

**DIA, DEOGHAR IAS ACADEMY**

# ***Daily News Feed***

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***D.N.F***

***15.07.2025***

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# The two-state reality we see today

**P**erhaps the only surviving relic of the long-targeted peace process and decades of futile negotiations intended to end Palestinian suffering is the continued talk of the two-state solution. All the other once-sacred phrases – ‘land for peace,’ ‘confidence-building measures,’ ‘final status issues’ – have faded from headlines and memory alike. Yet today, the international community – everyone but Israel and its staunch patron, the United States – continues to parrot the words ‘two-state solution’ as if they have just discovered a miracle, or reinvented the wheel.

But even a cursory glance at United Nations General Assembly Resolution 181, known as the Partition Plan of Palestine, reveals that the essence of the two-state solution lies within it. Passed in 1947, it called for the creation of two states – one for the Jewish and one for the Palestinians – on the land of historic Palestine. It is, in every sense, the birth certificate of the two-state idea. Yet, in practice, it gave birth to only one state: Israel. The Palestinian state remains unborn. It is trapped in legal text, denied by force, and smothered by a chronic lack of international political will.

## A ‘two-state’ reality

Ironically, if we examine the ground today, we can see that a two-state reality has indeed taken form – but both are Israel’s. The first state is the one declared on May 14, 1948, established through the expulsion and ethnic cleansing of the indigenous Palestinian people on 78% of the historical land of Palestine.

The second is rising now on the remaining 22% of the historical land of Palestine, within the borders of the 1967-occupied Palestinian territories: a de facto Jewish messianic state. We can refer to it as the Halakha state – or more plainly, the settler messianic state. It has its own armed militias, openly backed by the Israeli army; its own budget; its own political infrastructure. It is ruled not by



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Ambassador of State of Palestine to India

The world must stop treating Israel as a state above international law and indulging it as though it is a spoiled, reckless adolescent

Tel Aviv, but by the Yesha Council, an acronym for Yehuda (Judea), Shomron (Samaria), and Aza (Gaza), and subdivided into semi-autonomous regions: the Shomron, Gush Etzion, and Binyamin Regional Councils. Each functions like a federal entity within a greater settler theocracy.

This second state was conceived on the very day Israel occupied the West Bank, including East Jerusalem, and Gaza in 1967. Since then, a stream of legal documents, military orders, appropriated Ottoman and British Mandate laws, and selectively applied Israeli legislation have built its legal scaffolding. This carefully crafted system is meant not only to entrench this parallel state, but also to render the internationally supported two-state solution obsolete.

Israel has grown accustomed, perhaps even addicted, to the diplomatic niceties of international officials, knowing they hold no real consequence. Worse, Israel has now developed a counter-logic, bolstered by its allies, to challenge the very foundations of the two-state vision. The current U.S. Ambassador to Israel, for instance, has gone so far as to claim there is “no such thing” as Palestinians.” This genocidal rhetoric has been met by the international community with blind eyes at best and silent complicity at worst.

By signing the Oslo Accords in the early 1990s, the Palestinian leadership made a historic and painful concession: they agreed to establish their future state on just 22% of their ancestral homeland – Palestine. This was not easy. Even UN Resolution 181 had originally allocated 46% of historic Palestine to the Palestinian state.

## At a crossroads

Today, the international community stands at a crossroads. Will it act decisively in favour of a just and rational two-state solution that ends the Palestinian tragedy and brings a sustainable peace for all? Or will it continue to turn a blind eye to the entrenchment of

the messianic and evangelical vision that guarantees only bloodshed and despair for Palestinians on their homeland?

This is not just a policy debate; it is a moral test. While a genocidal war is being livestreamed to every screen around the world, we must confront a fundamental truth: there can be no peace without justice. There can be no lasting solution without granting the Palestinian people their basic rights, foremost among them the right to self-determination.

International law, human rights, and humanitarian principles must be applied equally and universally. If the world continues to let Israel, an occupying power, expand and maintain its illegal settlements instead of compelling it to dismantle them, the so-called Halakha state will not only be established in the West Bank, but it will also increasingly dominate and redefine the entire Israeli state. That outcome would be a disaster for Palestine, the whole region, and the world.

The international community has the tools for action. Recently, powerful countries implemented over 16,500 sanctions against Russia. Yet, they remain unable – or unwilling – to adopt even a single meaningful sanction against Israel. On the contrary, Israel continues to receive unconditional military and intelligence support, while the cost to Palestinians exceeds 54,000 lives and counting. From economic sanctions, arms embargoes, and diplomatic pressure to legal accountability in international courts, the tools are within reach but there is no political will.

The world must stop treating Israel as a state above international law and indulging it as though it is a spoiled, reckless adolescent. Accountability is not a luxury; it is a necessity. It is the only path to peace. This may well be the final warning before apocalyptic fantasies turn into a devastating global reality, replacing the two-state solution with endless war.



# Women, STEM careers and a more receptive industry

Every year on July 15, as we observe World Youth Skills Day, we are reminded that skills development is fundamental to reducing unemployment and promoting decent work. India faces a critical paradox: 43% of India's STEM graduates are women, the highest proportion among major economies globally. Yet, women represent only 27% of the STEM workforce, limiting women's access to career opportunities offered by the STEM sector.

