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INSIDE



T.N. Governor stalls Ponnudiy's return to Cabinet

Big recipients 'unable' to reveal bond donor data

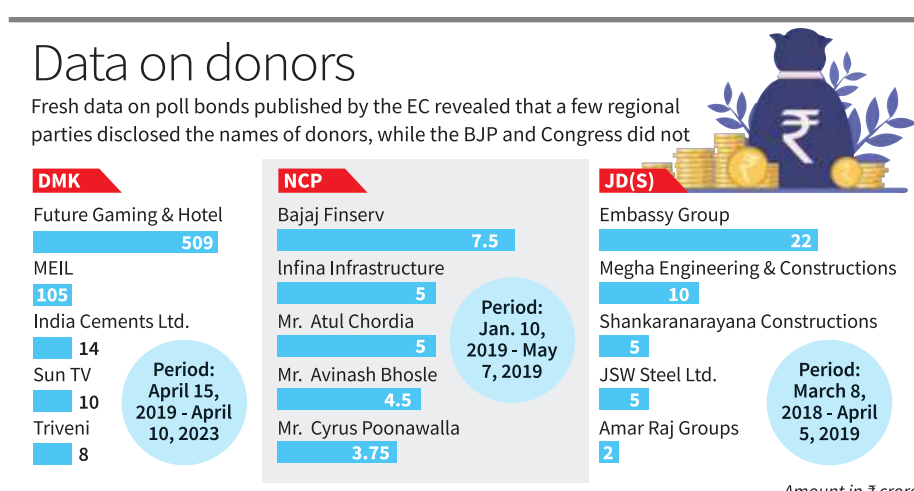
BJP, Congress and Trinamool Congress have not shared details about poll bond donors to the EC

Data comes out after the EC published details submitted by parties under SC's directives

BJP says the rules of the scheme had precluded political parties from maintaining donor details

Abhinav Lakshman
NEW DELHI

Most large recipients of funding via electoral bonds, including the Bharatiya Janata Party, the Congress, and the Trinamool Congress have not shared any details about their donors, in submissions made to the Election Commission of India (EC) under the direction of the Supreme Court in May 2019 and November 2023.



DMK received ₹509 crore from 'lottery king'

CHENNAI

The Dravida Munnetra Kazhagam (DMK) received ₹509 crore in poll bonds from 'lottery king' Santiago Martin's Future Gaming and Hotel Services. Of the ₹1,368 crore worth of bonds purchased by the firm between April 12, 2019 and January 24, 2024, 37% went to the DMK.

2019, saying, "The particulars of a donated EB [electoral bond] is available with the respective donee/political party."

'Details with the bank'

In their updated disclosures for the period till September 2023, the Trinamool Congress again said that the information on donors was only available with the SBI, while the Congress noted that it had requested the bank yet again to provide this information to the EC in compliance with the SC's directions. It is not clear if the SBI responded again to that missive from Congress.

2 held in Gujarat for violence at university

AHMEDABAD

The Ahmedabad Police on Sunday arrested two persons in connection with violence at Gujarat University in which at least five foreign students suffered injuries in a latenight brawl on the hostel campus.

This came to light on Sunday when the EC published the data previously submitted to it by political parties in sealed covers under the top court's directions. In fact, only a handful of parties have revealed their electoral bond donors' identities in their entirety; these parties include the Dravida

Munnetra Kazhagam, the All India Anna Dravida Munnetra Kazhagam, and the Janata Dal (Secular).

The BJP, the largest recipient of electoral bonds, justified its move not to reveal the names of donors by citing the rules framed under the electoral bonds

scheme that the SC has struck down as unconstitutional. These rules, it said, precluded parties from having to maintain donor details, and so it claimed that it had not maintained a record of these particulars. Some of the other parties that did not supply do-

nor details also noted that the scheme was designed in such a way that they did not have ready access to donor information, as these were essentially bearer bonds. The details will only be available with the authorised bond issuer, the State Bank of In-

dia (SBI), they said.

The Congress and Trinamool Congress, in their 2019 disclosures, said that they had specifically asked the SBI to provide them with details of the donors' names. In response to the former's request, the SBI had written back in June

However, donor names were not shared by these parties subsequently, when the court asked for updated bond receipt details for the period up to September 30, 2023. When political parties submitted their first set of information to the EC, around May 2019, the country was in the midst of the last Lok Sabha polls.

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BONDED FAVOURS
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Netanyahu vows not to stop war despite criticisms

TEL AVIV

Israeli Prime Minister Benjamin Netanyahu railed on Sunday against growing criticism from the U.S. against his leadership amid the war with Hamas, saying the pressure will not stop Israel from achieving "total victory."

Formula for Kashmir



Fresh tracks: Drivers take part in the first ever Formula-4 car race held on the banks of Dal lake in Srinagar, on Sunday. NISSAR AHMAD

Modi can't win polls without EVMs, CBI, ED, says Rahul

Purnima Sah
Abhinav Deshpande
MUMBAI

Launching a fierce criticism of the Prime Minister Narendra Modi-led BJP government, Congress leader Rahul Gandhi on Sunday said Mr. Modi cannot win the Lok Sabha election without electronic voting machines (EVMs), the Enforcement Directorate (ED), the Central Bureau of Investigation (CBI), and the Income Tax department.



Congress leader Rahul Gandhi and Tamil Nadu Chief Minister M.K. Stalin at the INDIA bloc rally in Mumbai on Sunday. EMMANUEL YOGINI

Addressing an INDIA bloc rally at Shivaji Park here, he accused the ruling dispensation of subverting democratic institutions.

Terming the now-scrapped electoral bonds scheme "white collar corruption", Tamil Nadu Chief

Minister M.K. Stalin said it proved that the ruling BJP was corrupt. Mr. Stalin further described Mr. Gandhi as the future hope of India and exuded confidence that the INDIA bloc would form a secular, federal, and inclusive government at the Centre.

Mr. Gandhi said their fight was not against a party or one man, but against a *shakti* (power).

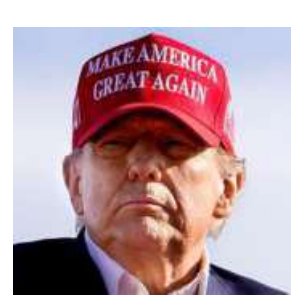
In a show of strength, the INDIA bloc leaders had gathered for the massive rally, but the CPI(M) and the CPI boycotted the rally claiming that it was a Congress function.

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Trump warns of industrial 'bloodbath' in case he loses

Associated Press
VANDALIA

Former U.S. President Donald Trump claimed that he - not President Joe Biden - will protect Social Security and warned of a "bloodbath" if he loses in November as he campaigned for Senate candidate Bernie Moreno in Ohio.



Donald Trump

auto industry and his plans to increase tariffs on foreign-made cars.

Biden campaign spokesman James Singer accused Mr. Trump of doubling "down on his threats of political violence."

"He wants another January 6, but the American people are going to give him another electoral defeat because they continue to reject his extremism and his thirst for revenge," Mr. Singer charged in a statement.

Trump campaign spokesman Steven Cheung said that Mr. Trump had clearly been talking about the impact of a second Biden term on the auto industry and broader economy. "Crooked Joe Biden and his campaign are engaging in deceptively, out-of-context editing," he said.

to deliver a profanity-filled version of his usual rally speech that again painted an apocalyptic picture of the country if Mr. Biden wins a second term.

'Impact of offshoring'

"If I don't get elected, it's going to be a bloodbath for the whole - that is going to be a bloodbath for the country," he warned, while talking about the impact of offshoring on the country's

Where names indicate the order of birth in a family

Children of the Lisu and Singpho communities in Arunachal Pradesh and Assam are named according to the order they are born in the family, incorporating numbers into names; the names may also help identifying the clan a person belongs to

Rahul Karmakar
MIAO

Ayu and Agey are familiar names among explorers of the 1,985-sq km Namdapha, India's easternmost tiger reserve bordering Myanmar. But for members of their Lisu or Yobin community, inhabiting pockets of the Miao subdivision in Changlang district of Arunachal Pradesh, the names of the two brothers are also clear indicators of the order they were born into their family.

In the Lisu dialect, Ayu means seventh, and Agey eighth. Apart from the sequence of their birth, their names reveal that they have at least six male



Traditional affair: Members of the Lisu community taking part in a festival. SPECIAL ARRANGEMENT

siblings, with the eldest named Apu, followed by Adu, Akhi, Achi, Ati, and Apshi.

