म्घ्रघ्र इव श्रुळु ड
Employment	Around 1,300 employees; many fresh engineering graduates.	चणकण 1,300 इववद्वघ्र इह षइ सत्रहृषघ्रघ्रण वलुडु
Training	3–6 months training at Micron facilities in Malaysia and Singapore.	3–6 रकृघ्र इव ॐ ल् रकृकृघ्र ञघ्र श्रु त्रणवृषघ्र रकृडु

Topic	English	श्रात्रळ
ATMP Meaning	Assembly, Testing, Marking and Packaging of semiconductor chips.	द्व्यवहत्रमज्घ श्रती इह शदळ चह, दधहल्, रक्कयण ज्घ ह्यवत्रणदु
DRAM	Dynamic Random Access Memory used as working memory in computers and data centres.	म्वगववद घप्रम्व इष्ट रक्कह न्ना इत्रिजघ ज्घ म्वव्व दळघ रवळ इवगवदहच रक्कह कु चह रवळ दहग्वण पक्कह पक्क
NAND Flash	Non-volatile memory used in SSDs, smartphones and storage devices.	द्व्यवहत्रमज्घ रक्कह न्ना SSD, नवववद्वण ज्घ कक्क दहद्वणइत्र रवळ दहग्वण पक्कह पक्क
India Semiconductor Mission (ISM)	Launched in 2021 with ₹76,000 crore incentive package.	क्रवल् द्व्यवहत्रमज्घ श्रावट 2021 रवळ ₹76,000 इधम इवण ह्य कु दवळ द्क इणुदु
Strategic Importance	Reduces import dependency and strengthens supply chain resilience.	व्वक्क श्रकववद्व इव इधव प्ण ज्घ व्हक्कव क्कचव कु रवणक्क प्वल्व पक्क

Gujarat Advantage	Strong industrial ecosystem, Dholera SIR and semiconductor policy support.	સુબલક્ષ્મ ગુજરાત હોલેરા સીઆર અને સેમિકન્ડક્ટર નીતિ સમર્થન
Global Context	Semiconductor industry is crucial for AI, 5G, EVs and defence technologies.	સેમિકન્ડક્ટર ઉદ્યોગ આઈ, 5જી, ઈવ અને રક્ષણ તકનીકો માટે અત્યંત મહત્વના છે
Clean Room Standard	Clean rooms are classified under ISO 14644 standards.	પ્રશુભ્ધ ચેમ્બર ડાઉન ડ્રાફ્ટ ઈસો 14644 સુધારા માટે
Particle Comparison	Gold bonding wires are thinner than a human hair.	સોલ્ડર વાયરો વધુ સૂક્ષ્મ છે જેમને માનવ વાળ કરતાં પાતળા માને છે
Supply Chain	India currently imports majority of semiconductors, mainly from Taiwan, South Korea and China.	ભારત અત્યંત સૂક્ષ્મ સેમિકન્ડક્ટરોનો મોટા ભાગે ટાઈવાન, દક્ષિણ કોરિયા અને ચીન પર આધાર રાખે છે

- Consider the following statements regarding Micron's Gujarat facility:
- It is India's first advanced memory ATMP facility.
- The clean room is rated Class 10 under ISO standards.
- The facility assembles DRAM and NAND flash memory.
- Which of the above statements is/are correct?
  - A) 1 and 3 only
  - B) 2 and 3 only
  - C) 1 only
  - D) 1, 2 and 3

# India Eyes Israeli 'Sky Sting' Missile for IAF

---



Feature	English	श्रमत्रव्ह
Weight	180–200 kg	180–200 श्रुचक्रव
Range	Up to 250 km (reported)	चणक्रण 250 श्रुक्र लड (प्रघरुब्र श्रुत्रघ)
Speed	Exceeds Mach 5	रकु 5 लु श्रुड
Propulsion	Three-pulse solid-fuel rocket motor	लुण-दुघरुहग श्रुड हत्रु ष घुक्रु रकुघ
Seeker	Radio-frequency seeker with AI-based target discrimination	AI षुक्रु चरु हणदुवु अक्रु घुगु श्रुक्रु लुडुघ
Data Link	Two-way data link for mid-course correction	श्रुक्रु-कुक्रु लुडुघ पुरुशु-श्रु टुवुडु म्रुवु श्रुत्रुडु
ECM Resistance	Jam-resistant and strong electronic countermeasure resistance	लुवु श्रुक्रु श्रु सुचुगुश्रुडु इरुत्रुघरुकुघ कु श्रु लुलुवु