According to the Periodic Labour Force Survey (PLFS) 2023-24, India's overall female labour force participation rate (FLFPR) has risen to 41.7%, a meaningful jump after years of stagnation. However, the increase is sharper for rural women (47.6%) than in urban areas (25.4%), reflecting barriers in formal employment, workplace safety, and societal expectations. In STEM, the paradox is more pronounced. According to the UNESCO Institute for Statistics (2021), only 31.5% of researchers worldwide are women. This education-employment gap reflects systemic barriers that industry is uniquely positioned to address. The economic stakes are clear. According to estimates by the McKinsey Global Institute, enabling 68 million more women to participate in India's workforce could boost India's GDP by up to \$700 billion by 2025. Similarly, the World Bank suggests that achieving a 50% female workforce participation rate could elevate GDP growth by 1%.

## Government vision and STEM skilling

The New Education Policy (NEP) 2020 paved the way for higher retention and opportunities in the fields of STEM. The nodal Ministry of Education (MoE) has integrated education with skills development and life skills training. The Government's renewed focus on revitalising Industrial Training Institutes (ITIs) and expanding



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World Youth Skills Day is a reminder that industry is losing out by not investing in STEM careers for India's women

vocational skilling is bringing high-quality technical education and training closer to villages and small towns, ensuring broader access for youth across rural India.

This progress aligns with the Prime Minister's vision of Viksit Bharat (or developed India), where women's economic mobility forms the cornerstone of inclusive development. The share of the gender budget in the total national Budget has increased from 6.8% in 2024-25 to 8.8% in 2025-26 with ₹4.49 lakh crore in allocation toward gender-specific programmes.

Further, the Union Budget 2025-26 introduced term loans for women entrepreneurs, new National Skill Training Institutes, and investments in technology-driven skilling. India's policy framework, from Skill India to Digital India, and from 'Beti Bachao, Beti Padhao' to PM Vishwakarma Yojana, has the right intent. However, government policy alone cannot bridge the education-employment gap. Industry must transform from passive recruiter to active enabler of women's career transitions.

## Industry as the missing link

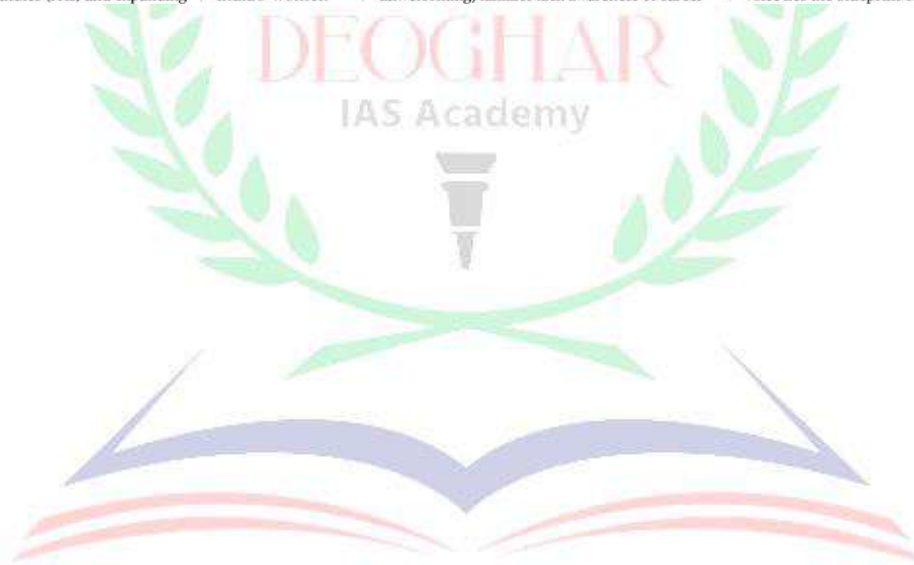
Industry plays a critical role in bridging the gap between skilling and employment, especially for women. Persistent social norms, such as the belief that "mechanical means masculine" or that "coding isn't for girls", continue to create invisible barriers for skilled women entering technical fields. These stereotypes are well-documented in multiple studies, including those by the World Bank and UNESCO, which highlight how gendered perceptions limit women's participation in STEM and technical trades. Evidence also shows that women do not leave STEM fields due to a lack of ability, but instead because workplaces are often unwelcoming, families lack awareness of career

opportunities, and roles remain deeply gendered. Addressing these perceptions, alongside ensuring workplace safety, equitable pay, and support for career transitions related to marriage, childbirth, and caregiving, is key to unlocking the full potential of the workforce.

India's private sector is increasingly stepping up, with many companies championing structured mentoring programmes, industry-linked training initiatives and partnerships with educational institutions to create direct pathways from classrooms to careers. One such initiative is the UN Women's WeSTEM programme, being implemented in collaboration with the Governments of Madhya Pradesh and Gujarat, and supported by the Micron Foundation. This programme provides access to skills and bridges the talent gap. By engaging families and community leaders, conducting workplace safety sessions, and introducing women role models in classrooms, the programme recognises that skill-building requires a shift in mindsets to be effective.

## A blueprint for industry leadership

Industry partnerships with educational institutions, mentorship networks linking professionals with students, and workplace policies that accommodate life transitions and ensure safety, can bridge the education-employment gap. The question is not whether India can afford to invest in women's STEM careers. It is whether industry can afford not to. By equipping women and girls with the skills and training needed to succeed in STEM fields, we can create a more inclusive and robust society. When a woman earns, her voice and impact echoes across dinner tables, shop floors, policy rooms and entire industries. And in that voice lies the blueprint of a future ready India.