"I do not write 'Ayu', but members of my family, clan, and tribe call me by that name. Numbering our names is a tradition we generally adhere to," said

Yolisa Yobin of Gandhigram aka Shidi, about 120 km from Miao.

Lisu boys and girls have separate sets of numbered names to indicate the order of their birth. The eldest girl in a family has Ana in her name, and the ones after her are called

Angyi, Acha, Ado, Achhi, Ata, Akhu, Agu, Aju, and Apshi.

'Clearing confusion'

"We have a mechanism for clearing the numerical confusion in cases where two or more families may have an equal or almost equal number of boys and girls. This is done by prefixing or suffixing the given names to the number assigned after birth," Tifusa Yobin, the president of the Yobin Welfare Society told *The Hindu*.

His name, for instance, is derived from Ati, or the fifth male child in the family. Akhila, his brother, carries Akhi, or the number three in his name. "I should ideally have

used Atifusa but I dropped the 'A' from my name," he said.

He added that Lisu names may also reflect the names of their clans.

The Lisus belong to the Tibeto-Burman family and inhabit the contiguous hilly regions of Arunachal Pradesh, China, Myanmar, and Thailand. They number about 5,000 in India.

The tradition of numbered names is also prevalent among the Singphos, an ethnic group inhabiting 27 countries, including China's Yunnan province. In India, they mostly inhabit the Changlang and Namsai districts of Arunachal Pradesh and the Tinsukia district of Assam.

IN BRIEF



NIA attaches four assets in Pune in IS terror module case

The NIA on Saturday attached four immovable properties as "proceeds of terrorism" in the IS module case in Maharashtra's Pune, officials said on Sunday. These properties have been identified as critical hubs for the fabrication of Improvised Explosive Devices (IEDs), and for training and planning terrorist operations. Attached under Section 25 of the UAPA, the properties are residential houses/flats linked with accused Mohammed Imran Khan, Mohammed Yunus Saki, Mohammed Shahinawaz Alam, Md. Rizwan Ali, Kadir Dastagir Pathan, Simab Kazi, Zulfikar Ali Barodawala, Abdullah Faiyaz Shaikh, Talha Liyakat Khan, Shamil Nachan and Aakif Nachan.

Robbers from Tiruchi held for stealing cash in Gujarat

The Gujarat Police arrested five persons, hailing from Tamil Nadu's Tiruchi, in Delhi on Saturday for their alleged involvement in the theft of cash and laptops in Gujarat. According to the police, the accused had left Tiruchi and gone to Jamnagar, one of the venues of the pre-wedding celebrations of industrialist Mukesh Ambani's son Anant Ambani and Radhika Merchant. As the security was tight there, they headed to Jamnagar bus stand, where they allegedly broke the window of a parked car and stole a laptop. Then they went to Rajkot where they allegedly broke a Mercedes car's window and stole ₹10 lakh cash and a laptop before being nabbed.

No change in CUET-UG exam schedule, says UGC chief

The Common University Entrance Test (CUET)-UG will be conducted between May 15 and May 31, 2024, as announced earlier, and there will be no change in view of the Lok Sabha election schedule, according to UGC Chairman Jagadish Kumar. The date sheet will be released after the registration process is completed. He had earlier this month said the exam dates could change depending on the schedule of the forthcoming Lok Sabha election. "The National Testing Agency (NTA) will conduct CUET-UG, as announced earlier, between May 15 and May 31, 2024. In this period, two dates overlap with the election dates on the 20th and 25th of May."

Uttarakhand ex-Minister's daughter-in-law quits Cong.

Former Uttarakhand Forest Minister Harak Singh Rawat's daughter-in-law, Anukriti Gusain, has quit the Congress citing personal reasons. In a letter to the State Congress president, Ms. Gusain on Saturday said she was resigning from the primary membership of the party. A former beauty pageant winner, Ms. Gusain had unsuccessfully contested the 2022 Assembly polls from Lansdowne. The development comes close on the heels of a severe indictment of her father-in-law by the Supreme Court in connection with the illegal felling of trees and constructions carried out during his tenure as Forest Minister in the Corbet Tiger Reserve.

Marathon operation by Navy, IAF led to pirates' surrender

17 crew members were saved from the hijacked MV Ruen; the Air Force's C-17 aircraft airdropped Marine Commandos during the operation while INS Kolkata disabled the vessel's steering system

Dinakar Peri
NEW DELHI

The Indian Navy said on Sunday that a drone it had used to intercept a merchant vessel hijacked by pirates on March 15, was shot down by the armed men. The Navy said this while sharing details on the over 40-hour operation resulting in the surrender of 35 pirates and freeing of 17 crew members of the hijacked vessel.

An Indian Air Force (IAF) C-17 transport aircraft executed a precision airborne drop of two Combat Rubberised Raiding Craft (CRRC) boats flying 10 hours to an area 2,600 km away from the Indian coast.

"In a reckless hostile act, the pirates shot down the drone and fired at the Indian Naval warship. In a calibrated response in accordance with international laws, INS Kolkata disabled the ship's steering system and navigational aids, forcing the pirate ship to stop," the Navy spokesperson said. Videos of the operation released by the



Somali pirates with arms inside Maltese-flagged vessel Ruen. The vessel was rescued by Navy and Indian Air Force. REUTERS

Navy show the pirates putting forward the crew members as human shields as warning shots were fired from the warship.

INS Kolkata undertook "precisely measured actions" while maintaining her position close to the pirate ship and also engaged in forceful negotiations, which resulted in the "pirates surrendering and releasing the pirate ship MV Ruen and its original crew present onboard," the spokesperson stated.

Hijacked in December
The Malta-flagged merchant vessel Ruen was hijacked in December 2023

Kolkata to intercept the ship approximately 260 nm east of Somalia."

The anti-piracy operation 1,400 nm (2,600 km) from mainland India was augmented by the deployment of INS Subhadra on Saturday morning, and also by air-dropping of the Marine Commandos (MAR-COS) by C-17 aircraft in the afternoon, the Navy said. Additionally, the pirate vessel was kept under surveillance by MQ-9A high-altitude long endurance remotely piloted aircraft and P8I maritime reconnaissance aircraft.

Commenting on its role, the IAF said on X, "In a remarkable display of jointness and integration, an IAF C-17 aircraft executed a precision airborne drop of two CRRC boats, along with Indian Navy MARCOS in Arabian Sea in support of ongoing anti-piracy Op Sankalp flying for almost 10 hrs to an area 2600 kms off the Indian Coast..."

Union Defence Minister Rajnath Singh said, "The Navy continues to ensure safety and security of the mariners in the Indian Ocean region."

More polling booths in Bastar region flagged as 'critical'

Shubhomoy Sikdar
RAIPUR

Given the increased security threat posed by Naxals during the Lok Sabha election, the Chhattisgarh State Election Commission (SEC) has adjusted its strategy compared to the Assembly polls held last November. There has been an increase in the number of critical polling stations and those scheduled for relocation, and an uptick in the expected helicopter drop-offs. An official said due to better visibility during the summer months, the Maoists are more active and target those from the administration necessitating such changes.

"As many as 1,726 polling stations - all in the Maoist-affected Bastar region - have been marked as critical this time compared to 1,670 such polling stations during the Assembly polls. The number

of polling stations marked as 'vulnerable' will however remain the same at 109," said the official.

The EC definition for critical includes several quantifiable parameters such as voter turnout below a certain threshold, past incidents of violence, more than 75% of the eligible votes being polled for a single candidate etc., explained the official, adding that the "vulnerable" tag is based on an on-ground analysis of the situation by the police and the local administration.

The official added that the number of relocations - i.e. polling station being taken further away from a village due to threat - will be almost doubled from 151 in the Assembly elections to 289 this time.

Several violent incidents were reported during the Assembly election in which security personnel had both been injured.

As Ayodhya turns a tourist hotspot, 'guides' leave devotees high and dry

Mayank Kumar
AYODHYA

For Vinay Shukla, 52, the visit to Ayodhya in the second week of March wasn't as pleasant as he had expected. A resident of Satna in Madhya Pradesh and ardent devotee of Lord Ram, he feels he was overcharged by a local guide he hired through the hotel staff for the Ram Temple visit.

"I was told about the special darshan of Ram Lalla and paid ₹2,000 each for five people, but later got to know that there was no such arrangement," Mr. Shukla said, bitter about being fleeced.

