

Karnataka to pay grant to sandalwood craftsmen

Rashmi Patil
BENGALURU

After a gap of six years, Karnataka State Handicrafts Development Corporation Ltd. (KSHDCL) has revived its scheme of providing sandalwood to craftsmen at 50% subsidy to support artisans and encourage youngsters to take up the dwindling art of sandalwood carving.

The corporation has announced this under the Support to Handicrafts Scheme. However, given the limited availability of raw material, only a section of artisans is likely to receive support in the first round.

H.R. Rajappa, Managing Director of KSHDCL, said the programme had been stalled owing to a shortage of raw material. The KSHDCL collaborates with the Forest Department to procure raw materials.

“At present, the market price for 1 kg of sandalwood is ₹16,000, which will be provided to the artisans at ₹8,000 per kg,” Mr. Rajappa said. The KSHDCL has procured one tonne of sandalwood from Dharwad, Shivamogga and Mysuru, besides neighbouring Kerala, he added.

The corporation has 700 registered artisans across the State.

“At present we will be able to provide sandalwood to only 300 artisans,” he said.

The corporation plans to extend the programme to the remaining artisans, subject to the availability of funds.



Industries Minister S. Keerthana with representatives from Hyosung TNS, in South Korea. SPECIAL ARRANGEMENT

Hyosung TNS plans to set up plant in T.N., says Minister

Sangeetha Kandavel
CHENNAI

Hyosung TNS, a South Korean firm, is considering setting up a greenfield manufacturing facility in Tamil Nadu for the production of ATMs for both domestic and global markets, said S. Keerthana, Minister for Industries, Investment Promotion and Commerce, in a post on X. She asserted that the Tamil Nadu government would extend its full support to the initiative and looked forward to welcoming Hyosung TNS to Tamil Nadu. “During my visit to South Korea, I had a productive meeting with the leadership of Hyosung TNS. We discussed opportunities in Tamil Nadu and explored potential collaborations in advanced manufacturing and technology sectors,” she said.

“The government of Tamil Nadu is committed to strengthening the State’s industrial ecosystem and attracting global manufacturing investments,” Ms. Keerthana said in the post. The visit to South Korea

was the Minister’s maiden overseas trip since assuming charge as Industries Minister last month.

During the trip, she also visited HD Hyundai Heavy Industries, which had signed a deal with the State government in December 2025 during the previous DMK regime to build a new shipyard in Thoothukudi, entailing investments to the tune of ₹40,000 crore.

“The proposed Thoothukudi Greenfield Shipyard is one of the earliest outcomes of the India-Republic of Korea maritime cooperation framework and reflects the growing strategic partnership between our two countries in the maritime sector. The project is envisaged as a mega greenfield shipyard with the capability to support large commercial vessel segments and strengthen India’s long-term shipbuilding capacity,” Ms. Keerthana said on X.

Tamil Nadu is home to over 150 Korean companies; more than 4,000 Korean families reside in the State, forming the biggest expat community here.

Three close contacts of Nipah patient in Kerala test negative

No need to declare containment zones, says Minister; infected patient remains on ventilator support; 4 persons under observation in hospital

The Hindu Bureau
KOZHIKODE

Kerala Health Minister K. Muralleedharan has said that the three close contacts of the 43-year-old Nipah-infected patient from Ramannattukara in Kozhikode, have tested negative for the virus, indicating that a community spread of the lethal zoonotic disease is unlikely at the current juncture.

The three contacts, all close family members, were placed in the highest risk category. They have been under observation at the Government Medical College Hospital (MCH) here since Friday.

The patient is on ventilator support at the MCH, official sources said.

At present, 100 people are on the contact list of the patient. Eighty-two are in the lowest risk category, 14 in the high-risk category, and four in the highest risk category.

A press release quoting Mr. Muralleedharan said on Saturday that four more persons on the contact list were under observation at the MCH.

ICMR team arrives

A team from the Indian Council of Medical Research (ICMR) has arrived in the district to take stock of the situation. The team



On alert: Health authorities in Kerala are keeping a close watch on the high-risk contacts of the Nipah patient. THULASI KAKKAT

visited the MCH and participated in a review at the Collectorate attended by Revenue Minister A.P. Anil Kumar, who is the district in-charge.

Official sources said the patient was administered the first dose of monoclonal antibody on Friday. The medical board would evaluate the situation after 48 hours and give him the second dose, they added.

No restrictions

Mr. Kumar told presspersons earlier that from the current scenario, it could be presumed that there had not been any large-scale spread of the infection. There was no need to declare a containment zone and put restrictions in place, he said. People from Kozhikode, Malappuram, and Kannur were on the contact list, he said.

He claimed that there had been no lapses in the

containment steps as alleged by leaders of the Communist Party of India (Marxist).

Health workers have reached out to all the residents of the area from where the infected person hails. The health system was fully prepared to handle the situation, he said.

Govt. lethargic

This comes against the backdrop of the allegations by Leader of the Opposition Pinarayi Vijayan, Bepore MLA P.A. Mohamed Riyas, and CPI(M) Kozhikode district secretary M. Mehboob accusing the political executive of being lethargic to the current situation.

On Saturday, Mr. Riyas staged a protest outside the Nipah control room at the Kozhikode Collectorate claiming that steps were not being taken to address local residents’ concerns.

Rahul’s ways helping BJP, not supporting INDIA bloc: Pinarayi

The Hindu Bureau
KOZHIKODE

Former Kerala Chief Minister Pinarayi Vijayan has accused Rahul Gandhi, Leader of the Opposition in the Lok Sabha, of taking political positions that will help the Bharatiya Janata Party (BJP), instead of strengthening the Indian National Developmental, Inclusive Alliance (INDIA).

His comments in Kozhikode on Saturday came in the wake of a remark made by Mr. Gandhi during an INDIA bloc meeting on June 9.

The Congress released the audio and the transcript of Mr. Gandhi’s speech on June 12. “We have our fights, but if you are asking me to go and hug the ex-Chief Minister of Kerala, I cannot and I will not, because I have an ongoing political fight with him,” he said.

BJP aide

Responding to this, Mr. Vijayan said the INDIA bloc was facing its current crisis because of Mr. Gandhi’s approach. He said leaders such as Tejashwi Yadav (Rashtriya Janata Dal) and Akhilesh Yadav (Samajwadi Party) had aired their views against this political position of the Congress.

“We have seen what is happening with the Dravida Munnetra Kazhagam (DMK). All this is because of Mr. Gandhi’s approach. He is not trying to strengthen the INDIA bloc, but is becoming an aide of the BJP,” Mr. Vijayan alleged.

The senior Communist



Pinarayi Vijayan

Party of India (Marxist) [CPI(M)] leader also said that he was not used to hugging people when he met them.

“If I meet Mr. Gandhi, I either shake hands with him or we greet each other by folding hands. But we have seen a photo of him hugging [Prime Minister Narendra] Modi. I don’t have any problem with that. But, he portrayed it in a different way at the INDIA bloc meeting,” Mr. Vijayan said.

Meanwhile, the former Chief Minister criticised the Health Department for “its casual approach to dealing with the recent Nipah case in Kozhikode.” Mr. Vijayan said the government was not giving the issue the attention it deserved and there were lapses in the containment steps.

He said Health Minister K. Muralleedharan had not bothered to come to Kozhikode. Pointing out that though none of the Health Ministers in recent times were medical degree holders, he said, they were well-prepared to meet any emergency.

Cold comfort



Rain pours misery on a horse in Bengaluru on Saturday. Animal-drawn carts exist with modern transport modes in the city. SUDHAKARA JAIN

89 tourists rescued after boat develops snag on Godavari in A.P.

The Hindu Bureau
DEVIPATNAM

At least 89 tourists were rescued after a private boat developed a technical snag in the Godavari river in Polavaram district of Andhra Pradesh on Friday.

The boat had travelled nearly one kilometre from the boarding point when the problem was detected. The tourists were on their way to the Papikonda hill range.

Rampachodavaram Deputy Superintendent of Police Ashraf Ali told *The Hindu* that the boat driver noticed a sudden drop in speed due to a technical issue, reportedly linked to connecting bolts.

The private operator later deployed another boat, *Jalasri*, to ferry the tou-



A fresh safety audit of all the boats will be undertaken.

rists, who continued their scheduled trip to Papikonda.

“Both the boats, including the one that developed the technical snag, have since returned to the boarding point,” Mr. Ashraf Ali said.

In a release issued on Saturday, Rampachodavaram Revenue Divisional Officer K. Swathi said an in-

quiry committee comprising officials from the Revenue, Irrigation, Tourism and Police departments had been constituted to ascertain the cause of the breakdown and examine whether any operational guidelines had been violated. Operations of all tourist boats plying between the Gandiposamma Temple point and the Papikonda hill range have been suspended until further orders.

Compliance measures

“A fresh safety audit of all private boats will be undertaken from Sunday. The audit will examine safety measures and compliance with operational guidelines before permitting the boats to resume services,” Ms. Swathi said.

Accused in Sabarimala gold theft case passes away

The Hindu Bureau
KOCHI

Murari Babu, 54, a former administrative officer of the Travancore Devaswom Board (TDB) who was arrested in connection with the Sabarimala temple gold theft case, died in Kochi on Saturday. A native of Perunna, Changanassery, in Kottayam district, he was arrested from his residence after the special investigation team (SIT) that probed the gold theft case found that he had “falsely recorded the gold plates on the idol as copper plates.” The SIT had arraigned him as the second accused in the alleged theft of gold from the Dwarapalaka sculptures.

Man, daughter electrocuted in Telangana

The Hindu Bureau
HYDERABAD

A 44-year-old man and his 16-year-old daughter were electrocuted in Secunderabad on Saturday after they stepped out of their home to move their car away from a tree that had fallen during heavy rain. The man, his wife and daughter had come out to move their car after a tree fell in front of their house.

While doing so, the wife moved a live wire on the road and suffered a shock. As the man rushed to help, another live wire struck the daughter, electrocuting both of them on the spot.

Teeming peacock population poses new challenges to farmers, foresters

K. Umashanker
KUPPAM

In the rural areas of Kuppam region in Andhra Pradesh’s Chittoor district, flanked by Tamil Nadu and Karnataka, peacocks are as much a part of the landscape as the granite outcrops and scrub forests that define the tri-State terrain.

Till a decade ago, the Indian peafowl was confined to the forest fringes, but now the bird is a frequent visitor to villages, agricultural fields, and even institutional campuses across the region.



At home: A peacock perched on a tree on the outskirts of Kuppam in Chittoor district, Andhra Pradesh. SPECIAL ARRANGEMENT

The forest authorities of Chittoor confirm that the bird’s population is growing steadily. “The peacock is a Schedule-I species under the Wildlife (Protection) Act, enjoying the

same level of legal protection as the tiger. But unlike the tiger, whose conservation remains a challenge in many parts of the country, peacock numbers have been increasing consistent-

ly, not only in Kuppam but across India,” says District Forest Officer G. Subburaj.

The forests of the Kuppam region continue to provide an ideal habitat for peafowl. Open forests, cultivated fields, seasonal water sources, and rocky elevations offer abundant food and safe roosting sites.