# The importance of India and Europe walking in step

In a world increasingly marked by disorder and divergence, as foreign policy mavens cast about for new policy initiatives, the India-Europe relationship stands as a compelling case for diplomatic renewal – rooted in civilisational depth, yet animated by contemporary relevance. If history has often rendered them distant participants in each other's geopolitical imagination, the present moment demands – and enables – a more purposeful engagement.

Prime Minister Narendra Modi's G-7 diplomacy and External Affairs Minister S. Jaishankar's renewed focus on Europe reflect a conscious pivot towards a continent in flux. This is not merely a recognition of Europe's enduring economic weight or cultural capital; it is an astute reading of the evolving global chessboard, where yesterday's alliances are fraying, and new solidarities are emerging across the hemispheres.

## An order upended, a partnership emerging

The transatlantic realm, long anchored by American leadership, finds itself adrift amidst United States President Donald Trump's iconoclasm. His transactional world view, scepticism towards the North Atlantic Treaty Organization, disdain for traditional allies, and dalliance with adversaries such as Russian President Vladimir Putin have unnerved Washington's most steadfast partners. The G-7, once the de facto board of directors for global governance, convened last month not in consensus, but in contention.

For Canada, the United Kingdom, Germany, and France – each recalibrating their foreign policies – the strategic logic of looking eastward has grown sharper. Canada, disentangling itself from overdependence on the U.S., now seeks deeper integration with Europe and emerging powers such as India (the hiccup over its molycoddling of Khalistani extremists notwithstanding). The U.K., shedding its Brexit-era illusions, embraces renewed continental ties. And Germany, awakened from strategic somnolence, has embarked on a path of defence investment and industrial reinvention. In this milieu, Europe is striving not simply to stay relevant but to become a pole of power in its own right.

The rhetoric of "strategic autonomy", once French fancy, is now echoed in Berlin, Warsaw, and Brussels alike. From French President Emmanuel Macron's nuclear umbrella to Germany's constitutional recalibration for military spending, and the Weimar Triangle's assertiveness in central Europe, the project of European reinvention is well underway.

India's external engagement, long characterised by prudence and non-alignment, is morphing into a more assertive posture of



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Their shared values and strategic compulsions can lead to a partnership of conviction and result in a more stable and equitable world

"multi-alignment". In a world veering toward bipolar rivalry between the U.S. and China, India and Europe, both aspirational middle powers, find common cause in championing a multipolar order that is anchored in international law, inclusive institutions and plural values. This convergence plays out on several fronts. The India-European Union (EU) engagement now unfolds on two levels. Institutionally, the EU and India are expanding their long-standing dialogue in areas of shared and exclusive competencies – from trade and technology to security and climate change. Bilaterally, ties with major member states – France, Germany, Italy and, increasingly, the Nordic and Eastern European nations – are acquiring greater strategic depth.

## Economic ties as a corridor of opportunity

Few statistics capture the potential of this moment better than the startling rise in bilateral trade and investment. Between 2015 and 2022, EU foreign direct investment in India grew by 70%, with France's investments alone skyrocketing by 373%. In the last three years, EU imports from India have doubled, underscoring New Delhi's growing economic magnetism. Yet, India and Europe are still only scratching the surface.

The much-anticipated India-EU Trade and Investment Agreements must now be fast-tracked with an "early harvest" accord that shows some sensitivity to India's green transition. The European Carbon Border Adjustment Mechanism, laudable in spirit, must be reinterpreted through the lens of equity. Climate ambition must never become climate protectionism. The India-Middle East-Europe Economic Corridor (IMEC) can become a modern Silk Road linking geographies not only in trade, but also in enterprise, energy, and innovation. It is an answer to the Indo-Pacific's demand for infrastructure that is transparent, sustainable and sovereign in spirit.

Perhaps the most exciting frontier lies in technology. India and Europe both view digital architecture not as a proprietary domain of Big Tech but as public infrastructure for the global good. As Mr. Modi observed at the AI Action Summit, the partnership can span the entire digital lifecycle – from innovation to governance, from standards to regulation. Europe's leadership in deep tech, digital manufacturing, and semiconductors dovetails with India's dynamism in software, digital public goods and scalable platforms. Together, they can lead in clean energy innovation, biotechnology, ocean sustainability, food security and resilient health-care systems.

To harness this, both sides must invest in human mobility. A comprehensive mobility agreement for students, scientists and scholars

will enrich talent pools, ease Indian unemployment and fertilise bilateral innovation. In the age of ideas, cross-border thinkers are as valuable as cross-border capital.

Strategic alignment now extends to defence and counter-terrorism. Europe remains an important source of armaments for India, and as both sides seek self-reliance – India under Atmanirbhar Bharat, Europe through ReArm 2025 – there is scope for unprecedented co-development and technology transfer. Maritime cooperation, cyber security, space collaboration, and joint responses to terrorism offer a template for trust. Europe must also adopt a firmer line on Pakistan's enabling of Islamist extremism – an issue that has scarred both sides. Technical cooperation is not enough; political will must follow.

In a world where great powers often behave as if might is right, middle powers such as India and Europe must act as custodians of a rules-based order. Not as relics of a liberal utopia, but as realists pursuing stability through coalitions, not coercion. Their shared belief in multilateralism, in resisting hegemonic binaries and in empowering the Global South with inclusive frameworks, sets them apart from more prescriptive paradigms. This ethic must shape their joint leadership in forums from the United Nations to the World Trade Organization (WTO), and from the Quad (Australia, India, Japan, U.S.) to the Artificial Intelligence (AI) governance tables.