Mr. Shukla is not alone. With the Shri Ram Janmbhoomi Temple in Ayodhya witnessing an average footfall of 1 lakh to 1.5 lakh pilgrims daily, the city's infrastructure and tourism ecosystem is still playing catch up. "There is huge rush, people from adjoining districts are a bit aware



Left in lurch: The Ram Temple devotees say they lack awareness about facilities in Ayodhya. AP

of the city, but outsiders face some difficulties as a few locals try to take advantage," says Rahul Pandey of Ayodhya Tour Guide Service.

Devotees also demand a dedicated awareness campaign by the government. "There is no arrangement for special darshan by paying a certain fee or any special pass at the Mandir. If you ever hear about paying for darshan, it might be a scam," said the Shri Ram Janmbhoomi Teerth Trust after multiple complaints were raised.

"We booked our stay

ED holds searches in Mumbai in fake artworks case

The Hindu Bureau
MUMBAI

The Enforcement Directorate said on Sunday it conducted search operations under the Prevention of Money Laundering Act (PMLA), 2002, at six locations in Mumbai for allegedly selling fake paintings.

The operations were carried out on March 13 in a case involving Rajesh Rajpal and others. During the search proceedings, digital devices and incriminating documents were seized which highlighted the operations of a cartel, including trading of fake artwork, generation of fake authenticity and provenance certificates, transfer of money through cash and involvement of other prominent art galleries and individuals.

The ED initiated an investigation based on a first information report registered by the Tardeo police station under various Sections of the Indian Penal Code wherein one Puneet Bhatia had alleged that Mr. Rajpal and Vishwang Desai had conspired to financially dupe him by defrauding him to the tune of ₹17.90

crore by selling fake paintings to him along with the forged and fabricated certificates of the paintings.

The ED also unearthed a cartel involving a prominent art gallery in South Mumbai, a ace corporate lawyer and bullion traders. This included works of 'national treasure' artist Jamiini Roy and others including M.F. Husain, F.N. Souza, Jahangir Sabavala, S.H. Raza, N.S. Bendre, and Ram Kumar.

It was found that the cartel operated with the help of people claiming fake origins with royal kingdoms, antique art collectors and small-time artists who created these fake replicas and projected it to be authentic with the help of fake certificates of authenticity, provenance and affidavit of ownership.

The money trail in the case has revealed that the money received was sent by domestic hawala channels to members of the cartel in the form of commission or free/discounted artwork. Some cash so generated from sale of fake artworks was used to purchase antiques. Further investigation is under progress, said the ED officials.

grims with affordable homestay options whose fares are regulated by district authorities. "Many tourists are not aware of these options," added Mr. Pandey.

Locals said the hospitality sector in the city is still at a nascent stage and only took off following the Supreme Court's November 2019 judgment on the Ayodhya Temple. They hoped the industry would develop with more quality and affordable options in the next 12-18 months. At present a few hundred hotels, lodges, and homestays cater to the needs of the devotees.

Construction of 142 hotels, including luxurious ones like Wyndham Hotels and Resorts and Indian Hotels Company Limited (IHCL), was launched after the recent Global Investors' Summit. In the 2023 edition of the summit, 102 investment intents worth approximately ₹18,000 crore were signed for tourism in Ayodhya.

CROSSWORD+ 14125 (set by Vidwan)

Crossword puzzle grid with clues:

- 14 Good! Cochin made dumplings! (7)
- 16 Asylum built around small plant (7)
- 18 Mark as 'dealt with reprimand' (4,3)
- 20 Slippery English priest engaging liberal Knight and Earl (3-4)
- 22 A large gun causing scare (5)
- 24 Ignorant royal having time at present to follow United Nations (9)
- 26 Appear in panic, sadly at the last moment of crisis (9)
- 27 A spot inhabited by number one fool (5)
- 28 Sing softly, quietly, again with robust sea giant (8,5)
- Down
- 2 Blunder golfer cherishes for experience (7)
- 3 Top of CIA's rendered by very nature of the deed (4,5)
- 4 This Arab model could be Qatari (5)
- 5 Daydream about one finally becoming very useful for some purpose (5-4)
- 6 Fuzzy due to very high fever (5)
- 7 Communists capturing diocese for sows again! (7)
- 8 A fact - the grids can be blank! (8-5)
- 9 Bar might waste rum for some boxers (13)
- 15 Impact - Church lost South Africa to disease (9)
- 17 Cry over fancy kind of shade (9)
- 19 Country house gossip over Adam's ale (7)
- 21 This cop could be politician first (7)
- 23 Study gum? (3,2)
- 25 Symmetrical vessel (5)

SUDOKU

Sudoku puzzle grid with difficulty rating: ★☆☆☆☆

Solution to previous puzzle and solution to yesterday's Sudoku

FAITH

Affection, cause for disaster

Dhritarashtra was silent when Duryodhana unleashed his fury against the Pandavas. It was not that Dhritarashtra lacked affection for his brother Pandu's sons.

The problem with Dhritarashtra was his love towards his son Duryodhana, said Kidambi Narayanan in a discourse. Because of his excessive attachment to his son, he did not check him, or overrule his wrong decisions. But when the Pandavas depart for the forest, Dhritarashtra is anxious.

He sends for Vidura and enquires about the Pandavas. Vidura tells him about the attitude of the Pandavas, which is a clear indication that they are going to have their revenge later. Vidura also says that there have been many ill omens, which show what awaits the Kauravas.

Even as Vidura and Dhritarashtra are conversing, Narada comes to the court, and says to Dhritarashtra, "Fourteen years from now, Bhima and Arjuna will destroy your entire family. And this is entirely due to Duryodhana."

And indeed, it is Duryodhana who has put the entire Kuru clan in danger.

But while Duryodhana is guilty of arrogance and jealousy, Dhritarashtra is guilty of being a weak, vacillating king. Had he vetoed Duryodhana's plan to get the Pandavas to gamble, none of the subsequent events would have happened. A king should think of the welfare of his kingdom.

But Dhritarashtra was more interested in keeping his son happy. In any case, this did not benefit Duryodhana either. It just led to the entire Kaurava family being wiped out eventually.

Scientists build a camera to 'show' how animals see moving things

Animal-vision video could help people navigate wild landscapes without hurting camouflaged animals; help farmers spot fruit pests invisible to the human eye but readily visible to animals that have evolved to eat those fruits; and even transform the way wildlife documentary films are made

Sanjukta Mondal

To most people, leaves are green and oranges are orange. But if our pets could speak, they'd disagree.

We know there are many different ways to 'see' the world because that's the diversity we have found in animals. Organisms with the ability to see have two or more eyes that capture light reflected by different surfaces in their surroundings and turn it into visual cues. But while all eyes have this common purpose, the specialised cells that respond to the light, called photoreceptors, are unique to each animal.

For instance, human eyes can only detect wavelengths of light between 380 and 700 nanometres (nm); this is the visible range. Honey bees and many birds on the other hand can also 'see' ultraviolet light (10-400 nm).

While the human visual range is relatively limited, it hasn't abated humans' curiosity about how animals see the world.