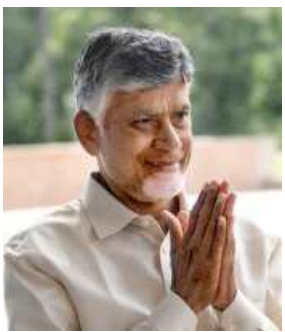
Across several hamlets and semi-urban villages as well, farmers express concern over increasing crop damage caused by peacocks. Paddy fields are the worst hit, while vegetable crops and cereal plantations also bear the brunt.

Andhra CM’s two-day tour of Singapore begins tomorrow

The Hindu Bureau
VIJAYAWADA

Andhra Pradesh Chief Minister N. Chandrababu Naidu is going on a visit to Singapore on June 15 and 16 to attract investments and review collaborations for the development of Amaravati and other key infrastructure projects.

High on his agenda are discussions with Singapore Prime Minister Lawrence Wong, Foreign Minister Dr. Vivian Balakrishnan, Home Affairs Minister K. Shanmugam, Minister for Manpower Tan See Leng, and Minister for Trade and



N. Chandrababu Naidu

Industry Gan Kim Yong.

Mr. Naidu’s itinerary includes meetings with Shilpak Ambule, Indian High Commissioner in Singapore, and Anacláudia Rossbach, Executive Director of

UN-Habitat, among others.

Mr. Naidu will also inaugurate CBN@361 programme being organised by the Kakatiya Cultural Association, participate in APAC Semiconductor Roundtable and attend the Surbana Jurong - Amaravati Planning Meeting.

Mr. Naidu will address the leadership plenary at the World Cities Summit, visit the World Cities Summit Exhibition and attend the CII Partnership Summit-2026 Business Roadshow, which forms a key component of Andhra Pradesh’s investment outreach efforts.



Attacks on vessels with Indian seafarers likely to feature in IORA meet

Saptaparno Ghosh
NEW DELHI

While denouncing the U.S. torpedo attack on Iranian ship *IRIS Dena* in the Indian Ocean, killing more than 80 sailors in March 2026, he also expressed his concerns over retaliatory attacks by Iran on the U.S.'s Diego Garcia military base.

The officer has commanded an armoured regiment in the desert sector, an armoured brigade, and a counter-insurgency force in Jammu and Kashmir. As a Lieutenant-General, he commanded the prestigious Sudarshan Chakra Corps and later served as the General Officer Commanding, Delhi Area.

Mr. Shah informed the Chief Minister that the Centre would provide ₹10 crore worth of rice to aid relief efforts.



Bottled pride: Azizullah Kozgar pours rose water syrup in a glass jar at his shop in the downtown area of Srinagar.



Harvest season: Farmers pluck highly fragrant Damask roses at a field in Sirhama, Anantnag district in south Kashmir.



Floral alchemy: Workers process the collected rose petals in a distillation plant. The resulting herbal hydrosol is used widely in culinary dishes, cosmetics, and religious rituals.



Steaming essence: A worker heats rose water in distillation units to extract rose oil in Ganderbal district, central Kashmir.

Scented by tradition

Rose farming is a labour of love, and there is no better canvas for these delicate pink blooms than Kashmir where the journey from blossom to by-product is a celebrated tradition, deeply rooted in the heart of the region's local communities



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The temperate climate and fertile soil of Kashmir provides an ideal environment for floriculture, particularly for the cultivation of the highly aromatic Damask rose. Rose farming is a seasonal labour of love and requires the harvest of petals in spring and early summer when the blossoms yield their highest concentration of complex fragrance and essential oils. Once harvested, these pristine petals are immediately channelled into two traditional products of rose water – *Arke-Gulab* and *Gulkand*. Rose water is prepared using traditional steam distillation. Petals are simmered in large copper stills, and the condensed vapour creates a pure, therapeutic hydrosol used widely in culinary dishes, cosmetics, and religious rituals. *Gulkand* is a rich, sweet preserve made by layering fresh rose petals with sugar in airtight glass jars.

The mixture is slow-cured under the natural warmth of the sun for several weeks. This gentle sun-cooking process allows the natural juices to ferment softly with the sugar, transforming the petals into a thick, cooling jam celebrated in Ayurvedic traditions for its digestive benefits. Local entrepreneurs like Shireen Manhas are instrumental in bridging the gap between these age-old agricultural traditions and modern, premium markets. By establishing structured agro-ventures, Ms. Manhas and fellow innovators empower local farmers, particularly women, through sustainable employment. Their enterprises focus on maintaining absolute purity – avoiding synthetic additives – while utilising contemporary packaging and supply chains. This modern entrepreneurial approach not only preserves Kashmir's delicate horticultural heritage but also elevates its organic rose water and *Gulkand* to a competitive luxury status globally.



Purest drops: A worker collects the distillate in Sirhama, Anantnag district.

News in Frames



Dedicated hands: A worker layering fresh rose petals in the first step to making *Gulkand*.



Sweet culmination: The home-made concoction of *Gulkand*, a sugary preserve made of rose petals.

Why did the SC quantify labour of homemakers?

The story so far: **T**he Supreme Court on June 11 held that the unpaid domestic labour performed by homemakers must be assigned an independent economic value while determining compensation in motor accident death cases. It fixed a minimum notional income of ₹30,000 per month for this purpose. Observing that homemakers are "nation builders", a Bench of Justices Sanjay Karol and N. Kotiswar Singh created a distinct head of compensation called "loss of domestic care" in motor accident claims and mandated a 10% increase in this amount every three years.

The ruling came in an appeal arising from a motor accident claim in Punjab. Following the death of a woman named Reshma in a road accident in November 2001, her husband and three children approached the Motor Accident Claims Tribunal (MACT) seeking compensation. In December 2003, the Tribunal awarded ₹2.42 lakh in compensation. Dissatisfied, the family moved the Punjab and Haryana High Court. In December 2024, the High Court enhanced the compensation to ₹8.43 lakh, along with interest at 7.5% from the date of filing of the claim petition. It said that if the amount was not paid within three months, the interest rate would be enhanced to 9% per annum, and to 12% per annum if payment was delayed beyond six months. Still aggrieved by the amount awarded, the family approached the apex court.

The Supreme Court pointed out that motor accident compensation claims often remain embroiled in litigation for years. It said the average pendency of such cases is around six years before MACTs and eight years before High Courts. It held that compensation appeals should not remain pending in High Courts for more than four years and emphasised that adjournments should be granted only for genuine reasons. Observing that the welfare-oriented objective of the Motor Vehicles Act, 1988, is frustrated when compensation claims remain pending for years, the Court directed the Chief Justices of all High Courts to accord priority to older motor accident compensation appeals and assess the need for additional Benches to expedite their disposal.

The Court held that in cases involving the death of a homemaker, tribunals and courts should award an additional amount of ₹30,000 per month under the head of “loss of domestic care”. The amount, it said, would serve as a minimum benchmark to offset the inherent disadvantage faced by homemakers when compensation is assessed on the basis of a conservatively determined notional income. The Bench clarified that the ₹30,000 figure is to be treated as a “stand-in” monthly income in cases where the homemaker does not have a direct monetary contribution to the household, and directed that it be enhanced by 10%, on a cumulative basis, every three years. Where the homemaker is also part of the workforce, compensation under this head would be awarded in addition to any proven income.

The ruling pointed out that routine household tasks performed by homemakers, such as cooking, cleaning, and caregiving, play a vital role in supporting the paid workforce and enabling economic productivity. Yet, these contributions are rarely accounted for in conventional economic indicators such as GDP. The Bench described homemakers as the architects of India's "human capital", observing that they lay the foundation stones on which the edifices of "high-flying business persons, successful politicians, headlining artists, and sought-after lawyers" are built.

The Court enhanced the compensation payable to the deceased's family to ₹62.78 lakh, holding that the award must reflect not only her contribution to the household but also the loss of maternal care, spousal companionship, and the care and assistance that would have been available to other dependent family members.

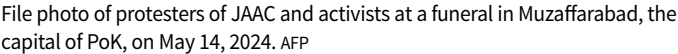
The ruling does not spell out any specific mathematical or empirical basis for arriving at the \$30,000 figure, though it acknowledges that “strict arithmetic calculation” cannot fully capture the economic, social, and nation-building role of homemakers. While the Court has previously cautioned against treating homemakers’ services as having no economic value merely because they do not generate a formal income, this is the first time it has prescribed a concrete minimum benchmark for assessing the loss of domestic care.

The story so far: Pakistan-occupied Kashmir (PoK) is again in the throes of civilian unrest as protests for economic justice and equitable political representation rage across the region. The Joint Awami Action Committee (JAAC), which called for the protests, has since been banned by the regional government, for “engaging in terrorism”.

The JAAC, an umbrella organisation of various civil society groups, trade bodies, students organisations and socio-religious groups based in PoK, was formed in 2023, out of protests against rising electricity tariffs and inflation. They brought out a 38-point Charter of Demands which included access to subsidised wheat flour, fair electricity pricing based on hydropower generation costs from the local Mangla dam, and the abolishment of the reservation of 12 seats for refugees in PoK's Legislative Assembly.

While the JAAC was given assurances regarding electricity tariffs, their “non-fulfilment” led to wider protests. In May 2024, the JAAC called for a march to Muzaffarabad over their demands, which led to the police arresting around 70 members of the organisation. Outrage against the arrests resulted in clashes between civilians and the police, leaving at least four dead and hundreds injured. In the wake of this violence, Pakistan Prime Minister Shehbaz Sharif approved the grant of a \$86.25 million subsidy programme.

In October 2025, protests again emerged due to a breakdown of talks between officials and the JAAC. The ensuing violence killed at least 10 people. The government then agreed to some demands which included providing



The 12 reserved seats are for communities who migrated to Pakistan from Jammu and Kashmir during Partition. Over the years, these groups have integrated into Pakistani cities and polity

compensation for those killed in the violence, releasing funds for the implementation of health cards, and issuing a grant of PKR 10 billion for the improvement of the electricity system.

While it was also decided that a high-powered committee comprising legal and constitutional experts would deliberate on the issue of members of the PoK Assembly, the central question remained unaddressed.

Elections to the regional government of PoK have been scheduled for July 27. The JAAC announced that they would take out a protest march to Muzaffarabad, calling for an end to the reservation of the 12 refugee seats, on June 9 – the same day on which the filing of nominations for the elections was to begin.

In an effort to nip the march in the bud, the regional authorities banned the JAAC under a 2014 anti-terrorism law and placed a bounty for its most prominent leaders. They said the organisation had acted in a manner “prejudicial to peace and security” of the state. This led to widespread protests in various cities, particularly Mirpur, Rawalakot and Muzaffarabad, with police personnel clashing with civilian protesters.

On June 8, at least 11 people, including four police officers, were killed and dozens injured when regional authorities opened fire on activists and protesters gathered in Rawalakot for the funeral of a local trade activist who had been killed during an earlier protest.

While the proscribed JAAC has called for strikes, leaving life paralysed in the streets of Muzaffarabad, many parts of the region continue to witness violent clashes, with reports indicating that the death toll has crossed 30.

Regional authorities have deployed paramilitary troops in the region to restore law and order and have also issued a strict travel advisory urging visitors to avoid travelling to the region. Reports also say that Internet in the region has been severely restricted.

The political question regarding the 12 reserved refugee seats is at the heart of the protests. The regional Assembly of the PoK has a total of 53 seats. Of these, 45 seats are directly elected by the public (33 are elected by the general public while 12 seats are reserved for refugees). The remaining eight seats are reserved (five for women, one for a technocrat, one for a religious scholar and one is a diaspora seat) and are filled via nominations after the general elections.