Aircraft

English

श्रात्रव्ह

Tejas Mk1A

Lightweight and compatible

लुदु Mk1A कुं द्रळ  
श्रुत्रुय

Su-30MKI

Compatible

दुदु-30MKI कुं द्रळ  
श्रुत्रुय

Radar  
Integration

Paired with Israeli  
ELM-2052 AESA  
radar

सुधुत्रुय ELM-2052  
AESA घुत्रुय कुं द्रळ  
इदुदु

Dimension

English

श्रात्रः

China Factor

China operates PL-15 long-range BVRAAM (~300 km range).

दृष्टः PL-15 चत्रः लम्ह इह  
श्रवद्रस्य (~300 श्रुवह)  
दृत्रद्वश्रल इधल्व णः

Pakistan Factor

Pakistan uses Chinese PL-15 and AMRAAM variants.

दृष्टः दृष्टः PL-15 अघ  
AMRAAM दृत्रWघरुअत्र इत्र  
दृष्टः इधल्व णः

Force Multiplier

Enhances long-range air superiority capability.

चत्रः लम्ह इह णः ल्व  
ल्वल्व इत्र णः

Local Production

Possible local production with Rafael in India.

क्रवः खळ घत्रः इह दृष्टः  
दृत्रक्रवः त्रिहगे दृष्टः इह

Aspect

English

श्रमलह

Developed By

DRDO

DRDO

Production Agency

Bharat Dynamics Limited (BDL)

कुरधरु मुरगडुगुर शुरशुरवडुगु

Astra Mk1

Range ~110 km

घणकण 110 शुरकुरह

Astra Mk2

Expected >200 km

200 शुरकुरह हुरु शुर इ शुरुकुरल

Astra Mk3

Projected 350 km (SFDR technology)

350 शुरकुरह (हुरुशुरमरु गुर मरुडु घणकुरु लडुहडु)

Concern

Overdependence on imports may affect indigenous missile momentum.

षुगुरल हघ शुरकुरबुरघलुव Sडुह इवुरगुरडुव डुगु बुरकुरशुरल इघ हुरुडुलह णुहु

India Crosses 520  
GW Installed  
Power Capacity

---



Topic

English

श्रमवह

News

India's total installed power capacity has crossed 520 GW.

क्रमवह इह इम क्रमवह श्रमवह लखवह  
520 फहवक्रह ह श्रम इ पक्रह एह पक्रह

Announcement

Stated by Union Minister of State for Power and New & Renewable Energy Shripad Yesso Naik.

गण नखवह रनखवह घृ खत्रहवह क्वहवह  
गक्रह वखवह क्रमवह वह एहवह

Event

India Energy Transition Summit 2026, New Delhi.

सत्रश्रमगवह इवहवह वमखवहवहवह व श्रमवह  
2026, एह श्रमवह

Organiser

Federation of Indian Chambers of Commerce and Industry (FICCI).

वमखवहवह व व सत्रश्रमगवह वखवहवहवह  
व व वमखवहवह व सत्रश्रमगवह  
(FICCI)वह

Key Highlight

More than half of the capacity comes from non-fossil fuel sources.

इम लखवह इव वखवह ह श्रम इ श्रमवह वम  
नखवह वखवह व वमखवहवह व

Target

English

शुभारंभ

2030 Target

500 GW non-fossil fuel capacity by 2030.

2030 लऱु 500 ढुऱुऱुऱुऱु  
ऱुऱुऱुऱुऱु हऱुऱुऱु लऱुऱुऱु इऱु  
ऱुऱुऱु

Net Zero

India committed to Net Zero emissions by 2070.

ऱुऱुऱुऱु 2070 लऱुऱुऱु  
ऱुऱुऱुऱुऱुऱु इऱुऱुऱुऱुऱु  
शुभारंभ

Climate Commitment

Part of India's long-term climate strategy under Paris Agreement.