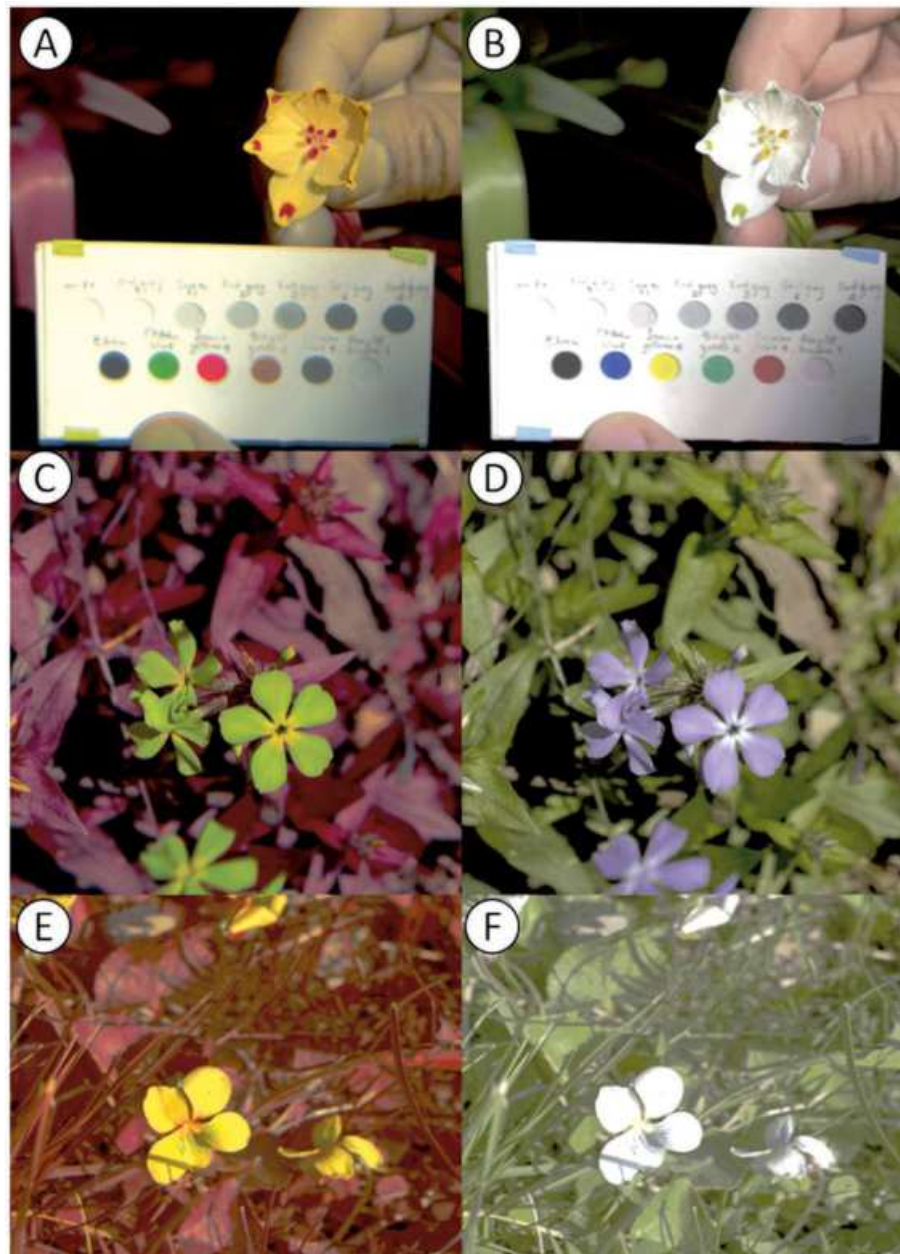
Thankfully we don't have to imagine too much. Researchers at the University of Sussex and the George Mason University (GMU) in the U.S. have put together a new camera with the ability to view the world like animals do. In a paper published in *PLoS Biology*, the team has written their device can even reveal what colours different animals see in motion, which hasn't been possible so far.

Making the invisible visible

Animals use colours to intimidate their predators, entice mates or conceal themselves. Detecting variations in colours is thus essential to an animal's survival. Animals have evolved to develop highly sensitive photoreceptors that can detect light of ultraviolet and infrared wavelengths; many even notice polarised light as part of their Umwelt - the biological systems that make a specific system of meaning-making and communication possible.

Neither human eyes nor most commercial cameras have been able to tap into this uncharted territory of animal vision. In the new study, exponents of biology, computer vision, and programming came together to create a tool that could record and track the complexity of animal visual signalling.

The tool combined existing multispectral photography techniques with a new camera setup and a beam-splitter (to separate ultraviolet and visible light), all encased in a custom 3D-printed unit. The system recorded videos simultaneously in visible and ultraviolet channels in natural lighting. They fed the camera output through some code (written in Python) that could convert the visual data to the physical



This illustration compares three flowers - summer snowflake (A, B), blue phlox (C, D), and a blue violet (D, E) - in honeybee false colour (left) and human-visible colours (right). VASAS V, ET AL., 2024, PLOS BIOLOGY, CC-BY 4.0

signals produced by photoreceptor cells.

Finally, the researchers modified these signals based on what they already knew about how an animal's photoreceptors work, and produced videos true to what that animal might see. These used false colours in these videos so that, for example, a particular colour could stand in to show ultraviolet imagery.

In sum, the camera system translated what animals see in visible and non-visible light into colours compatible with the human eye.

The time challenge

You may have already seen false-colour images - like when you saw the Hubble space telescope's iconic snap of the 'Pillars of Creation'. The stars and nebulae don't actually look that resplendent to human eyes. They are



The specialised cells that respond to light, called photoreceptors, are unique to each animal

coloured that way to show what the telescope saw in, say, infrared or radio wavelengths. Scientists have also used false-colour images to understand how flowers reflect ultraviolet light to influence the behaviour of insects nearby.

But false colours can only stand in for so much. According to the researchers, existing techniques to visualise the colours animals see require object-reflected light to predict how an animal's photoreceptor would respond or require a series of photographs in

wavelengths beyond human vision (with the help of bandpass optical filters). Both scenarios require the subject to be motionless. The new system can visualise free-living organisms in their natural settings, however.

In addition, Pavan Kumar Reddy Katta, a graduate teaching assistant at GMU and one of the study's authors, said the team wrote a program that could accept both ultraviolet- and visible-light data and spit out complete videos. "We made use of a continuous stream which allowed us to resolve our data at various points of space and time and produce real-time visualisations in animal-vision," he told this author.

The next big thing in animal vision

Equipped with the new camera, the research team checked what the flower black-eyed Susan (*Rudbeckia hirta*) looks like to honey bees (*Apis mellifera*).

"To our eye, the black-eyed Susan appears entirely yellow because in the human-visible range, it reflects primarily long wavelength light," the team wrote in its paper. "Whereas in the bee false colour image, the distal petals appear magenta because they also reflect ultraviolet, stimulating both the ultraviolet-sensitive photoreceptors ... and those sensitive to green light ... By contrast, the central portion of the petals does not reflect ultraviolet and therefore appears red."

According to the paper, the visual mechanisms animals have evolved to communicate and protect themselves could help solve many of our detection problems. For example, the animal-vision video could help people navigate wild landscapes better and without hurting camouflaged animals. It can help farmers spot fruit pests that are not visible to the human eye but are readily visible to animals that have evolved to eat those fruits.

Daniel Hanley, assistant professor at GMU and the study's corresponding author, said their invention could even transform the way wildlife documentary films are made.

The camera system could allow filmmakers and ecologists to record the animal world through a new lens and create new visual experiences. He also said the platform's striking images could be used to communicate the science of the living world to young audiences.

"We are thinking of creating a science exhibit for children using our setup, flowers, and live animals," Dr. Hanley said. "Where children can just click a button to experience what a snake might see or a honeybee might see."

(Sanjukta Mondal is a chemist-turned-science-writer with experience in writing popular science articles and scripts for STEM YouTube channels.)

THE GIST

Human eyes can only detect wavelengths of light between 380 and 700 nanometres; this is the visible range. Honey bees and many birds on the other hand can also 'see' ultraviolet light

Researchers created a tool that combined existing multispectral photography techniques with a new camera setup and a beam-splitter. The system records videos simultaneously in visible and ultraviolet channels in natural lighting

The camera system translated what animals see in visible and non-visible light into colours compatible with the human eye

BIG SHOT



A volcano in Iceland erupted on March 16 for the fourth time since December, the country's meteorological office said, spewing smoke and bright orange lava into the air in sharp contrast against the dark night sky. One resident of Grindavik, a town near the fissure, who had been evacuated in November said, "We're just like, this is business as usual." AP

WHAT IS IT?

IceCube: the big, chill neutrino-spotter

Vasudevan Mukunth

The IceCube neutrino observatory is a device at the earth's South Pole that detects subatomic particles called neutrinos. It was built and is maintained by the IceCube Collaboration, which consists of many universities worldwide led by the University of Wisconsin, Madison. IceCube consists of thousands of sensors buried more than 1.4 km beneath the ice plus multiple detectors above the surface.

Neutrinos are light particles that very rarely interact with matter. This is why they're called "ghost particles". By some estimates, a human-sized neutrino detector will have to wait for a century for a single neutrino to interact with a sensor. The larger the detector's collecting area, the higher the chances of spotting neutrinos. IceCube is the world's biggest 'neutrino telescope'; its sensors are distributed throughout a cubic kilometre of ice.

When a neutrino interacts with the ice surrounding the sensors, it may produce some charged particles and some radiation. The sensors detect the radiation to infer the detection of a neutrino and use the radiation's properties to understand more about the particle. Neutrinos come in different types. IceCube can identify some of them in real-time. For others, IceCube collects data for many years and scientists then comb through them to find neutrino interaction events.