## Changing minds, not just policies

Finally, let us not underestimate the power of perception. Public sentiment, media narratives and political attention must align with strategic intent. Relationships flourish not merely through summits and statistics, but through empathy, imagination and sustained effort. Europe must move beyond stereotypes of India as a reluctant partner; India must appreciate Europe's complex transitions with greater nuance. The Raisina Dialogue in Marseille (June 2025), the President of the European Commission, Ursula von der Leyen's symbolic visit to Delhi (February 2025), and India's diplomatic investment in the Mediterranean and Nordic regions, are all promising steps.

If the last decade taught us that history has a sense of humour (think of our relations with the two iterations of the Trump Administration), the coming one demands we have a sense of purpose. India and Europe, long circling one another, must now walk in step knowing that their shared values and strategic compulsions form a partnership not of convenience, but conviction. For in each other, they may just find not a mirror, but a window to a more stable, inclusive and equitable world.





# Scientists find pheromone that causes locusts to swarm and a way to block it

In a new proof of concept, researchers from the Institute of Zoology at the Chinese Academy of Sciences in Beijing have shown that it's possible to manipulate pheromones released by locusts to prevent them from swarming or engaging in group behaviour that leads to the feeding frenzy

Sandhya Ramesh

**H**uman societies have struggled to fend off locust infestations for millennia. The insects' destructive effects persist to this day, especially when they collect in large swarms and eat through thousands of hectares of crops in a matter of days. Such swarms have occurred once every few years of late. Most recently, in 2019-2020, a record number of locusts emerged in East Africa and eventually passed through Pakistan and India, making it the region's worst infestation in 25 years.

In the last century or so, experts and farmers have tried to control locusts using synthetic pesticides, but unfortunately they also damage the land, food security, and the environment. Thus finding suitable, eco-friendly alternatives to pesticides has been an active area of research.

In a new proof of concept, researchers from the Institute of Zoology at the Chinese Academy of Sciences in Beijing, have shown that it's possible to manipulate pheromones released by locusts to prevent them from swarming or engaging in group behaviour that leads to the feeding frenzy. The team was able to identify the pheromone responsible for triggering swarming and also tested a candidate molecule to block its function.

The study, published in *Nature* on June 25, also recommended more research to identify other molecules that can safely keep locusts from swarming, including at large scales. Overall, the study offers potentially one of the earliest pollution-free solutions for locust control.

## Jiving to jump

Several animal, bird, and insect species – including locusts – exhibit a social behaviour called gregariousness: it helps them form societies in which large numbers of individuals work together, instead of competing, in order to survive. In the first phase of their lives, individual locusts are solitary creatures; then they transition to their gregarious phase and begin to collect and operate in physical groups, including feeding together.

Scientists have sought to identify the hormones that trigger this behaviour for many decades now. In fact the same team behind the new study had identified a pheromone of interest, called 4-vinylanisole (4VA), in 2020.

After a locust eats food, it often emits large quantities of 4VA from its hind legs. This hormone is an aggregation pheromone: it promptly begins to attract other members of the species when it's released into the air. Other locusts nearby subsequently collect together and rub their hind legs against each other. This in turn triggers the release of serotonin, a neurotransmitter, which leads to swarming.

In the new study, the researchers figured that preventing locusts from releasing 4VA could potentially prevent swarming, so they set to work on understanding its production.

Locusts release 4VA only after they eat, which means certain molecules in the plants that locusts feed on could be triggering its production. The researchers figured right: the culprit was a compound called phenylalanine.

When locusts digested phenylalanine, two enzymes – mainly 4VPMT1 and



The UN Food and Agriculture Organization has estimated that 1 sq. km of swarming locusts, numbering about 40 million, can eat as much in a day as 35,000 people. GETTY IMAGES

4VPMT2 less so – were found to be responsible for converting the non-aggregating pheromone 4VP into solitary locusts into the aggregating pheromone 4VA. To confirm the link, the researchers turned to genetic engineering. When they deactivated the gene that encoded for 4VPMT1, the insects stopped transitioning from their solitary to gregarious phases and didn't exhibit any swarming tendencies.

## Molecular deactivation

The researchers also studied how the 4VP molecule bound to the 4VPMT1 enzyme and the amino acids on its structure. Then they identified chemically similar molecules that could bind to the enzyme. When they did, they'd block the receptor for the 4VP molecule, thus stopping enzyme activity and preventing it from converting to 4VA.

Among the many molecules the researchers studied, they found 4-nitrophenol (4NP) fit the two 4VPMTs' binding sites the best as well as prevented the biosynthesis of 4VA.

Xiaojiao Guo, the first author of the paper and insect behaviour researcher at the State Key Laboratory of Integrated Management of Pests and Rodents with a focus on locusts, said locusts' bodies could synthesise the 4VA in only two steps, so the team needed a way to precisely regulate the expression of the 4VPMT enzymes and quickly halt the release of 4VA.

"The two 4VPMTs are key enzymes in the biosynthesis of 4VA and are important targets for inhibiting locust aggregation," Guo said.

"It's worth noting that the binding affinity of 4NP to the 4VPMTs is higher than that of 4VP, thus it can competitively occupy the enzyme's active site."