The 12 reserved seats are for communities who migrated to Pakistan from Jammu and Kashmir during Partition. Over the years, these

The world's longest high-altitude tunnel, spanning 13.14 kilometres at an altitude of 11,578 feet, achieved a breakthrough on June 9, 2026. Built at a cost of ₹6,800 crore, the Zojila tunnel will provide all-weather connectivity between the Kashmir Valley and Ladakh, traversing a region that was long considered to be formidable in the Himalayas. Union Minister for Road Transport and Highways Nitin Gadkari, who pressed the blast button for the 2.5 metre-long last leg, termed the breakthrough "a historic day for India's infrastructure development and a milestone in India's technical expertise, engineering prowess, and indomitable resolve".

Zojila tunnel is India's first longest single-tube bi-directional tunnel and an engineering marvel for several reasons. The underground works were highly challenging due to the difficult terrain. The western Himalayan range around the Zojila Pass has been daunting for engineers



The Zojila tunnel is expected to provide year-long transportation access to the Indian forces stationed in Ladakh

and planners, with the fragile geology, sensitive rock formations, avalanche-prone terrain, and harsh winter conditions all complicating the execution of the project.

The Zojila tunnel connects Sonamarg's Baltal in central Kashmir's Ganderbal district with Meenamarg in Ladakh's Drass district. To ensure safe passage up to the mouth of the Zojila tunnel at Baltal, additional roadways, three bridges, and two tunnels were constructed over a stretch of 31 km in Sonamarg. These were designed to withstand the vagaries of winter, as avalanches and snow slides are often reported in the area.

It is a combined system of tunnels and roadways that forms a comprehensive corridor between the Union Territories of Jammu and Kashmir and Ladakh. The tunnel is equipped with catch dams, protection walls, and deflector dams over a 6-km stretch for protection from snowstorms. It will have automatic and emergency lighting, emergency phone, message signalling, and radio to ensure travellers' safety.

The tunnel was dug in extreme weather conditions, with temperatures dropping to minus 20 degrees Celsius on the Kashmir side and minus 30 degrees Celsius on the Drass side. Official estimates suggested that extreme weather conditions were prevalent for nearly 100 days a year. Then, there were avalanche risks: five major avalanches left two workers dead and over 172 workers stranded and later rescued. Snow accumulation was dealt with by a fleet of small and large snow blowers. Officials said the rock classification also changed 67 times across the 13-km stretch, "shifting constantly between good and poor formations."

India has witnessed repeated military confrontations with China and Pakistan since 1947, particularly in the regions of Ladakh and Kashmir, most notably in 1962 and 1999. India's full-scale military response was always

groups have integrated into Pakistani cities and polity. In fact, most of these 12 seats have often been won by political parties such as the Pakistan Peoples Party or the Pakistan Tehreek-e-Insaf. As the journalist Luv Puri writes, "...the 12 refugee seats account for around 4.36 lakh registered voters, while the remaining 33 directly elected seats in PoK have around 33 lakh voters. In effect, one refugee vote cast from Pakistan carries electoral weight far greater than that of a voter residing in PoK".

Pakistan maintains that PoK, or what it calls 'Azad Jammu and Kashmir', is an independent region with its own polity and that Pakistan supports its right to self-determination. At the same time, candidates who are elected to the regional Parliament have to sign loyalty oaths supporting the "cause of accession of the State of Jammu and Kashmir to Pakistan". This has led to questions regarding the undue influence of Islamabad in the regional politics of PoK.

In a further setback to such regional demands, on June 7, the Supreme Court of PoK observed that the 12 legislative seats reserved for refugees are constitutionally protected and cannot be abolished through administrative or executive measures; only a constitutional amendment can fulfil the demand to abolish refugee representation.

On June 9, India asked the international community to hold Pakistan responsible for the civilian killings and human rights abuses in PoK. "There are reports of severe police brutality in Pakistan Occupied Kashmir in which several protesters have been killed and many injured. We hope the international community will hold Pakistan accountable for its misdeeds and abuses," said Ministry of External Affairs spokesperson Randhir Jaiswal during a press briefing. National Conference president Farooq Abdullah condemned the violence and demanded a probe by the United Nations into the incidents of atrocities.

Pakistan Foreign Office spokesperson Tahir Andrabi dismissed India's statements "in their entirety" and went on to state that "it is untenable" for a country like India which has "consistently denied the people of Jammu and Kashmir their right to self-determination to claim concerns over the rights of Kashmiris."

The unrest has also generated global outrage. Human rights groups such as Amnesty International stated that the regional administration's sweeping crackdown on protests is a continuation of the "alarming deterioration of human rights in the region".

On June 6, a group of nearly 30 British parliamentarians, in a letter to the U.K. Foreign Office, raised concerns over reports of communication disruptions, arrests, and “escalating tensions” in the PoK. They urged the British government to engage proactively and use diplomatic channels to encourage a peaceful de-escalation in the region.

hampered by lack of connectivity and poor mobility of men and material in the region, both along the Line of Control in the west and the Line of Actual Control in the east. Officials believe that restricted movement of military vehicles led to delays. The Zojila tunnel is now expected to provide year-long transportation access to the Indian forces stationed in Ladakh, significantly improving mobility, logistics reliability, and strategic access in the border region. This is why Mr. Gadkari described it as “a game changer from a security perspective and the perspective of national integration”.

Ladakh has always been cut off from the Kashmir Valley during winters. Heavy snow and landslides would often close the Zojila Pass for 4-6 months. There have also been frequent reports of commuter deaths on the Zojila Pass due to landslides triggered by rains and avalanches occurring during sunny winters. All this resulted in severe hardships for patients and students in the Kargil-Drass range. Stocks would deplete, but the problem could not be attended to because of road closure. Locals relied on sun-dried vegetables and cereals during winters. Now, the is expected to be movement of people and goods and no more weather-related isolation for the region. Additionally, the tunnel will put a spotlight on activities such as adventure tourism and skiing in Drass, which will contribute to the economy.

In spite of the breakthrough, the tunnel is likely to take two years to be fully functional. Water seepage, benching, and electronic layouts are still being worked out. However, officials said the tunnel could be thrown open in case of emergencies, especially to security forces.

The tunnel will also help pilgrims on the Amarnath Yatra, whose base camp is in Baltal. Officials said vehicles can travel at a speed of 80 km per hour through the tunnel. Earlier, drivers could not drive more than 30-40 km per hour on the Zojila Pass, because of steep roads and hair-pin curves.

Officials said the project is moving closer to its long-envisioned goal of seamless all-weather connectivity that will spur long-term benefits in terms of mobility, economic integration, and strategic resilience.

PROFILES

The house of cards

FIFA

The governing body of the ‘beautiful game’, long dogged by allegations of corruption and abuse of power, now faces criticism for its muted response to U.S. immigration authorities denying entry to fans, officials, and team personnel

N. Sudarshan

The Federation Internationale de Football Association, known worldwide by its acronym FIFA, is the most powerful sports body outside the International Olympic Committee. It is the global custodian of football – popularly called ‘the beautiful game’ – and conducts the World Cup, the most prestigious single-sport competition in the universe.

What started in 1930 as a 13-team tournament has now grown into a behemoth. The ongoing edition in the U.S., Canada and Mexico is the 23rd World Cup, and features a record 48 teams and 104 matches.

Founded in 1904 in Paris, FIFA started with seven members – France, Belgium, Denmark, the Netherlands, Sweden, Switzerland, and Spain. Its original mandate was to bring structure to the international game, organise fixtures, and agree on a common set of rules.

The British associations in England, Scotland, Wales, and Ireland, which predated FIFA and had already set in place organised football in their territories, joined FIFA starting in 1905. Though the equation was stormy in the initial decades – with the First World War and disputes over monetary compensation for amateur players competing at the Olympics leading to the British associations’ withdrawal on multiple occasions – it stabilised after the Second World War and has remained so until now.

After Jules Rimet took over as president in 1921, FIFA was in charge of football at the Olympics for the first time at Paris 1924. The success of that, and of the event four years later in Amsterdam, prompted FIFA to think of a tournament of its own.

The inaugural World Cup was born in 1930 and was held in Uruguay, the nation which won the Olympic golds in 1924 and 1928. The in-form team, unsurprisingly, also became the first world champion. Since then, such has FIFA’s growth been that it now has 211 members, more than the UN. At its core, it is a non-profit organisation that



REUTERS

“oversees and promotes the development of football at every level”. But it is also among the richest bodies. At the end of 2025, FIFA’s reserves, according to its own financial report, amounted to \$2.69 billion. Cape Verde, which is competing in North America this summer and is the third-smallest nation ever to qualify (population less than six lakhs), has reserves of \$0.78 bn (data from 2024).

Generous powers

Understandably, the FIFA president, who sits atop this edifice, wields enormous power, and with a generous term limit of three four-year periods (consecutive or otherwise), he or she can take decisions that can have lasting consequences. Prior to 2016, term limits weren’t enforced. In fact, for 41 years from 1974 to 2015, FIFA just had three presidents – Englishman Stanley Rous for more than 12 years, Brazil’s Joao Havelange for a little over 24, and Swiss Sepp Blatter for more than 17.

Before that, Frenchman Rimet – whose name the World Cup trophy carried from 1950 to 1970 – was at the helm for 33 years (from March 1921 to

June 1954). Current president Gianni Infantino has been the leading man since early 2016. It is this structure, which allows a FIFA president to turn the organisation into a personal fiefdom, that has given rise to most controversies. The bosses have never shied away from striking friendships with problematic political figures and authoritarian regimes in search of big capital.

FIFA, by virtue of being a non-profit, is duty-bound to redistribute its revenues to member nations. *Prima facie*, it’s a democratic move, and even noble, considering that the money ensures the sport’s survival and development in many countries. But this dole has often been weaponised in return for votes to keep the head in power for perpetuity. Every FIFA member, big or small, has a vote, and is directly involved in electing the president.

The 1934 World Cup was held in Benito Mussolini’s Italy. The 1978 edition was conducted in Argentina, under dictator Gen. Jorge Rafael Videla’s rule and Havelange’s blessings. Rous was unwavering in his support

for Apartheid South Africa while Blatter dangled the monetary carrot to the developing world to keep his throne for as long as he did.

It is ironic that Infantino would preside over a FIFA which has remained unchanged. He vaulted to power promising reforms after serious corruption charges related to the allotment of the 2018 and 2022 World Cups to Russia and Qatar, respectively, brought down Blatter’s house of cards.

But he has since cultivated relationships with Russian President Vladimir Putin and U.S. President Donald Trump, and attracted a deal worth \$1 billion from Saudi Arabia, the country which will host the 2034 World Cup. In 2019, he accepted the Russian Order of Friendship medal from Mr. Putin. Last December, his FIFA created the first-ever Peace Prize – literally out of nowhere – and awarded it to Mr. Trump.

Infantino has also moved to extend his term beyond the 12-year ceiling that was brought in at the Extraordinary FIFA Congress in early 2016 in the aftermath of the corruption scandal. The 56-year-old has said his first three

years in office (2016-19) were from Blatter’s unfinished term and hence would not stop him from being re-elected in 2027.