Most of the energy of a collapsing supernova is radiated in the form of neutrinos, produced when protons and electrons in the nucleus combine to form neutrons. NASA

In such an instance, scientists reported last week they had found instances in IceCube's data from 2011 to 2020 that matched the signature of tau neutrinos, with more than 99.999999% confidence.

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

The military's continuing hold over Pakistan

After much waiting, Pakistan's election drama appears to be over, with Shehbaz Sharif becoming the Prime Minister for the second time after his Pakistan Muslim League-Nawaz (PML-N) joined hands with the Pakistan Peoples Party (PPP) to form a coalition government. The two parties may claim that they have taken this step to save Pakistan from instability; however, in reality, this is only poised to exacerbate the economic and political chaos. In the days ahead, the new government will have its task cut out to alleviate Pakistan's troubles while also pandering to the military's whims and fancies.

In Pakistan, it is a known secret that the military establishment interferes in the electoral process and selects the *laadla* (a derogatory term for the army-backed prime ministerial candidate). However, the brazenness with which the electoral manipulation has occurred this time has caused widespread anger among people against the army leadership. Allegations of rigging notwithstanding, the military appears to have achieved its intended objectives without caring much about the people's mandate. This is bound to have implications for not just domestic political stability but also for South Asia.

The military's interference
Pakistan's history is replete with instances of direct or indirect military interference in domestic politics, including four periods of martial law. This time, the independent candidates backed by Imran Khan's Pakistan Tehreek-i-Insaf (PTI) won the highest number of National Assembly seats. In 2018, Mr. Khan himself became the Prime Minister of Pakistan with the tacit support of the army. So, it is somewhat ironic that his party is now raising such a hue and cry about the rigging of the elections. The last purportedly free and fair polls in Pakistan were held in



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Pakistan's new government rests on a stolen mandate engineered by the military

1970. However, the disastrous consequences of those elections still linger in the memory of the military establishment. Despite securing an absolute majority in erstwhile East Bengal, Sheikh Mujibur Rahman's Awami League was not allowed to form the government in Islamabad. This spawned a public outcry and eventually caused the breakup of Pakistan in 1971. Since then, the army has been largely successful in manipulating the electoral mandate and selecting prime ministers. Both domestic and international pressures have so far failed to stop the army from interfering in domestic politics.

The latest arrangement of selecting the prime minister also squarely benefits the military establishment. First, with Mr. Shehbaz Sharif as the 'selected' Prime Minister, it will be easier for the army to control the civilian government. Unlike his elder brother, Nawaz Sharif, Mr. Shehbaz Sharif will not rebel against the military and will likely remain a trusted yes-man in the foreseeable future. Second, he shares good ties with important Western countries, in addition to China and Saudi Arabia. So, though the army is criticised by some countries for interfering in the elections, it will still receive some international support for at least holding general elections and helping form a (token) civilian government. The Chief of Army Staff (COAS), General Syed Asim Munir, is aware that the success of the Special Investment Facilitation Council, his pet project to stabilise the country's economy, depends on external financial support. For that to happen, any 'selected' government in Islamabad is sufficient to move things forward.

Third, a fractured electoral mandate with no clear majority for any political party has given enough manoeuvring space to the army to put PML-N and PPP in a politically weak coalition. Considering the sad fate of previous governments in Pakistan, this new PML-N-PPP coalition is

unlikely to last its five-year term. More importantly, this fractured mandate has already started an ugly power struggle among various parties. This political wrangling will help divert attention from the wrongdoings of the military establishment and put the spotlight on the political class and civilian institutions. Finally, with a 'selected' and weak prime minister in office, General Munir may now plan to seek an extension in November 2025. It is noteworthy that these were the first National Assembly polls under his tenure as the COAS. His responsibility was to ensure a free and fair election in a politically polarised Pakistan - a task at which he failed miserably.

Any rapprochement between Mr. Khan and the military establishment looks unlikely. Hinting at Mr. Khan's style of politics, General Munir said that Pakistan needed "stable hands and a healing touch to move on from the politics of anarchy and polarisation, which does not suit a progressive country of 250 million people." Ironically, the army's interference in the elections has dashed all hopes of providing a "healing touch" to the people.

A loss for the people
After a favourable election outcome, the military establishment now feels more emboldened to tighten its grip on Pakistan's civilian and political institutions. Journalists, PTI supporters, human rights activists, and minority communities are increasingly being targeted by state security agencies. Regular internet shutdowns, excessive social media monitoring, and the banning of platforms such as X have become daily occurrences. In his second year as COAS, with a new coalition government in power, General Munir will assert more control over all spheres of governance. As the military establishment wins another political battle by disregarding the public mandate, the ultimate loss will be borne by the people.

Advancing equitable access to kidney care

Chronic kidney disease is the fifth leading cause of mortality in Tamil Nadu

STATE OF PLAY

Sakthirajan Ramanathan

World kidney day is celebrated every year on the second Thursday of March. The theme of this year is 'Advancing equitable access to care and optimal medication practice'. The first Department of Nephrology in India was started at the Government General Hospital and the Premier Institute of Madras Medical College in Tamil Nadu in December 1971. The State has crossed many milestones since, including running a successful dialysis programme under the Chief Minister's Comprehensive Health Insurance Scheme (CMCHIS) - only Tamil Nadu and Kerala run a hemodialysis programme at government hospitals without opting for the PPP model - and delivering peritoneal dialysis bags at the doorstep of patients through the Makkalai Thedi Maruthuvam scheme, launched by Chief Minister M.K. Stalin in 2021 to provide healthcare at the doorstep of patients including screening, drug delivery, and palliative care. But there is still a long road towards the goal of ensuring kidney health for all.

Chronic kidney disease is the fifth leading cause of mortality in Tamil Nadu. This means that Tamil Nadu needs special attention compared to most other States. A recent step survey, conducted by the Institute of Nephrology and Institute of Community Medicine, Madras Medical College, estimated chronic kidney disease to be prevalent in 8.4% of the adult population of Tamil Nadu; 0.3% will require dialysis immediately. With diabetes and hypertension increasing in the population, the burden



of chronic kidney disease will only increase. This will impact not only the health of the people, but also the economy. Every year, the Tamil Nadu government spends more than ₹100 crore for hemodialysis alone for the CMCHIS; this is the highest amount being spent on one disease.

The need of the hour is to check blood creatinine levels to assess kidney function and use the dipstick method to check whether there is excess protein in urine among high-risk populations, in primary care. Further, the people of Tamil Nadu are also prone to chronic kidney disease of unknown origin. This is still an enigma as it is more common among people working in agriculture, salt pans, brick kilns, and other industries which require outdoor activity. A high number of people are involved in agricultural activities in Tamil Nadu, so they could be prone to this. Though there are symptoms for every disease, unfortunately, chronic kidney disease, much like diabetes and hypertension, predominantly remains asymptomatic and warrants a screening programme, which should be included in screenings for non-communicable diseases.

The State government has devised a mechanism to ensure that there are many super specialty doctors in government-run hospitals. There is internal reservation for those

working in primary health centres and government hospitals to pursue specialty medicine. Though Tamil Nadu has the highest number of super specialists (900 doctors across various disciplines) in government hospitals, it has qualified nephrologists in only 20 medical colleges. Nearly half these have only one specialist. A disease with a prevalence of 8.4% needs at least two qualified nephrologists in every medical college. Further, end-stage kidney disease can be prevented if appropriate treatment is given at various stages of chronic kidney disease (classified as stage 1 to 5). This will save opportunity cost.

The government has done commendable work through the Makkalai Thedi Maruthuvam scheme by delivering medicines for diabetics and hypertension at the doorsteps of individuals above 45 years of age. This scheme has covered more than 1 crore people so far. But it has to be strengthened further to include drugs for chronic kidney disease. All those with non-communicable diseases need lifelong medication. This scheme not only cuts the indirect cost of travel and wage loss for people who have to go get the drug on a specified day, but also ensures good adherence to medication.

Mr. Stalin has been emphasising that health and education are the two eyes of a government following the Dravidian model. He has ensured reasonable steps in every corner to achieve health equity. Similar to diabetes and hypertension, chronic kidney disease also needs prioritisation so that Tamil Nadu can achieve kidney health for all.