"From the perspective of protein



As an alternative to small-molecule inhibitors, RNAi insecticides targeting 4VPMTs could also be developed to control locust swarming behaviours

structural characteristics, the specific interaction between 4NP and 4VPMTs ensures the selectivity of the inhibitor and minimizes the off-target effects when interfering with other metabolic pathways. Therefore, the small molecule regulation of 4VA biosynthesis is an efficient strategy for sustainable locust plague management," she added.

There is one catch, however: nitrophenols can be dangerous in an open environment.

Industries widely use compounds like 4-nitrophenols to make dyes, darken leather, and manufacture drugs – and in fungicides and insecticides. The compounds are toxic and are often detected in polluted water and in hazardous waste. They also persist in the environment for a while – roughly two weeks in soil and over two months in sea water – and have shown to irritate the eyes, skin, and airways in humans.

"As an alternative to small-molecule inhibitors, RNAi insecticides targeting 4VPMTs could also be developed to control locust swarming behaviours," the team wrote in the published paper. RNAi is a process in which RNA molecules are used to prevent genes from being expressed inside cells, preventing the corresponding proteins (including enzymes) from being produced.

## Non-toxic insecticides

In a swarm, the millions of locusts eat their own body weight in food and can fly

more than 150 km in a day.

Human attempts to tame these swarms go back thousands of years, and have taken forms like creating noise and smoke and even shooting arrows.

In the 19th century chemical insecticides came to the fore. Even today, spraying locust swarms in the air with insecticides is still the most commonly used method, and its efficacy is unclear.

The 2019-2020 swarm originated in East Africa after heavy rains and floods created the right conditions for dormant locust eggs to come to life, rendering an 8000-fold increase in the insects' numbers.

The havoc they subsequently wrought reminded the world to develop an effective control strategy.

In one response, for example, scientists from 34 organisations worldwide penned an article in *Journal of Orthoptera Research* detailing major topics of interest vis-à-vis swarming behaviour and organisational weaknesses in the field that allowed the problem to persist.

As alternatives to 4NP, this paper identified seven candidate compounds for further study.

Likewise, the Guo et al. study also proposed a five-step locust control strategy: using synthetic or other 4VA substitutes to attract locusts to a trapping area, where they can be killed by fungal pathogens or pesticides at a small scale; spraying 4VA to prevent aggregation; monitoring population dynamics by tracking 4VA signatures; releasing genetically modified locusts into the field to establish non-gregarious populations; and using the combined strategy of small-molecule regulators in conjunction with biopesticides.

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# Centre defends new coal plant rules, calls them cost-effective

**Jacob Koshy**  
NEW DELHI

The Ministry of Environment and Forests said in a note on Monday that its recent decision to exempt a majority of thermal power plants from installing flue gas desulphurisation (FGD) units was a “scientifically justified shift towards more targeted, cost-effective and climate-coherent regulation” and not a rollback of environmental safeguards.

FGD units are used to cut sulphur dioxide emissions from coal plants and in 2015, the Ministry had made the systems mandatory for all thermal plants. However, only 8% of India’s roughly 180 coal plants have done so. The other plants have received multiple extensions from the Ministry for reasons such as limited availability of these units and high cost. The latest order, ho-



**Revised norms:** Under the new rules, only about 11% of India’s 600 thermal power units have to install FGD systems. R.V. MOORTHY

wever, says only a minority of plants – 22% – located in major cities with a history of poor air quality need to install these units.

The revised policy, its note says, reflects India’s “...declining ambient sulphur dioxide levels, the limited role of sulphur dioxide levels in driving PM2.5 health impacts and... the disproportionate resource and environmental costs of indiscriminate FGD man-

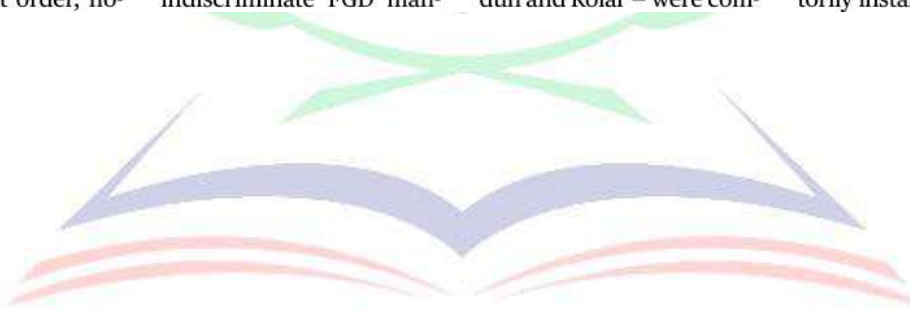
dates”. The Ministry’s note was in response to “media reports”.

According to the Ministry, India’s annual sulphur dioxide concentration standard of 50 microgram/cubic metre is more stringent than Japan (66), European Union (52.4) and Australia (66). A 2023 measurement in 492 cities, the Ministry said, found that all but two – Dehradun and Kolar – were com-

pliant. Indian coal was naturally low in sulphur (0.5% of weight) but had high ash content and therefore led to low sulphur dioxide concentrations. Studies had shown that cities with thermal power plants that have FGD technology and those without FGD technology didn’t show any “significant difference” in sulphur dioxide concentrations, it said.

“Eliminating all sulphur dioxide emissions would only result in a marginal improvement of particulate matter concentrations... At ₹1.2 crore per MW, the capital expense of installing FGD would be ₹2.54 lakh crore and would only bring about a marginal benefit,” it said.