At the ongoing World Cup, FIFA has been heavily criticised for its cavalier attitude regarding American immigration authorities’ arbitrary actions in denying entry to fans, match-officials and team personnel alike. Most notable was the rejection meted out to Somali referee Omar Artan, the best men’s referee from Africa in 2025.

Limits of influence

Infantino has defended FIFA by saying there are limits to how much the governing body can influence an individual country’s immigration policies. But a decade ago, when Mr. Trump had signed an executive order banning immigration from six Muslim-majority countries, Infantino had declared that “there is no World Cup” if supporters and officials do not have access.

While increasing the number of teams in the World Cup to 48 will help enlarge the game’s footprint, the FIFA Club World Cup bloating to a 32-team affair starting 2025 from a modest seven outfits earlier further entrenches FIFA’s power. The competition, which has replaced the Confederations Cup as a World Cup preparatory event, ran for a month in the U.S. last summer, a slot otherwise reserved for players’ rest and recuperation.

Reportedly, there is an urge to make it biennial, and the \$85 million Chelsea received as prize money for winning in 2025 is a big enough perk for the participants to agree.

All of this highlights a fundamental conflict at the heart of FIFA’s functioning. On the one hand, it is the guardian of the sport, defines laws, puts in place the rules and is expected to act impartially in disputes between its members. At the same time, it has tournaments to sell and a partially self-imposed obligation to generate revenue, forcing it to turn a blind eye when those like the U.S. err.

Can such a system, where the referee is also a player, stay true to the cause?

THE GIST

Founded in 1904 in Paris, FIFA started with seven members – France, Belgium, Denmark, the Netherlands, Sweden, Switzerland, and Spain

After Jules Rimet took over as president in 1921, FIFA was in charge of football at the Olympics for the first time at Paris 1924. The success of that prompted FIFA to think of a tournament of its own

The inaugural World Cup was born in 1930 and was held in Uruguay, the nation which won the Olympic golds in 1924 and 1928. The in-form team, unsurprisingly, also became the first world champion

Virulent bacterium

Shigella

Kerala has seen a new outbreak of shigellosis, caused by this gram-negative, contagious bacterium, which infects millions globally every year

Ramya Kannan

Stained, and viewed under a microscope, Shigella is a captivating sight. The rod-shaped bacteria resemble fat, furry cartoon caterpillars. In reality, however, this gram-negative, contagious bacterium, which causes shigellosis, can be remarkably dangerous. Shigella is back in the news, after an outbreak in Kerala that was first detected in late March 2026 and has continued into June. According to the Kerala health department, 132 confirmed cases and about 75 probable cases of shigellosis had been reported till June 12. Three deaths have been linked to the disease this year, two of which were children under five.

Shigellosis is a diarrhoeal disease marked by fever, abdominal cramps, and bloody diarrhoea (dysentery). It was bacteriologist Kiyoshi Shiga, who isolated the shigella dysenteriae, in 1897, after Japan experienced a severe dysentery epidemic. The genus eventually took his name.

Transmission is mostly through the faeco-oral route, when people ingest tiny amounts of faecal matter through contaminated food, water or hands. As low as 10-100 bacteria can cause the infection, and even an outbreak. It is estimated that globally, shigel-



GETTY IMAGES

la causes 80-165 million infections annually and about 6,00,000 deaths, particularly among children under five in sub-Saharan Africa and South Asia. In an article in the *Indian Journal of Medical Research*, Neelam Taneja and Abhishek Mewara write about the epidemiology of shigella in India. “Though humans and primates are the primary reservoir of shigella, it has been isolated from various sources – aquatic bodies (rivers, surface waters as well as coastal waters), free living amoebae, insects, birds and wild animals.”

Taneja and Mewara explain that several aquatic bodies in India have been found to show the presence of shigella. So a potential source of infection could be fish if it is harvested from sewage-contaminated water. Even ingesting small amounts of contaminated water while swimming or bathing, or the consumption of crops cultivated in soil/water contaminated by shigella

can cause severe infection. The paper argues that while no individual can be considered immune to shigellosis, “certain individuals are at increased risk. Globally, the incidence of shigellosis is highest among children under five. The incidence of shigellosis has been reported to increase steadily after the age of 40.”

Outbreak in Kerala

In late March 2026, Kerala reported a shigellosis outbreak in Kuttikkattoor, Kozhikode, where a three-year-old girl died and over 60 residents (mostly children) fell ill. Soon, clusters came up in Wayanad, Malappuram and Kannur. A major cluster emerged at a Wayanad school where over 300 children were hospitalised. So far, experts have traced the infections to contaminated water and food sources, alongside poor hygiene practices in communal environments such as schools.

This is not Kerala’s first brush with shigellosis. In

2009, over 300 people reportedly contracted a food-borne shigella infection across the State. In December 2020, an outbreak, again in Kozhikode, killed an 11-year-old and infected 40 others; in May 2022, shigella was said to be behind a mass food poisoning incident, in Kasargod, where 30 people were hospitalised and a 16-year old girl died. While mild shigella infections typically clear on their own with hydration, severe cases require antibiotics to shorten the duration of the illness, reduce the severity and prevent complications, according to the U.S. Centers for Disease Control. However, some antibiotics are not effective against certain types of shigella. Healthcare providers must order laboratory tests to determine which antibiotics are likely to work.

Taneja and Mewara point out in their article that “there is a nationwide presence of multi-drug resistant shigella developing rapid resistance to most antibiotics available. Thus, judicious use of antibiotics is among the most essential measures to combat shigellosis.” This calls for a continuous and strong surveillance of antibiotic resistance across the country for periodic updates of the local antibiograms, in order to allow doctors to effectively identify the right antimicrobial drug to use.

Golfer, lawyer, spymaster

Jay Clayton

U.S. President Donald Trump has nominated the New York attorney and former SEC chief as the new Director of National Intelligence

Smriti Sudesh

On a golf course somewhere, U.S. President Donald Trump may have found his next intelligence chief. And with that, a vacancy that has triggered days of controversy in Washington could finally be filled.

On June 11, Mr. Trump announced on Truth Social that he was nominating Jay Clayton, the former chair of the Securities and Exchange Commission (SEC) and current U.S. Attorney for the Southern District of New York, to serve as Director of National Intelligence (DNI). “Few people anywhere in the Legal Community are respected at the level of Jay,” Mr. Trump wrote.

The nomination comes amid two sensitive moments for the White House: one, Congress had been in an uproar over Mr. Trump’s earlier interim pick, Bill Pulte, a housing industry executive with little intelligence experience; two, lawmakers are debating the future of Section 702 of the Foreign Intelligence Surveillance Act (FISA), one of the most powerful surveillance tools available to U.S. intelligence agencies, which expired on June 12. Put simply, the White House needs Congress on board.

The DNI position became vacant after Tulsi Gabbard resigned in late



ILLUSTRATION: SREEJITH R. KUMAR

May, citing personal reasons. Following her departure, Mr. Trump appeared to back away from his controversial push to install Mr. Pulte permanently in the role. Democrats had labelled Mr. Pulte “unqualified” and warned that he would politicise an office meant to coordinate the work of America’s intelligence agencies.

Heavyweight resume

Born on July 11, 1966, Walter Joseph ‘Jay’ Clayton III brings a heavyweight Wall Street resume to a job associated with spies, analysts and national security professionals. A former SEC chairman during Mr. Trump’s first term, he currently serves as U.S. Attorney for the Southern District of New York. The Manhattan-based office handles everything from terrorism and espionage cases to securities fraud and corruption probes.

Mr. Clayton has spent much of his career moving between government and private practice. Before en-

tering government, he was a partner at the New York law firm Sullivan & Cromwell and built a successful Wall Street career as a corporate lawyer. Mr. Trump first tapped him to chair the SEC in 2017, during his first term. His tenure at the SEC was marked by a generally pro-business approach, though the agency under his leadership also brought some of the first major enforcement actions involving crypto assets.

It was also under his watch that the SEC pursued a high-profile case against trillionaire and businessman Elon Musk over tweets related to Tesla – years before Mr. Musk bought Twitter.

More recently, as a U.S. Attorney, he has overseen several high-profile investigations and prosecutions, including cases involving Venezuelan President Nicolás Maduro (who is currently in U.S. custody) and rapper Sean ‘Diddy’ Combs. He was also tasked with overseeing the federal investigation of the much-

discussed Epstein files.

Yet for all his credentials, Mr. Clayton is hardly a conventional intelligence pick. Like Mr. Pulte, he has no operational experience in any of the 18 intelligence agencies overseen by the DNI. The difference, both the critics and supporters alike acknowledge, is that Mr. Clayton has never worked inside the intelligence community; but unlike Mr. Pulte, he arrives with decades of experience running large institutions, conducting sensitive investigations and navigating Washington. One lawmaker remarked that, had the White House settled on Mr. Clayton a week earlier, “a lot of pain might have been avoided”. Another one, more bluntly, said anything is better than Pulte.

Mr. Trump, meanwhile, has praised the 59-year-old as a “great talent”, and that nobody has “better credentials”. He and Mr. Clayton are known to share a friendly relationship and have reportedly spent time together on the golf course, perhaps explaining why the story of America’s next intelligence chief may have begun somewhere during that time together.

And now, while his supporters and critics are sharpening their respective arguments, It remains to be seen whether Mr. Clayton will win Senate confirmation.

Meet the frogs that build ‘cloudy’ nests in South Africa’s trees

D.P. Kasbekar

For most frogs, life begins as a game of odds. They lay their eggs in the water, where fish and insects gobble up about 98% of them before they even have a chance to hatch. The African grey foam-nest tree frog (*Chiromantis xerampelina*) figured a way out: it took its nest into the air.

In the rainy season between October and February, a female frog finds a

branch overhanging a pool and begins secreting a special fluid. As the male and the female mate, the pair uses their hind legs like whisks to churn the secretions into a thick, bubbly froth. The result is a foamy nest.

A few days later, the eggs hatch inside this nest. When the tadpoles are ready, they simply break through the bottom of the foam and drop into the pool below, beginning the

next stage of their lives.

While a single pair of frogs can build a nest, these frogs prefer a ‘foam party’ approach. Researchers from three Australian universities recently studied these frogs in South Africa and found that when it comes to nesting, there is real strength in numbers.

The findings were published in the journal *Evolution* on June 2.

Sometimes, a single fe-

male is joined by a dozen or more males. This results in a better home rather than chaos.

More males meant more legs churning, leading to nests up to three times larger than those built by a single pair.

While smaller nests dry out quickly, killing the eggs inside, larger nests hold onto moisture for longer, ensuring more tadpoles survive from the nest.

You might wonder: why

would a male frog help build a nest if he is competing with 12 other frogs? Using DNA testing, the researchers found that in these crowded nests, paternity is often split. By cooperating to build a large, moist fortress, the males ensure at least some of their offspring survive, rather than losing all of them to a dried-out nest.

The scientists also suspected that the males’ skin and fluids contain surfac-

tants – compounds similar to laundry detergent – that keep the bubbles from popping.

The African grey foam-nest tree frog reminds us that survival is not always about being the strongest or the fastest. Sometimes, it is about having the best teammates, the best chemistry, and the most impressive bubble-making skills in the forest.