Sakthirajan Ramanathan is Senior Assistant Professor of Nephrology, Madras Medical College

No major change in employment status or wages in 10 years

A report by Bahutva Karnataka shows that the share of self-employed workers increased, while the share of those in formal employment remained low

DATA POINT

The Hindu Data Team

On March 11, Bahutva Karnataka, a forum for concerned citizens and organisations, released a report titled 'Employment, Wages and Inequality', at the Press Club, Bengaluru. The report analyses the progress in various employment-related indicators in the last decade, ever since the National Democratic Alliance (NDA) came to power, including employment generation, formalisation of jobs, and improvement in wages.

As the general elections draw near, the report also examines the progress of the NDA's employment-related initiatives. In April 2019, for instance, Prime Minister Narendra Modi claimed that 2.5 crore jobs have been added annually. Data reveal that the share of formal employment with social security and other advantages attached to it has remained stagnant. On the other hand, the number of self-employed individuals has increased substantially. Further, while wage earnings have increased when adjusted for inflation, the increase is negligible.

The stagnation is reflected in the share of households earning less than the national floor level minimum wage (NFLMW). About 34% of households in India earned less than the proposed NFLMW of ₹375 a day. Further, wage inequality has resulted in widening the gap between the rich and the poor. In 2022, the top 1% and 10% of the population held 22% and 57% of the national income, respectively, while the bottom 50% held 12.7%, according to data from the World Inequality Database.

Chart 1 compares the share of employment across various employment categories in 2011-12 and 2022-23 for men and women. Data show that the share of employment in the formal sector remained below 25%. The share of

those who were self-employed remained above 50% by 2022-23. While the share of self-employed women was the highest, it also saw the highest growth of 8% points from 56.5% in 2011-12 to 64.3% in 2022-23. According to the report, between 2011-12 and 2022-23, women doing unpaid labour in their family business or farming rose from one in four to one in three due to lack of other remunerative employment and stagnant household earnings.

Chart 2 shows the year-wise average weekly wages, adjusted for inflation, for male and female regular salaried workers and casual labourers. Data show there has not been any significant growth in income in the last five years across employment categories.

Further, many households still earn less than the NFLMW (Map 3). In 2019, an expert committee, set up by the Ministry of Labour and Employment, recommended that the NFLMW should be at least ₹375 per day and ₹3,050 per week. Of the 34 States and Union Territories (UTs) analysed, in about 19 of them, more than 20% earned less than ₹375 a day or less than ₹3,050 a week in 2022-23. In Chhattisgarh and Uttar Pradesh, above 50% of the households earned less than this threshold. The report adds that nearly 30 crore workers make less than the minimum wage.

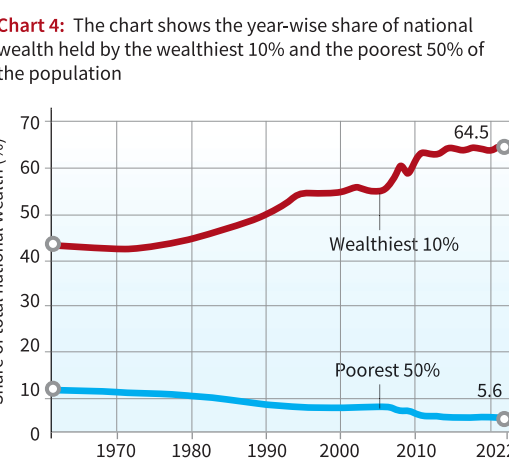
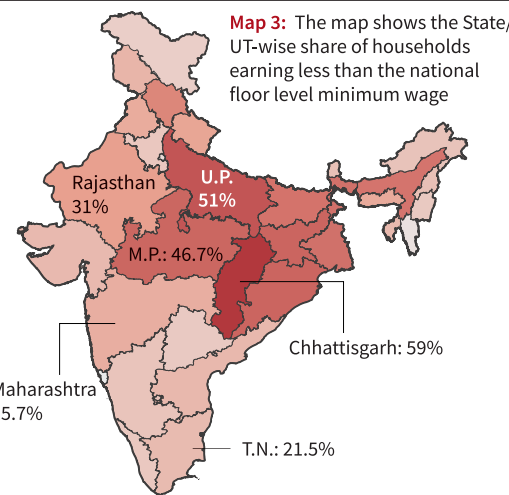
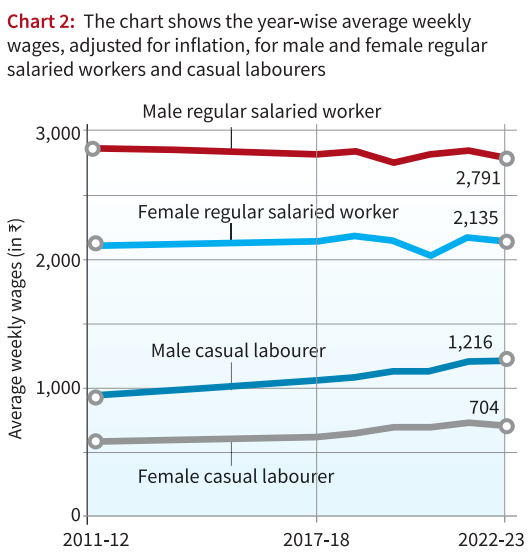
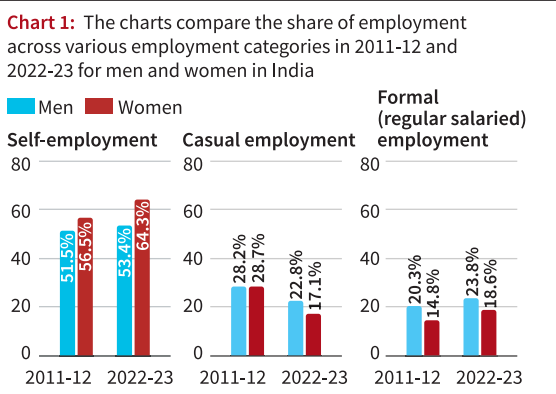
The stagnancy in income growth among the majority of the population, when juxtaposed with India's increased GDP per capita, hints at a widening gap between the rich and the poor. In the last 10 years, GDP per capita increased by 60%, while close to 35% of the total households earned less than the NFLMW. The share of national wealth held by the wealthiest 10% of the population increased from 63% in 2012 to 64.5% in 2022, while the share held by the poorest 50% reduced further from 6.1% in 2012 to 5.6% in 2022 (Chart 4). The chart shows the year-wise wealth share of the top 10% and the bottom 50% of the population.

Employment check

The charts were sourced from the report titled, 'Employment, Wages and Inequality', published by Bahutva Karnataka



Unpaid helpers: Women planting paddy seedlings in their agricultural field in Tetelia village, Guwahati. RITU RAJ KONWAR



FROM THE ARCHIVES

The Hindu

FIFTY YEARS AGO MARCH 18, 1974

Malaysia and Singapore hold differing views on peace zone idea

Kuala Lumpur, March 17: Following up the recent statement of the Malaysian Government in support of the call to make the Indian Ocean a zone of peace, official sources here believe that the principle should be reiterated regardless of what the United States does with Diego Garcia.

They are of the view, however, that China may have to be taken into confidence and brought into the picture at some stage by the Indian Ocean countries. Malaysia and China, although they recognise each other, have no diplomatic relations. They are moving towards diplomatic representation which may be established this year.

Opinion here on this issue is in such contrast to what it is in Singapore. Like other non-aligned countries which support the peace zone idea, Malaysia sees the problem as one of big power rivalry, essentially leading to U.S.-Soviet confrontation, in the Indian Ocean. Singapore, on the other hand, sees it as a problem of small power confrontation in its region. In the event of its relations deteriorating with Malaysia or Indonesia or both to the point of confrontation, Singapore feels that it must have dependable ways of safeguarding its commercial sea lanes without which it cannot survive. Non-aligned maritime nations may feel that the Indian Ocean must be non-aligned not only as between the superpowers but among themselves. Unless a peace zone also means agreement among its sponsors that they will themselves police it with a view to keeping the peace among themselves, small States like Singapore have nowhere to go for succour in an emergency. This is how the Strait of Malacca have come to be crucial to Singapore's thinking on the subject. Both Indonesia and Malaysia claim the Straits as part of their territorial waters.