Under new rules, only about 11% of India’s 600 thermal power units – a single plant can have multiple units – have to mandatorily install FGD systems.



# Researchers gear up to study seeds that were sent to space

**The Hindu Bureau**  
THIRUVANANTHAPURAM

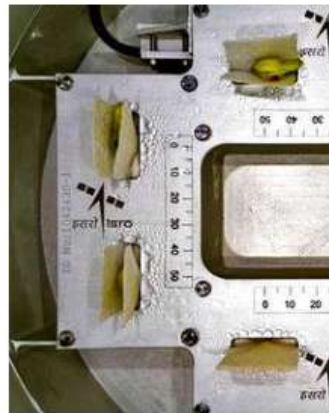
With Group Captain Shubhanshu Shukla and the rest of the Axiom-4 crew expected back on earth on Tuesday, the Indian Institute of Space Science and Technology (IIST) here is preparing for post-flight field studies using the crop seeds that were sent to the International Space Station (ISS) aboard the high-profile mission.

Post-flight studies will be conducted in collaboration with the Kerala Agricultural University (KAU), which released the seeds for the project, according to IIST sources.

Seeds of Jyothi and Uma rice varieties, Kanakamani (horse gram), Vellayani Vijay (tomato), Thilakathara (sesame) and Soorya (brinjal/eggplant) were sent to the ISS under the “Crop Seeds on ISS”, a project spearheaded by the IIST’s Space Biology Lab.

The IIST officials said they expected the seeds to reach Thiruvananthapuram within a few days.

The biology payload consisted of dry seeds that were packed and exposed to microgravity conditions on the ISS and returned to earth. Back on earth, the space-returned samples



Seeds of two rice varieties, horse gram, tomato, sesame and brinjal were sent to the ISS.

will be grown to assess the unique effects of microgravity on growth and yield parameters and how it will be manifested in growth.

Comparative studies will be carried out using three sets of samples under different conditions.

The “Crop Seeds on ISS” project was the result of multi-level memorandums of understanding between the ISRO and the European Space Agency, the ISRO’s Human Spaceflight Centre (HSFC) and the IIST, and the IIST and the KAU.

IIST Vice-Chancellor Dipankar Banerjee and HSFC Director D.K. Singh had inked an MoU in this regard in May. K.G. Sreejalakshmi, Professor, IIST, is the Principal Investigator of the project.



# After 18 days on ISS, Shukla begins return trip to earth

The Dragon spacecraft carrying the four crew members is expected to splash down off the California coast around 3 p.m. today; Shukla will undergo a rehabilitation programme for a week

**Hemanth C.S.**  
BENGALURU

**A**fter spending 18 days on the International Space Station (ISS), Indian astronaut Group Captain Shubhanshu Shukla and his Axiom Mission 4 (Ax-4) crew members departed from the orbiting laboratory on Monday aboard the SpaceX Dragon.

The return journey to earth commenced at 4.45 p.m. as the Dragon autonomously undocked from the forward-facing port of the ISS's Harmony module.

The journey would take about 22.5 hours. The Dragon is expected to splash down in the Pacific Ocean off the California coast approximately at 3 p.m. on Tuesday.

Group Captain Shukla is the pilot for the Ax-4 mission. The other crew members are Commander Peggy Whitson of the U.S., Mission Specialist Sławosz Uznański-Wiśniewski of Poland, and Mission Specialist Tibor Kapu of Hungary. "After approximately 433 hours, 18 days, and 288 orbits around earth covering nearly 7.6 million miles



**Team work:** Shubhanshu Shukla with other crew members of the Axiom-4 mission and the International Space Station. PTI

since docking with the ISS, the Ax-4 crew is officially homeward bound," Axiom Space said.

There are seven phases the Dragon spacecraft will encounter on its return journey. The first one is the departure burns where the Dragon performed four small burns to move away from the ISS on Monday.

This will be followed by the phasing burns in which the Dragon will perform a series of orbit-lowering manoeuvres that will line

up its ground track with the desired landing location. The next is the deorbit burn, which is scheduled at 2.07 p.m. on Tuesday. SpaceX said after the deorbit burns are completed, the flight computer will jettison the trunk to safely splash down in the Pacific Ocean ahead of atmospheric re-entry.

The next is the re-entry phase during which the Dragon will experience significant heating and drag as it re-enters earth's at-

## 'He completed all 7 experiments'

Group Captain Shubhanshu Shukla has completed all seven microgravity experiments, the Indian Space Research Organisation said on Monday. The astronaut achieved "a significant milestone in the mission. Experiments on Indian strain of tardigrades, myogenesis, sprouting of fenugreek and green gram seeds, cyanobacteria, microalgae, crop seeds and voyager display have been completed as planned", the agency said.

mosphere. The penultimate phase is where the parachutes deploy.

In the final splashdown phase under four main parachutes, the Dragon will splash down at a velocity of 27 kilometres per hour and autonomously releases its parachutes. A Space X recovery vessel will pick up the crew from the sea.

According to the ISRO, Group Captain Shukla will undergo a rehabilitation programme for about a week to adapt to gravity.



# New Governors for Haryana Goa; Ladakh gets new L-G

Kavinder Gupta appointed Lieutenant-Governor of Ladakh; Ashok Gajapathi Raju is the new Governor of Goa, and Ashim Kumar Ghosh to take charge as the Governor of Haryana

**The Hindu Bureau**  
NEW DELHI

**F**ormer Deputy Chief Minister of Jammu and Kashmir Kavinder Gupta was appointed Lieutenant-Governor of Ladakh on Monday, replacing B.D Mishra, a communication by the President's Secretariat said. The President has accepted the resignation of Brigadier Mishra (retd), the statement said.