(D.P. Kasbekar is a retired scientist)

SNAPSHOTS



Sea star sports nature's optic fibres to focus light

A remarkable structure in the chocolate-chip sea star (*Protoreaster nodosus*) has come to light. On the tip of each arm, a skeletal part contains an array of cone-shaped structures that, like optic fibres, transmit 70% of incident light and concentrate it nearly 3x at the base. Overall, the array captures light from a 120° field of view and ‘brightens’ it 8x inside the arm. Scientists said engineers could use the design for lightweight sensors and displays.

Droughts can drive antibiotic resistance in soil bacteria

Research has revealed that drought-induced soil stress concentrates natural antibiotics, accelerating evolution of resistant bacteria; this phenomenon threatens to worsen global antibiotic resistance by 2050, particularly in drought-prone regions

Sharmila Vaidyanathan

Droughts can increase the levels of antibiotic resistance in soil, researchers from the California Institute of Technology have reported. Their study also projected that by 2050, several parts of India and other drought-prone countries will grapple with severe antibiotic resistance (ABR).

The study, in *Nature Microbiology*, revealed that when soil dries due to drought stress, the concentration of natural antibiotics increases, favouring the survival of resistant bacteria. Soil has been an important source of antibiotics.

“The current study spotlights a broader ecological perspective where climate-driven environmental changes might also influence resistance,” the study’s authors, postdoctoral research scholar Xiaoyu Shan and the Gordon M. Binder/Amgen professor of biology and geobiology Dianne Newman, wrote in an email.

By analysing soil DNA datasets from the U.S., China, and Europe and across cropland, wetland, grassland, and a forest site, the team found that drought increased the prevalence of genes that both produce antibiotics and help organisms resist them. The team also replicated the findings using synthetic soil samples inoculated with soil bacteria and treated with a known antibiotic. When the soil was dried, antibiotic-resistant bacteria better survived the adverse conditions.

“Previous studies have

Under pressure

When soil dries, the concentration of natural antibiotics increases, favouring the survival of resistant bacteria



Per a 2024 report, 91 districts in India are in the ‘very high’ drought risk category while 188 districts face ‘high’ drought risk. AFP

- New research has found that drought conditions increase natural antibiotic levels in soil, fuelling antibiotic resistance
- Researchers project that several countries, especially India, will face severe antibiotic resistance challenges by the year 2050
- Environmental stress from droughts independently shapes the evolution and enrichment of resistant bacteria within various soil ecosystems
- Antibiotic resistance can move from the environment to humans through horizontal gene transfer and contaminated agricultural products
- India faces heightened risks due to frequent droughts, dense populations, and heavy antibiotic use in livestock industries
- Experts recommend using vaccines and integrated monitoring systems to reduce the disease burden amplified by climate change

documented antibiotic resistance genes in wastewater, rivers, and soils, but these patterns have largely been interpreted as consequences of anthropogenic contamination, such as antibiotic overuse in medicine and agriculture,” the two co-authors wrote. “Our work asked a fundamentally different question: could environmental stress, independent of direct antibiotic pollution, actively shape the evolution and enrichment of resistance?”

The links between climate change and ABR are becoming more prominent. In one recent study, scientists found that subjecting experimental grassland plots to warming conditions over 11 years rendered ABR genes 24% more abundant. Droughts are also becoming more

severe due to climate change.

The study’s authors examined hospital data in 116 countries and found that drier regions reported more infections due to antibiotic resistance. Research has already shown ABR resistance can move from the environment to humans through horizontal gene transfer, where genetic elements carrying antibiotic resistance are transferred to human pathogens, and bacterial transmission via aerosols, polluted soil and water, and agriculture.

“India is vulnerable because it simultaneously faces several challenges relating to increased frequency of droughts, heavy antibiotic use in humans and livestock, wastewater irrigation, dense human-animal-soil interactions,

and heavy agricultural dependence,” G. Ravikanth, senior fellow and convenor, Ashoka Trust for Research in Ecology and the Environment, Bengaluru, said.

“India’s drought-prone regions overlap substantially with the rural districts where access to formal healthcare is weakest,” Erta Kalanxhi, fellow and director of partnerships at One Health Trust, a global health research organisation, said. “In this context, climate change may intensify the selection pressure on [antibiotic resistance] in the populations least equipped to manage the clinical consequences.”

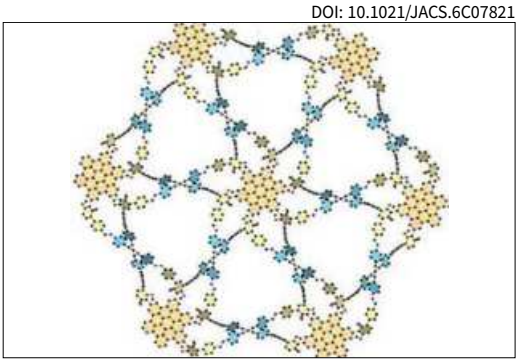
Dr. Ravikanth emphasised the need for long-term monitoring stations in arid regions to track microbial community shifts, drought intensity, and anti-

biotic resistance. He added that existing Krishi Vigyan Kendras could be mobilised for data on antibiotic residues in agricultural soils, poultry and dairy farms, and to understand the spread of resistant microbes.

In a recent One Health Trust policy brief, in collaboration with Christian Medical College, Vellore, the authors underscored the role of vaccines. “Apart from concentrating natural antibiotics in soil and intensifying resistance, droughts also create the conditions under which enteric pathogens such as *Salmonella typhi* thrive,” Dr. Kalanxhi said. “Scaling up vaccination suppresses the disease burden that drought amplifies and reduces the empirical antibiotic demand that drives resistance selection in clinics.”

The authors Drs. Shan and Newman also said the study encourages a deeper exploration of how these natural products shape the environments in which they reside – including understanding if antibiotics in soil have other functions or control the development of microbial communities near the roots of plants. They emphasised that integrated approaches that combine microbiome sampling and sequencing of soil, airborne dust, and the human body, epidemiological monitoring of exposed human populations, and longitudinal drought and climate records can help provide actionable insights.

(Sharmila Vaidyanathan is an independent writer from Bengaluru)



Nanographene paves way for ultra-porous materials

Scientists, led by Nobel laureate Omar Yaghi, have a new way to build highly porous materials using nanographene. They designed a molecule called HBC-LA12, with 12 connection points arranged in a prism shape. By linking this molecule with others, they created two new 3D structures that are a breakthrough in reticular chemistry. One has a record surface area of 5,000 sq. m per gram. The findings expand the way to design materials to store gases.



JUNO hits the ground to crack neutrino physics mystery

The Jiangmen Underground Neutrino Observatory (JUNO) collaboration in China has published its first results. Based on 59 days of data collected in late 2025, the group calculated how often particles called neutrinos from nuclear reactors change their flavour, or type, as they travel. The findings showed JUNO was working as expected and on track to help crack a tough open question called neutrino mass ordering: of the three flavours of neutrinos, which are heaviest and lightest?

How ants cope with disease outbreaks



SPEAKING OF SCIENCE
D. Balasubramanian

Ants are associated with a range of very positive qualities – including a self-motivated work ethic, preparedness and long-term thinking, and a preference for collective effort. Many ant species are also social, and living in social groups offers many advantages. However, there are downsides too.

Among humans, the occurrence of seasonal outbreaks of infections such as influenza and other diseases is the result of the nature of the social structures humans live in. That is how we have learnt the basic rules of limiting these outbreaks’ effects. If you notice a general build-up of

symptoms, you take leave from your workplace and isolate yourself for a few days.

Altering one’s social contact networks reduces the spread of pathogens. This process requires collective discipline – just the kind of qualities that ants are famous for.

So how do ants living in their colonies cope with pathogens? In some ant species, individuals spread antimicrobial secretions from the metapleural gland on themselves, on larvae, and on their fellow nest dwellers. This gives rise to a ‘social immunity’: every individual in the colony has some protection against infections.

Other, more dramatic measures have been observed. Researchers at the University of Lausanne in Switzerland introduced a worker black ant whose leg had been experimentally



Black garden ants tend to mealybugs. KATJA SCHULZ (CC BY)

injured back among its companions. It was seen that the fellow ants quickly amputated this leg by repeated bites at the joint linking the leg to the body (*Current Biology*, 34, 2024). A wounded limb would have attracted disease-causing microbes and endangered other ants in the colony.

A more recent study looked at how ant colonies respond to an epidemic (*Science*, 390, 266, 2025).

The ant studied was the black garden ant, which is related to the Indian black ants that we see in and around our homes. The black garden ants build complex underground nests that have one main entrance, a central portion housing the queen, eggs, and larvae, and several satellite chambers used by other ants in the colony and to store food and collect waste. Tunnels connect various parts of the

nest. There is a clear division of labour, with some worker ants acting as nurse caretakers and others acting as foragers.

In the experiments, a single queen, with around 200 worker ants, began to build a nest. All ants have miniature QR codes stuck on them and video cameras follow their movements. The scientists monitored the nest structures using micro-CT scans. One day later, 20 worker ants that had been exposed to a pathogenic fungus were introduced to the colony.

Over the next few days, the infected ants exited the nest more often and spent more time outside than their nestmates. This was self-isolating behavior. The architecture of the nest had also adapted: the entrances were spaced further apart than normal. The pace of work became frantic and focused on digging

longer tunnels. There were also fewer connections between chambers.

Together, these changes led to more segregation and restricted interactions between the segregated groups. High-value ants like the queen and the nurses had significantly lower exposure to the forager ants and remained healthy.

Sounds familiar? Humans maintain quarantines, wear masks when interacting with others, and wash their hands often when faced with an epidemic in our communities. Ants seem to have evolved their own, very effective social distancing measures.

(The article was written in collaboration with Sushil Chandani, who works in molecular modelling)

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Question Corner

Pattern of walks

Do people have a tendency to walk in particular directions?

The answer to this strange question is a stranger ‘yes’. When people walk freely in an open space, they often begin to move in a counter-clockwise circle. While scientists believed people were simply following those in front of them or reacting to boundaries, a new study in *Nature Communications* has found a biological bias to turn in that direction. The researchers conducted experiments in Spain and Japan, observing groups of adults, teenagers, and nursery school children. They found that the tendency to

move counter-clockwise exists even when a person is walking alone in an empty arena and social norms, such as whether a country drives on the right or the left, didn’t change the pattern. The preference also didn’t depend on whether one was left- or right-handed and whether they had a ‘dominant’ eye. The children displayed the preference in the most pronounced manner, which suggested the preference could be an intrinsic part of human locomotion.

Readers may send their questions / answers to science@thehindu.co.in

INBRIEF



‘Tata’s iPhone parts factory contaminated groundwater’

An Indian pollution regulator has alleged wastewater discharged from a Tata components factory for Apple’s iPhone has contaminated the groundwater for nearby farms and warned of a forced shutdown unless Tata gives a satisfactory explanation. The Tata plant under investigation is in Hosur in southern Tamil Nadu and makes back panels and other components for iPhones. Complaints led to five state inspections between December 2025 and May 2026. Inspections found that Tata discharged wastewater into a rainwater harvesting pond inside its facility and that the pond overflowed to contaminate “groundwater in the open wells located in the adjacent agricultural lands,” the Tamil Nadu Pollution Control Board’s warning notice to Tata said. Tata Electronics told *Reuters* in a statement it had commissioned an independent analysis through an accredited laboratory and that the study determined the company was “in full compliance with all regulatory norms”.