A HUNDRED YEARS AGO MARCH 18, 1924

Empire trade in the east

London, March 17: In the Commons to-day, replying to Mr. Nellairs, Mr. Ammon stated that the aggregate value of the Empire trade in 1922 in eastern waters east of Africa was 1,100 million pounds while the cost of maintenance of British squadrons including ships of dominion navies in Eastern Waters and the Pacific was £3,542,000.

Text & Context

THE HINDU

NEWS IN NUMBERS

No plans to allocate budget to settle Chinese plant dues

1.8 \$ billion dues. The Chinese power plants were built under the China-Pakistan Economic Corridor. An IMF team has been in Pakistan to complete the final review of the \$3 billion Standby Agreement. PTI

The decline in Flipkart valuation in the last two years

5 in \$ billion. The valuation of e-commerce firm Flipkart declined to \$35 billion as of January 31, 2024, from \$40 billion in the financial year ended on January 31, 2022, as per Walmart's change in equity structure in Flipkart. PTI

The aid package announced by the EU for Egypt

8 in \$ billion. The EU announced the aid package for cash-strapped Egypt as concerns mount that economic pressure and conflicts in neighbouring countries could drive more migrants to European shores. AP

Amount amassed by President Joe Biden's 2024 campaign

155 in \$ million. President Biden's campaign amassed more than \$150 million in cash on hand for the 2024 election, far exceeding the in-hand total for his Republican opponent, Donald Trump. AP

India's smartphone exports to the U.S. in April-December FY24

3.53 in \$ billion. India's smartphone exports to the U.S. rose from \$998 million in the same period last year, according to the Commerce Ministry. PTI

COMPILED BY THE HINDU DATA TEAM

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The problem of equity in IPCC reports

What underpins mitigation action in assessment reports by the UN Intergovernmental Panel on Climate Change? What are Integrated Assessment Models? Do these models follow the principle of equity? What did the latest study find with respect to over 500 future emissions scenarios?

EXPLAINER

Rishika Pardikar

The story so far:

In a study published on March 4, researchers analysed more than 500 future emissions scenarios the UN Intergovernmental Panel on Climate Change (IPCC) assessed in its latest reports. These scenarios relate to mitigation actions like reducing carbon dioxide emissions from burning fossil fuels and increasing carbon sequestration through forestry. It found that across all 556 scenarios, income, energy-use, and emissions disparities between developed and developing countries are projected to continue up to 2050.

What are IPCC assessment reports?

Typically, IPCC reports comprise three Working Group reports: one on physical science, one on climate adaptation, and one on mitigation action. One synthesis report consolidates findings from the three Working Group reports. Then there are thematic special reports. Each report assesses climate-related scientific literature to capture the state of scientific, technical, and socio-economic knowledge on climate change. The IPCC is currently in its Seventh Assessment cycle (AR7).

How does it assess future scenarios?

The IPCC uses 'modelled pathways' to estimate what it will take to limit the warming of the earth's surface. These pathways are drawn using Integrated Assessment Models (IAMs) that describe human and earth systems. IAMs are complex models that examine possible futures of the energy and climate system and economies. Its macroeconomic models can point to future growth levels in terms of GDP; its energy models can project future consumption; vegetation models can examine land-use changes; and earth-system models use the laws of physics to understand how climate evolves. With such integration across



Equitable action: A solar thermal power plant in Maraimalai Nagar, Tamil Nadu in 2023. FILE PHOTO

disciplines, IAMs are meant to provide policy-relevant guidelines on climate action. However, these models also have shortcomings. They prioritise least-cost assessments – for example, the absolute cost of setting up a solar plant or undertaking afforestation in India is lower than in the U.S. However, experts have said they could exercise the option of enabling countries to equitably share the burden of action, where the richest undertake more drastic mitigation action more immediately.

What did the new study find?

The study was conducted by Tejal Kanitkar and Akhil Mythri from the National Institute of Advanced Studies, Bengaluru, and T. Jayaraman from M.S. Swaminathan Research Foundation, Chennai. They assessed 556 scenarios in

IPCC's AR6 report and found they project that per-capita GDP across Sub-Saharan Africa, South Asia, West Asia and the rest of Asia, which together constitute 60% of the world's population, will be below the global average even in 2050. They spotted similar inequities between the Global North and the Global South vis-à-vis the consumption of goods and services and both energy and fossil fuel consumption.

The scenarios were also found to project higher carbon sequestration from land-based carbon sinks (like forests) and higher deployment of carbon capture and storage (CCS) technologies in developing countries compared to developed ones. Thus, poorer countries, they concluded, would bear the burden of both mitigation action and carbon dioxide removal and CCS. "Our analysis of the regional trends underlying the global modelled scenarios

in the IPCC's [AR6] indicates that the scenarios disregard the notion of historical responsibility of the Global North," the authors wrote in their paper, adding the scenarios also "disregard" the future energy needs of the Global South to meet development goals.

Why does equity matter?

The principles of equity and common but differentiated responsibilities are enshrined in the UN Framework Convention on Climate Change (UNFCCC). Article 3 of the Convention states countries "should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof."

These principles recognise that while tackling climate change requires global action, richer countries are better placed to shoulder bigger climate action responsibilities than poorer ones. By viewing climate action solely through the lens of global-level technical and economic feasibility, mitigation pathways modelled using IAMs often run counter to equity principles, researchers say. "Equity in this sense would imply that developed regions need to accelerate towards net negative emissions and make the remaining carbon budget available to other less developed regions. However, the scenarios project precisely the opposite," they wrote in their paper.

In the study, the authors conclude that construction of IPCC scenarios will need to be both equitable and environmentally sound. "This is currently a major gap in the emissions modelling domain and we need to move towards model and scenario building techniques where questions of equity and climate justice come to the foreground," they wrote.

Rishika Pardikar is a freelance environment reporter based in Bengaluru

THE GIST

In a study published on March 4, researchers analysed more than 500 future emissions scenarios the UN Intergovernmental Panel on Climate Change (IPCC) assessed in its latest reports.

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How were the new Election Commissioners selected?

What does the law say on the appointment process? Why has the new Act been challenged?

K. Venkataramanan

The story so far:

The President has appointed Gyanesh Kumar and Sukhbir Singh Sandhu, both retired IAS officers, as Election Commissioners (ECs) to fill up two vacancies in the three-member Election Commission of India. The two officials are the first to be appointed under the new law governing appointments to the constitutional body, the Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023.

How were the new ECs selected?

In terms of the new law, the two ECs were selected by a three-member Selection Committee, comprising Prime Minister Narendra Modi, Union Home Minister Amit Shah, and the Leader of the Indian National Congress in the Lok Sabha, Adhir Ranjan Chowdhury, as leader of the

largest party in the Opposition. They were chosen out of a shortlisted panel of six names. The shortlisting was done by a committee which, according to the Act, is headed by the Union Minister for Law and Justice and includes two officials of the rank of Secretary to the government.

What was the process before this?

Article 324 of the Constitution vests the "superintendence, direction and control of elections" in an Election Commission. It also says the EC shall consist of the Chief Election Commissioner and such number of other Election Commissioners, if any, as the President may fix from time to time. This provision was subject to any law made in that behalf by Parliament. However, for nearly 40 years from the adoption of the Constitution, the EC only had a Chief Election Commissioner (CEC). It was not until October 1989 that it became a multi-member body. However, the appointment of two Election Commissioners was rescinded within a short time, that is on January 1, 1990.

A law was enacted in 1991 to fix the conditions of service of the CEC and the ECs, and amended in 1993. However, it did not provide for any appointment process. In the absence of any particular process being laid down by parliamentary law, the President has been appointing the CEC and ECs. The only known process is that the Law Ministry puts up a panel of names to the Prime Minister, who recommends the appointment of one of them as EC to the President. It had become a convention to appoint officials as ECs first and then, on the completion of the tenure of the CEC, the senior EC was elevated as CEC.

What did the SC rule on the process?

In *Anoop Baranwal versus Union of India*, a five-member Constitution Bench ruled that it was the intention of the makers of the Constitution that the power to appoint the CEC and other ECs was not meant to be given exclusively to the executive and that the power was to be exercised "subject to any law made by

Parliament". Noting that no such law was enacted since the inception of the Constitution, the court laid down an interim arrangement for the appointment. This was to operate until Parliament made its own law. The court said the appointments should be made by a three-member committee comprising the Prime Minister, the Leader of the Opposition in the Lok Sabha (or the leader of the party that is largest in the Opposition) and the Chief Justice of India. It was in response to this that Parliament enacted the 2023 Act, which received presidential assent and was notified late in December 2023.