ऱुऱुऱुऱुऱुऱुऱुऱुऱुऱुऱुऱुऱु  
ऱुऱुऱुऱुऱुऱुऱुऱुऱुऱुऱुऱुऱु  
ऱुऱुऱुऱु इऱुऱुऱुऱुऱुऱुऱुऱु

Topic

GW Meaning

Major Renewable Sources

India's Solar Mission

Green Energy Corridor

COP26 Announcement

Energy Transition

Leading Renewable States

India Rank

English

1 Gigawatt = 1,000 Megawatts = 1 billion watts.

Solar, Wind, Hydro, Biomass, Nuclear.

National Solar Mission launched in 2010.

Infrastructure project for renewable energy transmission.

PM announced 500 GW non-fossil target at Glasgow (2021).

Shift from fossil fuels (coal, oil) to renewable energy.

Rajasthan, Gujarat, Tamil Nadu, Karnataka.

India among top 5 countries in renewable energy capacity.

शुभ्रातु

1 गुररुतु = 1,000 ररुतु = 1 शरुतु  
रुतु

दुतु, हतु, नतु, ररुतु, हतु

रुतु-रुतु दुतुशुतु 2010 ररुतु दुतु ररुतु

रुतुदुतु ररुतु दुतुदुतु ररुतुशुतुदुतुदुतु  
दुतुदुतुदुतु

2021 ररुतुदुतु (COP26) ररुतु 500 GW  
ररुतु ररुतुदुतु

ररुतु हतु (ररुतु, ररुतु) दुतु रुतुदुतु  
ररुतु ररुतुदुतुदुतुदुतु

ररुतु, ररुतु, ररुतुदुतुदुतुदुतु

ररुतु रुतुदुतु ररुतु ररुतु ररुतुदुतु  
5 ररुतु ररुतुदुतु



- 
- Consider the following statements:
  - India has crossed 520 GW of total installed power capacity.
  - India aims to achieve 500 GW of fossil fuel capacity by 2030.
  - India has committed to achieving net zero emissions by 2070.
  - Which of the statements given above is/are correct?
  - A) 1 and 3 only
  - B) 1 and 2 only
  - C) 2 and 3 only
  - D) 1, 2 and 3

---

# Word of the day

## **Trepidation:**

a feeling of alarm or dread

---

**Synonyms:** worry, unease, panic

---

**Usage:** *She waited with trepidation for the phone call.*

---

**Pronunciation:** newsth.live/  
trepidationpro

---

**International Phonetic  
Alphabet:** /trɛpɪdeɪʃən/

---

## **V.V. Ramanan**

### **QUESTION 1**

How many different teams prior to Jammu & Kashmir have won the Ranji Trophy?

### **QUESTION 2**

Which bowler finished the season with 60 wickets?

### **QUESTION 3**

Which team made it to the semifinals for the first time in its history?

### **QUESTION 4**

Who won the Plate Championship for the 2025-26 season by defeating Manipur by a

massive margin of 568 runs in the final?

### **QUESTION 5**

What remarkable feat did Arjun Sharma and Mohit Jhangra of the Services achieve for the first time in the 91-year history of the Ranji Trophy in the match against Assam?

### **QUESTION 6**

The highest individual score in the 2025-26 Ranji Trophy season was the 299 recorded by a batter from a team which made the last four. Name the batter and team.

### **QUESTION 7**

Who was named Player-of-the-tournament?



### **Visual Question:**

Name this batter who amassed the most runs this season (950). EMMANUAL YOGINI

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- Coverage of all major national and international events from **January 2025 to March 2026**
- **20 high-priority topics** explained in depth so you can handle both factual and analytical questions

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**2. Budget & Taxation**

**3. Economic Indicators**

**4. Reports & Indices (India's Rank)**

**5. International Affairs (India + Major Summits)**

**6. Science & Tech**

**7. Environment & Ecology**

**8. Polity & Constitution Updates**

**9. Awards & Honours**

**10. Sports**

**11. Banking & Financial Market**

**12. Defence**

**13. Appointments & Resignations**

**14. Books & Authors**

**15. Important Days & Themes**

**16. Government Committees**

**17. States in News**

**18. India Rankings & Lists**

**19. Sports + Govt Sports Schemes**

**20. Miscellaneous Must-Do**

- All video lectures will be delivered in bilingual format (Hindi + English) to ensure clarity and comfort for every learner.



Thank you 😊