Nasscom launches UK Technology Advisory Council

Nasscom, through its UK forum, in partnership with the High Commission of India in the United Kingdom, recently announced the constitution of a UK Technology Advisory Council (TAC), at the Nasscom UK Forum meet held at the High Commission of India, London. The UK Technology Advisory Council will serve as a strategic industry advisory body to the High Commission of India in the UK, providing structured inputs on accelerating India-UK technology partnership including the government-led Tech Security initiative on Artificial Intelligence, enhancing cross border trade, investment and talent development, streamlining ease of doing business to help achieve the FTA target of doubling the bilateral trade, and achieving the goals of Vision 2035.

AI sovereignty hawks see red as U.S. moves to block Mythos, Fable models

Aroon Deep
NEW DELHI

The U.S.’s abrupt decision to restrict access to AI firm Anthropic’s Mythos and Fable large language models is leading an “I told you so” moment for national security hawks within the Indian government, who had dealt for months with skepticism and sparse resources in supporting sovereign efforts to develop an Indian AI stack.

“Globalisation is dead, and Bharat must find its own way ahead,” Sridhar Vembu, founder of Zoho and a member of India’s National Security Advisory Board (NSAB), declared on X shortly after Anthropic announced the export controls. “What can our government do right now? Ensure that organisations in India embrace smaller models, both Indian and Chinese open-source ones. With a bit of effort, we can make them work. Anyway, why pay money to people who don’t even want to sell to you?,” he posted.

The U.S. government ordered Anthropic to disable Mythos and Fable access for non-U.S. nationals, even within its own company, on Friday evening. Mythos is a model which Anthropic claims has been highly accomplished in finding and patching cybersecurity vulnerabilities that even human researchers had missed over decades.

Amid concerns that AI-generated cyberattacks may be a threat to Indian companies and government entities, India sought access to Mythos, and some entities joined the so-called Project Glasswing to gain some access earlier this month. That access



India had sought access to Mythos amid AI-generated cyberattack concerns.

may now be disrupted. The Ministry of Electronics and Information Technology (MeitY) and the Ministry of External Affairs, which have been in touch with Anthropic and the U.S. government regarding Project Glasswing, did not respond to queries from *The Hindu*. The Indian Cyber-crime Coordination Centre (I4C), which reportedly gained access to Mythos this month, along with the cybersecurity agency CERT-in, which operates under MeitY, also did not respond.

Even some less cybersecurity-focused projects are experiencing disruptions due to the U.S.’s move.

The restriction of Fable, which has been available for all paying users of Claude, had immediate fallout on Saturday.

For instance, Vikram Chandra, an entrepreneur and journalist, said on X, “I have projects that were to run on Fable today – and they will come to a grinding halt... Yes, guardrails for frontier AI are essential – and Anthropic itself has argued for them. But creating national barriers isn’t the solution.”

India’s capabilities to train a frontier AI model lag behind those of China, which itself is a few steps

behind the U.S. While Beijing is home to firms like DeepSeek, which uses slightly older graphics processing units (GPUs) in large quantities, with abundant access to data centre capacity and electricity, to try to catch up to the more efficient U.S. models made by firms like Anthropic and ChatGPT, India has a relatively limited capacity of such resources to train large language models (LLMs) like Claude’s Opus, Mythos, and Fable.

While a hypothetical Indian alternative to Mythos wouldn’t be subject to abrupt geopolitical interruptions, actually creating such an LLM is dependent on the availability of abundant quantities of expensive AI chips from firms like Nvidia, data centre capacity, and electricity availability to boot.

Since the costs run into tens of billions of dollars, sovereign AI proponents’ ambitions have been limited. Even Mr. Vembu, who has been critical of over-reliance on foreign tech and whose firm has been appointed to run email inboxes of Union government employees, struck a realistic note on the potential.

“We must deepen our R&D,” Mr. Vembu said.

“Sarvam has been on it and we have been on it, but remember that the latest models cost not only huge GPU budgets to train; the GPUs themselves are restricted. So, we can’t afford the scale of money (of the order of \$100+ billion to even get in the game), and even if we could come up with the money, we can’t get all the GPUs. I would not like to ask the government to fund tens of billions of dollars on this anyway – the money has

far better uses,” he said. He advocated lower-cost research like what Zoho was undertaking.

“We are way behind and need a national mission to get going quickly,” T.V. Mohandas Pai, former CFO of Infosys, who consults closely with the government on technology-related issues, said on X.

“Existing government programs are too slow, way too small to make any large impact. We need an annual ₹50,000 crore fund for deep tech and AI, a ₹2,00,000 crore ELGS [Emergency Credit Line] Guarantee Fund to build Hyper cloud, hardware and chips.”

At least one firm has seen some progress, however: Bengaluru-based Sarvam AI launched a 105 billion parameter LLM that is specifically trained with an Indian bias (to counter the U.S.-centricity in most LLMs). While this model is capable of coding tasks, it is far from a frontier-class model for ambitious cybersecurity work.

“A few Indian friends of mine who had access to the Mythos model told me genuinely how terrifying it was,” C.S. Akshay, a cybersecurity researcher who has uncovered several vulnerabilities in Indian government and private websites in the past, said in a LinkedIn post. “You just point it to anything and it does uncover vulnerabilities unlike anything they have seen before.” While responses to Mythos are occasionally tempered by less advanced LLMs discovering similar software bugs, its true potential remains gatekept to Project Glasswing members of whom there are only a few dozens, most in the U.S.

Business

Where Indian seafarers’ safety is at stake

Seafarers operating in regions where commercial shipping is entangled in geopolitical conflict are at a greater risk; diplomatic engagement alone may not suffice, they should not be compelled to sail through war-risk zones without full disclosure of risks and their informed consent

OPINION

Capt. Daniel J Joseph

The deaths of Indian seafarers Aditya Sharma, Shivanand Chaurashiya and Patnala Suresh aboard Settebello are a stark reminder of the risks borne by those who sustain global commerce. While geopolitical tensions dominate headlines, the human cost is frequently carried by civilian merchant mariners navigating the world’s most dangerous maritime corridors.

In the aftermath of recent attacks on merchant vessels, debate has emerged within maritime circles over the role of so-called “sanctioned vessels” – much of it marked by misunderstanding and oversimplification.

A sanctioned vessel is one designated under an economic, trade or security sanctions regime imposed by a government or international organisation. Such sanctions may originate from the UN Security Council, the United States, the European Union, the United Kingdom or other national authorities.

Vessels may be sanctioned due to their ownership, involvement in prohibited trade, restricted cargo, links to terrorism, or participation in sanctions-evasion practices such as deceptive shipping and unauthorised ship-to-ship transfers.

Yet sanctions are not universally applicable. A vessel sanctioned by one



Choppy waters: The Strait of Hormuz remains one of the world’s most critical maritime chokepoints. ANI

country is not automatically sanctioned everywhere. Unless restrictions arise from a binding UN Security Council resolution, unilateral sanctions generally apply only within the jurisdiction of the imposing country and to entities subject to its laws. A vessel sanctioned by the U.S. Office of Foreign Assets Control, for instance, does not automatically become illegal under Indian law.

Nor does a sanctioned vessel cease to be a merchant ship. Unless its registration is withdrawn, it is detained, or its flag State takes specific action, it may continue operating internationally. Such vessels often face port access restrictions, insurance challenges, banking limitations and heightened regulatory scrutiny – but they do not simply vanish from global trade routes.

The larger issue, however, is not the legal status of individual ships. It is the safety of seafarers operat-

ing in regions where commercial shipping has become entangled in geopolitical conflict.

Industry expectations

The maritime community expects India to adopt a stronger, more proactive posture. Attacks on merchant shipping and civilian seafarers, irrespective of nationality, should be unequivocally condemned. India continues to advocate adherence to international maritime law and freedom of navigation while raising concerns at multilateral forums including the UN, the International Maritime Organization and regional maritime-security platforms.

Diplomatic engagement alone may not suffice. India must work closely with flag States, shipowners and operators to ensure appropriate security measures for vessels transiting high-risk areas. Indian seafarers should not be compelled

to sail through war-risk zones without full disclosure of the risks and their informed consent.

There is growing expectation that India will strengthen its maritime-security posture in the region. Enhanced naval deployments, expanded Coast Guard surveillance, rapid-response capabilities and preparedness for hostage-rescue or evacuation operations would reassure the thousands of Indian seafarers serving aboard international vessels. Timely dissemination of actionable intelligence and regular threat assessments to shipowners and operators is equally important.

The welfare dimension of maritime crises often receives less attention than security concerns. Families of seafarers frequently depend on fragmented information and rumours during emergencies.

Establishing dedicated contact points, providing verified updates and offering psychological and logistical support to affected families should form an integral component of any crisis-management framework. The industry has also argued that seafarers who decline assignments in declared war-risk areas should not face professional penalties. Existing contractual protections, war-risk compensation provisions and insurance mechanisms must be fully honoured. Enhanced war-risk allowances and adequate insurance cover, negotiated with Protection and Indemnity Clubs and

hull-and-machinery underwriters, have become increasingly necessary as maritime threats evolve.

Banning no solution

The question of whether Indian seafarers should be prohibited from serving on vessels transiting the Strait of Hormuz has surfaced repeatedly. A blanket ban, however, is neither the primary demand of the maritime industry nor a practical solution.

The Strait of Hormuz remains one of the world’s most critical maritime chokepoints, handling a substantial share of global energy trade. Thousands of Indian seafarers earn their livelihoods aboard vessels that routinely transit the region without incident. A comprehensive prohibition could have significant consequences for employment, global supply chains and India’s standing as one of the world’s leading suppliers of maritime manpower.

What the industry seeks is a calibrated, evidence-based approach. Periodic risk assessments, clear advisories, mandatory informed consent for deployment in high-risk areas and enhanced security protocols are widely viewed as preferable to outright restrictions. Should the threat environment deteriorate significantly, temporary advisories against joining certain vessels or routes may become necessary – but the objective should remain protecting seafarers without unnecessarily undermining their employ-

ment opportunities.

An equally important question concerns regulatory authority. Can India’s maritime regulator prohibit seafarers from joining such voyages, or does that authority lie elsewhere?

The Directorate General of Maritime Affairs (DGMA) exercises regulatory oversight over merchant shipping and seafarer certification. However, its jurisdiction is primarily linked to Indian-flagged vessels. The Ministry of External Affairs, on the other hand, holds authority over Indian citizens abroad, diplomatic engagement and travel advisories.

It can influence maritime-security policy through diplomatic channels and, where necessary, through measures affecting international travel.

Any meaningful restriction on Indian seafarers joining high-risk voyages would require coordinated action across multiple ministries – Ports, Shipping and Waterways; External Affairs; and Labour.

India would benefit from an inter-ministerial maritime-security framework capable of escalating measures in proportion to the threat environment – one that brings together maritime regulators, foreign-policy officials, defence agencies, intelligence organisations, shipowners’ associations and seafarers’ unions to facilitate real-time decision-making.

(The writer is Deputy Director General of Shipping. Views are personal)

Striking march



Up in arms: Women take part in a demonstration as part of a day of women’s strike action ahead of the upcoming G7 summit, in Lausanne, Switzerland, Saturday. AP

Dr. Reddy’s launches generic cancer drug Bosutinib in U.S.