Former Civil Aviation Minister Pusapati Ashok Gajapathi Raju was appointed Governor of Goa and a senior Bharatiya Janata Party (BJP) leader from West Bengal, Ashim Kumar Ghosh, was appointed Governor of Haryana.

The appointments will take effect from the dates they will assume charge, the statement said.

Brigadier Mishra (87) was appointed to the post on February 12, 2023 on removal of R.K Mathur, a retired bureaucrat.



(From left) Kavinder Gupta, Ashim Kumar Ghosh and Pusapati Ashok Gajapathi Raju appointed as Lieutenant Governor of Ladakh, Governor of Haryana and Governor of Goa respectively, on Monday. ANI

Mr. Gupta belongs to Jammu and he served as the Mayor of Jammu for three consecutive terms from 2005 to 2010. He is also a national executive member of the BJP.

The fresh appointment of Mr. Gupta comes in the wake of a fresh agitation call given by the Ladakh civil society groups on demands for statehood and constitutional safeguards.

After the special status of Jammu and Kashmir under Article 370 was read down by Parliament on August 5, 2019, civil society groups in Ladakh erupted in protests, demanding

protection of land, resources and employment.

Mr. Raju, a senior Telugu Desam Party (TDP) leader from Andhra Pradesh, will succeed P.S Sreedharan Pillai as the Goa Governor. Mr. Pillai was sworn in as the Governor of Goa on July 15, 2021.

Mr. Raju (74) served as the Civil Aviation Minister between May 27, 2014 and March 10, 2018 under Prime Minister Narendra Modi.

Mr. Ghosh, who headed the party's West Bengal unit between 1999 and 2002, will succeed Bandaru Dattatreya as Haryana Gover-

nor. A former Labour and Employment Minister, Mr. Dattatreya assumed charge as Governor of Haryana on July 15, 2021.

Mr. Ghosh was born in 1944 in Howrah, West Bengal. He joined the BJP in 1991 and was a long-time member of the State Intellectual Cell.

In 1996, Mr. Ghosh became the State Secretary of the BJP and in 1998, he was appointed State vice-president. From 1999 to 2002, he served as the State president of West Bengal BJP. He was a member of the BJP National Executive from 2004 to 2006.

# Abuse of right to free speech increasing on social media, says SC

**The Hindu Bureau**

NEW DELHI

The Supreme Court on Monday said the right to free speech was increasingly being abused, especially on social media, and called for self-restraint and regulation.

A Bench of Justices B.V. Nagarathna and K.V. Viswanathan said the right to freedom of speech and expression carried with it reasonable restrictions. Using free speech to instigate divisive tendencies, at least on social media, needed to be curbed.

## **Calls for framework**

The court mulled framing guidelines to regulate abusive and divisive social media posts. "We are not speaking about censorship. But in the interest of fraternity, secularism and dignity of individuals... We will have to go into this beyond this petition," the Bench said.

The court was hearing a petition filed by Kolkata resident Wazahat Khan seeking the consolidation of the FIRs registered in different States over his social media posts. The FIRs against Mr. Khan were registered soon after his complaint led to the arrest of social media influencer Sharmistha Panoli over her social media posts.



The top court also mulled framing guidelines to regulate abusive content. FILE PHOTO

Expressing concern about vitriolic social media engagements, Justice Viswanathan said only greater fraternity among citizens would reduce mutual hatred.

"If citizens want to enjoy the fundamental right of speech and expression, it should be with reasonable restrictions. There must be self-restraint and regulation," Justice Nagarathna said.

The Bench said the State had its own limitations in curbing free speech to avoid disharmony. "Why can't citizens regulate themselves? Citizens must know the value of freedom of speech and expression.... If they don't, the State will have to step in...nobody wants the State to step in," Justice Nagarathna remarked.

The court posted the case after four weeks.



# Famous for its rhinos, Kaziranga records high diversity of grassland birds in survey

**The Hindu Bureau**

GUWAHATI

Researchers have found a great diversity of grassland bird species in the Kaziranga National Park and Tiger Reserve.

In the first such survey of avians conducted between March 18 and May 25, a team of forest officials, bird experts, scientists, and conservationists recorded 43 grassland species across Kaziranga's three wildlife divisions. The survey report was released on Monday, marking a milestone in the documentation and protection of grassland-dependent bird species in the Brahmaputra floodplains.

They included the critically endangered Bengal florican, the endangered Finn's weaver, and the



A colony of Finn's weaver in the Kohora Range of Kaziranga National Park and Tiger Reserve. SPECIAL ARRANGEMENT

swamp grass babbler. Among the remaining 40 species, six were in the vulnerable category – the black-breasted parrotbill, marsh babbler, swamp francolin, Jerdon's babbler, slender-billed babbler, and bristled grassbird.

"A highlight of this survey is that the Finn's weaver, locally known as *tukura chorai*, is breeding successfully. This remarkable bird, a master nest-builder atop trees, is a vital indicator of grassland health," Assam's Environment Minister Chandra Mohan Patowary said while releasing the report. The 1,174 sq. km Kaziranga is a mix of grasslands,

forestlands, and wetlands. "The study is significant because wet grasslands are not very well surveyed in India. Kaziranga's grassland bird diversity can, thus, be compared in terms of species richness with the dry grasslands of Gujarat and Rajasthan," the national park's director, Sonali Ghosh, said.