N. Ravi Kumar
HYDERABAD

Dr. Reddy’s Laboratories announced on Saturday the first-to-market launch of Bosutinib Tablets 400 mg, a generic equivalent of Pfizer subsidiary Wyeth’s cancer drug Bosulif, in the U.S. Bosutinib Tablets (400mg) was a first-to-file product and thus eligible for 180-days of generic drug exclusivity for this strength, in the U.S., Dr. Reddy’s said.

While the exclusive marketing rights for the product in the U.S. rest with Dr. Reddy’s, another Hyderabad-based generic drugmaker MSN Laboratories is responsible for the development and manufacturing of the product,



A view of Dr. Reddy’s Laboratories in Hyderabad

the company said.

The Bosulif brand (400 mg) had U.S. sales of approximately \$253.8 million for the latest 12-month period ended April 2026, it said, citing IQVIA National Sales Perspectives data.

“With this launch, we remain focused on strengthening our oncology portfolio and partnering across the healthcare system to

ensure that critical treatments are both accessible and affordable,” CEO North America of Dr. Reddy’s Milan Kalawadia said.

The successful development and commercialisation of Bosutinib Tablets demonstrates MSN’s strong scientific, regulatory, and manufacturing capabilities in complex oncology products, said Bharat Reddy, Executive Director of MSN Laboratories.

According to the U.S. FDA, Bosulif is a kinase inhibitor indicated for the treatment of adult patients with newly-diagnosed chronic phase Ph+ chronic myelogenous leukemia (CML); and chronic, accelerated or blast phase Ph+ CML with resistance or intolerance to prior therapy.

‘U.S., India to tackle trade at G7, but deal not imminent’

Reuters
WASHINGTON

U.S. Trade Representative Jamieson Greer will travel to India the week after the G7 leaders summit, a senior U.S. administration official said on Saturday, saying a trade agreement was possible.

Trade would be an issue discussed during President Donald Trump’s meeting with Indian Prime Minister Narendra Modi during next week’s gathering in France, but no agreement on a trade deal was expected at the summit, the official said.

Mr. Trump would insist on reaching “a very good deal,” the official said.

PRECAUTIONARY MEASURE

Pulisic allays injury worries after being substituted at half-time



United States' star Christian Pulisic played down injury concerns after he was substituted at half-time in the World Cup co-host's 4-1 win over Paraguay in Los Angeles. "I just got a bit of a kick in the first half. I was taking a little bit of precaution. But I am hoping that I will be fine in the next few days," said Pulisic.

GALAXY OF STARS

Celebrities enjoy the first men's World Cup match on Canadian soil



Cyle Larin's goal not only saved the World Cup opener for Canada but also gave a bunch of Canadian celebrities a reason to celebrate. *Deadpool* star Ryan Reynolds, in pic., NHL standout Connor McDavid and actor Mike Myers were among the stars spotted at BMO Field for the first men's World Cup match on Canadian soil.

OOZING POSITIVITY

Spain is full of confidence and is very motivated, says Grimaldo



Alex Grimaldo believes that Spain can emulate its golden generation by winning the World Cup two years after being crowned European champion. "I see us as a favourite. The team is full of confidence and is very motivated. We are desperate to do a good job because we have the team to do so," said Grimaldo.

TAKING A DIG

Infantino quips Italy might qualify if WC is expanded to 64 teams



FIFA president Gianni Infantino joked that struggling Italy might manage to qualify for the World Cup if the competition was expanded from 48 to 64 teams in 2030. "Maybe Italy qualifies with 64 teams, or we could even go up to 208 teams," Infantino told Brazilian digital broadcaster CazeTV.

USA off to a dream start with a thrashing of Paraguay

A Balogun brace and Reyna curler put the co-host in pole position to advance from Group D; the visitor plays the perfect obliging guest with an own goal to start off the proceedings; contest as good as over after the first half

FIFA WORLD CUP

Agence France-Presse
LOS ANGELES

The United States could scarcely have scripted a better start to its World Cup as a Folarin Balogun brace and Gio Reyna curler fired the co-host to a 4-1 drubbing of Paraguay on Friday. It took the lead within seven minutes thanks to an own goal, and by the end of an utterly dominant half, the home fans were in dreamland, their side up by three. The USA piled wave after wave of attacks on the South Americans, with Reyna polishing off the win after Mauricio had pulled one back. The win and emphatic scoreline put the USA in a favourable position already to progress from Group D, which also contains Australia and Türkiye. The night's only potential sour note was the half-time withdrawal of forward Christian Pulisic.



Unstoppable: Balogun fires in United States' third past a hapless Paraguay. AP

Paraguay could not have been a more obliging guest from kickoff. In the seventh minute, Weston McKennie picked up the ball in the centre circle and drove upfield, finding Pulisic. The 27-year-old darted between two defenders and returned the ball to McKennie, whose pass to striker Balogun was bundled into his own net by a hapless Damian Bobadilla. Balogun had a goal ruled out in the 28th minute for straying offside, as had Pulisic in the buildup. But the Monaco striker got on the scoresheet three minutes later, thanks to a superb ball down the left flank by Antonee Robinson to Pulisic, whose cross to Balogun took a fortuitous deflection. The US added a third on the cusp of half-time. Malik Tillman found Balogun, who evaded Omar Aldeire's challenge, skipped inside Gustavo Gomez and curled his shot perfectly into the top-left corner. Reyna scored a superb fourth with the outside of his right foot that curled just inside the far post.

THE RESULTS

Group B: Canada 1 (Larin 78) drew with Bosnia-Herzegovina 1 (Lukic 21). Group D: United States 4 (Bobodilla 7-og, Balogun 31, 45+5, Reyna 90+8) bt Paraguay 1 (Mauricio 73).

Canada earns first WC point after draw with Bosnia and Herzegovina



Promise delivered: David, right, provided the assist for Larin's equaliser. GETTY IMAGES

Agence France-Presse
TORONTO

Canada grabbed a second-half equaliser to draw 1-1 with Bosnia and Herzegovina on Friday in the first men's World Cup game played on Canadian soil. Cyle Larin (78th) produced the equaliser for the co-host after Jovo Lukic put Bosnia ahead with a header in the 21st minute of the Group B clash. Thanks to Larin's effort, Canada earned its first point in World Cup history. Canadian sides had a perfect record of futility at two previous tournament appearances in 1986 and 2022, with six losses. Lukic's goal from a corner sent the small but enthusiastic Bosnian contingent into a frenzy. Behind just before the first hydration break, Canada had the majority of the ball in the opening period but failed to generate any real chances. In the 17th minute, forward Jonathan David had a clear shot on goal but it was easily handled by Bosnian 'keeper Nikola Vasilj. Canada's Ismael Kone had a golden opportunity around the hour-mark, with his strike sailing well over the net and prompting groans from thousands of Canadians who blanketed the stadium in a sea of red. The second half began in similar fashion as Canada was largely on the attack but unable to find the net. Veteran Serbian defender Sead Kolasinac saved a certain goal when he diverted a strike from David onto the crossbar, extending Canada's agony. But Larin's equaliser in the 78th minute marked a high point in Canada's limited World Cup history, causing the majority of the 43,000 fans to erupt.

Ecuador's rock-solid defence faces the power and panache of Ivory Coast

Avon Sengupta

Every summer, visitors gather around the Independence Hall and the Liberty Bell in Philadelphia to revisit America's past. On Sunday evening, the city will welcome two nations looking to shape their footballing future when Ivory Coast and Ecuador open their World Cup campaigns at the Lincoln Financial Field. They arrive from opposite shores of the footballing map, one carrying the hopes of West Africa, the other representing South America's enduring depth. But both are united by the same ambition to announce themselves on the sport's grandest stage. In a group that also contains Germany and Curacao, neither side can afford a slow start. Three points here could prove decisive in the race for an automatic qualification to the knockout rounds. For Ivory Coast, the World Cup offers an opportunity to confirm that its recent resurgence is no passing phase. The 2023 African champion has rebuilt impressively after a period of uncertainty, with coach Emerse Fae concentrating on bringing in defensive stability. The pace and directness of Simon Adingra, Amad Diallo and the experience of captain Franck Kessie



The orchestrator: Chelsea midfielder Caicedo will be tasked with dictating the rhythm of Ecuador's play. GETTY IMAGES

give Ivory Coast a mixture of power and panache that has for long embodied its football. The Ivorians are unlikely to lack attacking intent. Their strength lies in transition, where pace and direct running can quickly turn defence into attack. Against an Ecuador side

midfielder, will be tasked with dictating the rhythm of Ecuador's play. Around him, the side possesses a young and dynamic spine, with Piero Hincapié anchoring the defence and a new generation of attacking talent seeking to make an impact. While Ivory Coast will look to make the game open and physical, Ecuador is more likely to rely on structure and patience. The contest could ultimately hinge on which side succeeds in imposing its preferred tempo. One will look to finish chances, the other to prevent them from materialising. Lincoln Financial Field, home of the Philadelphia Eagles, is among the venues introducing World Cup football to one of America's most passionate sporting cities. Known for demanding excellence from their teams, Philadelphia's fans appreciate intensity and commitment, qualities both Ivory Coast and Ecuador are expected to bring in abundance. Neither nation begins the tournament among the favourites, but both know that World Cups are often shaped by teams capable of seizing opportunities. Their road to the knockout rounds begins in Philadelphia, where history is celebrated daily and new stories are always waiting to be written.

Curacao set for a tough debut against Germany

Reuters
HOUSTON

Germany will look to start its World Cup campaign with a big win over Curacao, with the four-time champion out to repair its damaged international reputation following first-round exits in the previous two editions. It could not have hoped for an easier first opponent than Curacao, the smallest nation to qualify for the World Cup. Julian Nagelsmann's team is on a nine-match winning run, including a 4-0 victory over Finland and a 2-1 win over World Cup co-host United States. Curacao is a rank outsider, with most of its players plying their trade in the Netherlands or in lower European leagues. But veteran coach Dick Advocaat, who at 78 will become the oldest coach in World Cup history, relishes facing Germany in Group E. "We will find out immediately where we stand," said Advocaat.

Monday's matches Group F Netherlands vs. Japan, 1.30 a.m. Sweden vs. Tunisia, 7.30 a.m. Group E Ivory Coast vs. Ecuador, 4.30 a.m. Group H Spain vs. Cape Verde, 9.30 p.m. The day and time(s) pertain to India

Stat attack

1

Promise David assisted Cyle Larin's equaliser for Canada with the only pass he completed all game

1

Canada won a World Cup point in its seventh attempt

2

Larin was the second man (after Alphonso Davies vs. Croatia, 2022) to score for Canada in a World Cup

2

Paraguay became the only team the USA has beaten twice in World Cup history

4

The number of times USA benefited from own goals in its World Cup journey, tying it in the second spot with Germany and Italy. Only France (6) has more

6

Bosnia and Herzegovina's draws in its last six games, five ending 1-1

31

Larin's goal tally pulled him second behind Jonathan David (39) for most goals for the Canadian men

38y 250d

Tim Ream became the oldest to play for USA in the football showpiece

96

Folarin Balogun earned the distinction of being the first USA player to score two goals in a World Cup match in 96 years since Bert Patenaude performed the first hat-trick in 1930 (also against Paraguay)

Compiled by ANIRUDH VELAMURI

83

Chris Richards completed all 83 of his passes, the most without missing in a World Cup match since 1966

Japan and Netherlands' coaches have key decisions to make

Reuters
DALLAS

Japan coach Hajime Moriyasu must decide who will replace retired captain Wataru Endo at the heart of his midfield as it prepares to kick off its World Cup campaign against the Netherlands here on Sunday. Endo had formed a mid-field partnership with Ao Tanaka in Japan's most recent friendly against Iceland. But Moriyasu's confidence in his options was reflected in his decision to replace Endo with forward Shuto Machino. Tanaka could be paired with Germany-based Kaishu Sano or Daichi Kamada. Netherlands boss Ronald Koeman has concerns of his own. Goalkeeper Bart Verbruggen is recovering from a knock while forward Memphis Depay has played little over the last three months. "We know that Depay had a few injuries but he is back. Every day, he is closer to his 100% fitness," Koeman said. "He is our top scorer, and we need him if we would like to go in a good way in this tournament. We need all the players but, of course, we need Depay as well."