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"The study is significant because wet grasslands are not very well surveyed in India. Kaziranga's grassland bird diversity can, thus, be compared in terms of species richness with the dry grasslands of Gujarat and Rajasthan," the national park's director, Sonali Ghosh, said.

## New recording tool

A key highlight of the study was the deployment of passive acoustic recorders, enabling non-invasive and continuous monitoring even in inaccessible or high-risk areas. This approach significantly improved species detection, especially of shy and cryptic birds, enhancing the overall accuracy and depth of the findings.



# Inflation continues to cool as food prices, crude rates dip

Retail inflation at a 77-month low of 2.1% in June as food inflation falls for the eighth consecutive month; wholesale inflation eases after 20 months aided by drop in crude oil prices; food inflation likely to remain contained going forward, says expert

**T.C.A. Sharad Raghavan**  
NEW DELHI

**I**nflation continued to cool in June with retail inflation coming in at a 77-month low of 2.1% and wholesale inflation registering a contraction after 20 months. In both cases, easing food prices were a major driver of falling inflation, while the drop in crude oil prices further pushed wholesale inflation down.

According to the Consumer Price Index (CPI) for June released by the Ministry of Statistics and Programme Implementation on Monday, the last time the growth in the index was lower was in January 2019.

The -0.13% reading in the Wholesale Price Index

## Downward trend

Retail inflation eased to 2.1% in June, down from 2.82% in May. This is also the lowest year-on-year inflation since January 2019



(WPI), released by the Ministry of Commerce and Industry, was last lower in October 2023.

Within the CPI, the food and beverages category was the only main one to have seen a contraction, of 0.2%, in June. This is com-

pared with inflation of 8.4% in June 2024. This is the eighth consecutive month of easing food inflation.

### Looking ahead

"In the food basket, there was deflation in key items

such as vegetables, pulses, spices, and meat," Rajani Sinha, Chief Economist at CareEdge Ratings, said.

"Looking ahead, food inflation is likely to remain contained, supported by healthy agricultural activity and a favourable base," Ms. Sinha said.

In the fuel and light category of the CPI, inflation eased to a three-month low of 2.55% in June, down from 2.8% in May. What further emphasises the slow growth in retail fuel prices is that the relatively low inflation rate in June came on the back of an even lower base of -3.6% in June 2024.

While inflation in the *paan*, tobacco, and intoxicants category remained flat at 2.4%, inflation in the housing segment inched

up to 3.24% in June from 3.16% the previous month.

### Dropping crude rates

In the WPI, the food articles category saw prices contract by 3.75% in June 2025, down from 11.1% inflation in June last year. The overall food group in the WPI, which looks at food in the primary articles category as well as in the manufactured products category, contracted 0.3% in June.

The other category that witnessed a significant easing in wholesale prices was the crude petroleum and natural gas category. Prices contracted 12.3% in June, the 10th consecutive month of contractions, of which the last three have been double-digit contractions.





# 'India, China must push de-escalation process forward'



**Reduced friction:** External Affairs Minister S. Jaishankar with his Chinese counterpart, Wang Yi, in Beijing on Monday. PTI

**Suhasini Haidar**  
NEW DELHI

India and China must move forward on de-escalation at the Line of Actual Control (LAC), External Affairs Minister S. Jaishankar told Chinese Foreign Minister Wang Yi in Beijing on Monday, indicating that disengagement, which was achieved nine months ago, has still not been followed up by the actual withdrawal of troops.

Mr. Jaishankar is in China for the first time since 2019, and since the Galwan clashes began in 2020. He met with Mr. Wang, and also called on Chinese Vice-President Han Zheng, discussing both the positive momentum in ties and outstanding issues between them.

During the bilateral talks, Mr. Jaishankar called for "normalising" people-to-people ties and avoiding "restrictive trade measures and roadblocks", a reference to Chinese export restrictions on critical minerals.

Mr. Jaishankar also stressed the need for the Shanghai Cooperation Organisation (SCO) to address the issue of terrorism with "zero tolerance".

## Progress made

"We have made good progress in the past nine months for the normalisation of our bilateral relations. It is a result of the resolution of friction along the border and our ability to maintain peace and tranquillity there," Mr. Jaishankar said in opening remarks at the meeting

with Mr. Wang. "It is now incumbent on us to address other aspects related to the border, including de-escalation."

In talks with Mr. Han, Mr. Jaishankar said that the "continued normalisation of ties can produce mutually beneficial outcomes".

Mr. Jaishankar's reference to the "continued normalisation" of ties is significant as he has held in the past that it is impossible to normalise ties without the situation at the border being resolved, including the demobilisation of the troops that were amassed there in 2020.

In December 2024, the External Affairs Minister had said in a statement in Parliament that disengagement of troops of the Indian Army and China's People's Liberation Army along the LAC had been achieved, adding that the "next priority will be to consider de-escalation, that would address the massing of troops along the LAC with associated accompaniments."

While de-escalation is still pending, however, both sides have moved forward in restoring bilateral mechanisms in other areas, including visits by National Security Adviser Ajit Doval and Defence Minister Rajnath Singh to China.

The two sides have also agreed to resume direct flight connectivity between the two countries, while India is hopeful China will restart sharing hydrological data on trans-border rivers, the Ministry of External Affairs said.