ANDHRA PRADESH



Distraught family members of the victims wait outside the hospital premises, following the fire accident that claimed nine lives at the Visakha Steel Plant; (below) rescue and recovery operations under way after the industrial accident. V RAJU

A legacy of steel scarred by disasters

A blast in the Vizag Steel Plant on June 8 has claimed the lives of nine persons and injured six others, triggering demands from the victims' kin for accountability and long-term support, while sparking a nationwide debate on industrial safety, management accountability and privatisation. V. Kamalakara Rao reports on how the accident unfolded and how it has aggravated the suffering of workers who have been on the warpath ever since the Union government announced its proposal for 100% disinvestment of the plant

The recent explosion in the port city of Visakhapatnam reflects the human costs of an industrial tragedy that dominates the headlines for a few days and is forgotten till another tragedy strikes. A heart-rending video recorded on June 8 and now going viral on social media, depicting a father's final message to his son.

One of the victims, 53-year-old K. Paidiraju, knew that his time was running out, as he suffered over 90% burns in a massive explosion that occurred in the Plant. The skin on his chest had been burnt away, and every breath was an agonising struggle. Yet his voice carried the weight of a father's final message.

"Varma... Daddy," he whispered, addressing his eldest son. "Take care of your brother. Take care of your mother. Continue your studies. Don't fight with anyone. Stay united."

Within 48 hours, on June 10, Paidiraju succumbed to his injuries at MGM Seven Hills Hospital in Visakhapatnam, becoming the ninth fatality of the devastating industrial disaster at the Rashtriya Ispat Nigam Limited (RINL)-Visakhapatnam Steel Plant.

The video soon went viral across social media platforms, emerging as the haunting symbol of a tragedy that reduced hardworking men to ashes within seconds.

Among those who perished were technicians Gonitha Bhanu Kumar, G.V. Appa Rao and M. Krishna Nagu; general foreman K. Prabhakar Rao; and a promising young manager, Bheem Kumar, also known across the Plant as "Gold Kumar".

The intensity of the inferno was such that several bodies recovered from the wreckage of Steel Melting Shop-1 (SMS-1) were beyond recognition. Forensic teams at the King George Hospital (KGH) mortuary had to rely on DNA analysis to identify the victims and hand over their remains to grieving families.

As investigators continue examining the twisted remains of Caster-2, the human cost of the disaster is visible across Visakhapatnam.

In Gangavaram, not far from the steel plant, Paidiraju's home is filled with mourners. His wife remains inconsolable, while his two sons repeatedly watch the video carrying their father's final words.

Heartbroken families

Like Paidiraju's family, relatives of the other victims are struggling to come to terms with their loss. Appa Rao's wife, Rachamma, recalled that her husband, on the fateful day, left for the Plant from a hospital where their elder son was admitted due to a high fever. After arriving, Rachamma called Appa Rao, when he asked her to "take care of the children", a visibly grief-stricken Rachamma recounted it to be her husband's last words. Besides their grief, the victims' kin are demanding accountability and long-term support.

Take care of your brother. Take care of your mother. Continue your studies. Don't fight with anyone. Stay united

K. PAIDIRAJU
Victim

"We need immediate government intervention and livelihood support. Fair compensation alone is not enough. We need security for our future," several family members said outside the KGH mortuary while awaiting the release of the bodies.

The anatomy of an inferno

To understand the magnitude of the disaster, one must know the scale of the operation inside SMS-1. At around 4.15 p.m. on June 8, a massive industrial ladle, identified as Ladle No. 19, was suspended from an overhead crane. It contained approximately 150 tonnes of molten steel heated to nearly 1,500°C.

The molten metal had been processed through converters and was being positioned above the casting machine for transfer into a tundish before entering the continuous casting process. Workers stationed below were carrying out routine preparations for the opening of the ladle's mechanical slide gate.

Then, without warning, disaster struck. According to preliminary findings compiled by the Chief Inspector of Factories, gases trapped inside the molten steel may have caused a sudden pressure build-up. Before the slide gate could be opened, an explosion ripped through the vessel.

Ravi, a supervising technician working nearby, vividly recalls the horrifying moment. "I heard a sound like a supersonic bomb blast. Within seconds, a huge ball of fire shot up nearly 80 feet to the ceiling. Overhead Crane-2 caught fire almost instantly. The molten steel did not simply spill. It exploded outward like pressurised foam, raining down like volcanic lava over a vast area. We ran for our lives, but those directly underneath had no chance," he said.

The molten steel, glowing white-hot at temperatures approaching 1,600°C, instantly engulfed the workers below. Several were killed on

the spot, while others suffered catastrophic burns.

Political reverberations

The tragedy quickly acquired political dimensions. As RINL is a Navratna Central Public Sector Enterprise, the accident triggered a national debate on industrial safety, management accountability and privatisation. Prime Minister Narendra Modi expressed grief over the incident and announced an ex gratia payment of ₹2 lakh from the Prime Minister's National Relief Fund for the families of the deceased and ₹50,000 for those injured.

Union Minister for Steel and Heavy Industries H.D. Kumaraswamy arrived in Visakhapatnam shortly after midnight on June 9. Accompanied by Union Civil Aviation Minister and Srikakulam MP, Kinjarapu Rammohan Naidu, he visited the injured workers undergoing treatment at various hospitals and reviewed the situation. Kumaraswamy announced a relief package of ₹25 lakh for the family of each deceased worker, along with a permanent job in RINL for an eligible family member. For the injured, compensation of ₹10 lakh each was announced, while the company committed to bearing the full cost of medical treatment and rehabilitation.

Andhra Pradesh Chief Minister N. Chandrababu Naidu closely monitored the situation from Amaravati and directed officials to ensure speedy rescue and relief operations.

RAVI
Supervising technician

State IT and HRD Minister Nara Lokesh visited the accident site and met the bereaved families. "We are not merely providing financial assistance and moving on. After the mourning period is over, we will invite the affected families to Amaravati and discuss long-term support measures, including education for their children and their overall welfare," he said.

Deputy Chief Minister Pawan Kalyan also raised questions regarding industrial safety protocols, pointing to reports of technical issues in a nearby unit a day before the accident.

Meanwhile, YSRCP president and former Chief Minister Y.S. Jagan Mohan Reddy demanded a transparent and independent investigation into the incident, alleging that safety standards may have suffered due to the Plant's financial difficulties.

The disinvestment debate

Beyond the immediate tragedy lies a larger and more contentious issue. For several years, workers and trade unions have been protesting against the proposed 100% disinvestment of RINL by the Union government.

Many employees believe that the Plant's financial difficulties have directly affected safety standards. Trade union leaders, including D. Adinarayana, J. Ayodhya Ramu and Mantri Rajasekhar, argue that the company has been struggling under severe financial pressure, resulting in reduced operational capacity and a shortage of funds for maintenance and infrastructure upgrades. "When a large steel plant is starved of resources, the first casualties are preventive maintenance, safety audits and equipment replacement," Adinarayana said.

Ayodhya Ramu pointed to increasing dependence on contract labour in specialised operations. "There is a severe shortage of regular employees. Many critical functions are now being handled by contract workers who may not have

the same level of training and experience. This creates additional risks in a highly hazardous environment," Ramu said.

However, Minister Nara Lokesh rejected attempts to link the accident directly to privatisation. He noted that the Central government had recently extended substantial financial support to RINL to stabilise operations and address debt-related concerns.

Despite such assurances, workers remain skeptical. Many believe that unless the Plant secures captive iron ore mines and achieves greater financial stability, it will continue facing operational and safety challenges.

Seeking accountability

To determine the exact cause of the explosion, the Ministry of Steel has constituted a three-member independent inquiry committee headed by the Director-in-Charge of SAIL's Bokaro Steel Plant.

The committee is expected to examine several critical issues. Why did the safety systems fail to detect possible gas accumulation inside the molten steel? Was the refractory lining of the ladle adequately monitored and maintained? Were there any operational pressures to accelerate production despite warning signs?

The answers to these questions will be crucial in determining accountability and preventing future tragedies.

The National Human Rights Commission (NHRC) has also taken cognisance of the incident and sought a detailed report from the Andhra Pradesh government within two weeks. The NHRC has requested information on the condition of the injured workers, the compensation provided, and the measures being taken for the affected families.

Regional pride and sacrifice

This is not the first time the Visakhapatnam Steel Plant has witnessed such tragedy.

Popularly known as "Vizag Steel", the Plant occupies a unique place in the socio-political history of Andhra Pradesh. It emerged from the historic "Visakha Ukku-Andhrula Hakku" movement of the 1960s, during which 32 protestors lost their lives in police firing while demanding a steel plant for the State.

For many people, therefore, the Plant is more than an industrial unit - it is a symbol of regional pride and sacrifice. Yet its history has also been scarred by repeated industrial accidents.

The darkest chapter occurred in June 2012, when an explosion in the oxygen control unit of SMS-2 claimed 19 lives, including senior officials and union leaders.

In the years that followed, minor gas leaks, pressure valve failures and other accidents periodically claimed lives and exposed vulnerabilities in safety systems.

In May 2022, an explosion at Blast Furnace 3 injured several workers and renewed concerns about safety standards. Trade unions argue that a common thread runs through these tragedies.

According to them, chronic staff shortages, delayed maintenance schedules and excessive dependence on contract labour have steadily weakened the Plant's safety culture.

"The problem is not a lack of engineering expertise. It is a gradual erosion of safety practices," said a senior trade union leader.

For the people of Visakhapatnam, the steel plant remains a symbol of sacrifice, pride and perseverance. But every industrial accident chips away at that legacy.

As investigations continue and families mourn their loved ones' deaths, one painful question lingers: how many more lives must be lost before industrial safety becomes non-negotiable?

Until that question is answered, the proud moniker of "Ukku Nagaram" (Steel City) will continue to carry the bitter taste of avoidable tragedy.



A CM's promise and many doubts

A vibrant, stylized illustration of a man with glasses and a goatee, wearing an orange hoodie and green pants, riding a custom motorcycle. The bike features a rainbow-colored fuel tank with "REBEL SOUL" written on it, a rainbow-colored exhaust pipe, and a license plate that reads "007". The man is looking back over his shoulder. The background is white with a faint grid pattern.

ILLUSTRATION: SATHEESH VELLINEZHI

A group of young women are captured in a lively nightclub setting. They are dancing and socializing, illuminated by vibrant, colorful lights in shades of red, blue, and green. The atmosphere is energetic and festive.

Tourists travel on a bus with enhanced interior lighting.
S.K. MOHAN