What is the criticism against the Act?

The foremost criticism from those who have challenged the new Act is that it has removed the CJI from the selection panel and has made a Union Minister a member instead. This gives the executive a two-one majority in the three-member committee. The government has argued that the Act does not really remove the CJI from the appointment process, as the inclusion of the CJI was only a stop-gap arrangement put in place until the enactment of a law. The Supreme Court has repeatedly rejected attempts to obtain a stay on the new Act. The petitioners have approached the court again against the appointment of the two ECs. Their primary argument is that the Act violates the main principle in the Constitution Bench judgment – the need to free the appointment process from the executive.

THE GIST

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BUILDING BLOCKS



GETTY IMAGES

What is the HbA1C test and why is it used to check for diabetes?

All individuals older than 30 years should be screened for diabetes, according to the Indian Council of Medical Research's Guidelines for Management of Type 2 Diabetes, 2018. The American Diabetes Association approved HbA1c as a diagnostic tool for the same in 2009

Zubeda Hamid

India is estimated to have 10.13 crore people with diabetes, and another 13.6 crore people who are pre-diabetic, according to a nationwide study published in 2023. This apart, over 35% of Indians suffer from hypertension and nearly 40% from abdominal obesity, both of which are risk factors for diabetes. India accounts for 17% of all diabetes patients in the world.

Prevention and early detection are key to helping combat this non-communicable disease burden, experts say. One of the most commonly-used tests to diagnose pre-diabetes and diabetes (both type 1 and type 2) and to help manage diabetes, is the haemoglobin A1C (HbA1C) test, also known as the glycated haemoglobin or glycosylated haemoglobin test.

How does the test work?

Sugar enters your bloodstream from the food you eat. The sugar, or glucose, attaches to the haemoglobin in your red blood cells. Haemoglobin is a protein that transports oxygen to all the cells of your body. Everybody has some sugar attached to their haemoglobin. Those with pre-diabetes and diabetes, however, have more. The HbA1C test measures the percentage of your red blood cells that have sugar-coated haemoglobin.

Why is the test used to check for diabetes?

A paper was published in the *Cleveland Clinic Journal of Medicine* in 2016 entitled 'The role of haemoglobin A1c in the assessment of diabetes and cardiovascular risk'. It stated: "HbA1c was first discovered in 1955, but elevated HbA1c levels in diabetes patients were not noted until 1968. Another eight years passed before HbA1c was correlated with blood glucose values in hospitalised

patients with diabetes and was proposed for monitoring glycaemia."

During the first few years of clinical use, the paper said, HbA1c measures were inconsistent. But as the importance of precise HbA1c measurements became apparent through studies that revealed better patient outcomes and mortality associated with lower average HbA1c, the need to reduce error margins in measurement became apparent. Following programmes to regulate HbA1c measurements and calibrate them to reference standards, standardisation and accuracy greatly improved from 1993 to 2012, the paper noted.

The American Diabetes Association approved HbA1c as a diagnostic tool in 2009. In 2011, after an expert consultation with the World Health Organization (WHO), it said HbA1c could be used as a diagnostic test for diabetes "provided... stringent quality assurance tests are in place and assays are standardised to criteria aligned to the international reference values, and there are no conditions present which preclude its accurate measurement."

What do HbA1C test results look like?

The HbA1c levels are provided as either a percentage or in mmol/mol (which stands for millimoles per mole). A mole is a unit of measurement often used for chemical substances. The higher the percentage, the higher your blood glucose levels are. An HbA1c below 5.7% is considered normal; between 5.7% and 6.4% may indicate you are pre-diabetic; and 6.5% or higher can indicate diabetes. In mmol/mol: below 42 corresponds to below 6.0%; 42-47 mmol/mol to 6.0 to 6.4%; and 48 mmol/mol to 6.5% or over.

However, the test's results may change under certain conditions, including if a patient has kidney or liver failure, severe anaemia or a blood disorder such as thalassaemia; if they have a less common

type of haemoglobin found in some populations; or are under certain medications including steroids, opiates or dapsone (a drug used to treat leprosy). They may even change if a person is in early or late pregnancy.

Generally, for those whose results indicate pre-diabetes or diabetes, doctors specify a goal to achieve specific HbA1c levels. But these vary from person to person and also depend on their age, health conditions, medications being taken, and other factors.

Who needs to take the test and when?

According to the Indian Council of Medical Research's Guidelines for Management of Type 2 Diabetes (2018), all individuals older than 30 years should be screened for diabetes. Those with one or more risk factors including, among others, obesity, an increased waist circumference, a history of or being treated for hypertension, a history of heart disease, and a history of polycystic ovarian syndrome should be screened earlier. Retests should be conducted after three years in case of normal glucose tolerance. If a person is pre-diabetic, retests should be annual. Your doctor may also ask you to be tested more frequently if, for instance, you're planning to have a baby.

If you have diabetes, your doctor may ask you to take it every three to six months, to keep an eye on your blood sugar levels and to check if your treatment plan is working.

How does the test differ from others?

While fasting and post-prandial (after a meal) or post-meal blood sugar tests give you blood sugar levels within a specific time frame, the HbA1c test reflects your average blood glucose levels over the last two to three months.

Also, while the traditional blood sugar tests may fluctuate depending on items in

the person's latest meal and when they last consumed it, the HbA1c test is independent of these variables, making it more reliable. It can be taken irrespective of when the latest meal was consumed.

What are the test's limitations?

It is important to note the HbA1c test does not replace other tests and may be carried out alongside others, such as the traditional blood sugar tests to test for diabetes and pre-diabetes. It also does not replace regular blood-sugar testing at home, which a doctor may have recommended, as the blood sugar levels may spike and dip through the day or night, and the HbA1c test may not capture this.

This apart, while the HbA1c test remains one of the best to assess long-term control of diabetes in people known to have diabetes, it is not uniformly accepted as a diagnostic test by all global medical bodies because of its relatively low sensitivity arising from difficulties in assay standardisation. In other words, a doctor may recommend a glucose test alongside an HbA1c test to obtain a clearer picture when diagnosing a person. The test may also have limitations particular in India. A 2013 paper published in the journal *Diabetes Technology and Therapeutics* noted that in some clinical situations, accurate measurements are harder to make. These include having conditions like thalassaemia, structural haemoglobin variants in the population, iron-deficiency anaemia (which is relatively high in India), and the use of certain drugs.

"Because of the relatively frequent occurrence of some of these conditions in some parts of India, it is important that they are looked for when evaluating an inappropriately high or low HbA1c level. Alternative indices may have to be used for assessing glycemic control in these cases," the paper noted.



KNOW YOUR ENGLISH

I admire his happy-go-lucky attitude

His salty language got him in trouble with his superiors at the new office

S. Upendran

"I ran into Saketh at the supermarket."
"I really miss his cheerful presence in the office. Every office should have a happy-go-lucky person like him."
"Happy-go-lucky? What does it mean?"
"A happy-go-lucky person is someone who remains happy most of the time. He is a content individual who doesn't really become anxious or worry about things. Doesn't really plan for anything..."
"He's someone who thinks that everything will work out fine – even though he hasn't done the required work. Someone who depends on Lady Luck quite a bit."

"And when things don't go the way he'd expected them to, he doesn't panic. Instead, he merely accepts the outcome. Gets on with life."

"Not many people are willing to put up with that kind of attitude."

"I know! My boss fired him because she didn't like his happy-go-lucky attitude."

"Oh, by the way, have you read your favourite author's latest book?"

"I've bought the book, but just haven't found the time to read it."

"Saketh was raving about it. Critics have been praising the author's chatty style. Tell me, how can someone's writing style be chatty? The word chatty is normally associated with speech, isn't it?"

"It's true that the word chatty is usually used with someone's speech. When you describe someone as being chatty, what you're suggesting is that the person is very friendly, and talks a lot. The language she uses is rather informal. The chatty girl was full of questions."

"My grandmother was never chatty."

"That's true. The word chatty can also be used to refer to one's style of writing."

"When you refer to someone's writing style as being chatty, what you mean is that the individual makes use of the spoken language rather than the written."
"I guess you could say that The person makes use of an informal style of writing. It's more a conversation between the writer and you. The writer sounds as if he were talking to you."

Here's an example. I enjoy reading emails from my boss. They are always written in a chatty style."

"My uncle wants to write a chatty book about his life as a film distributor."

"I hope he uses the kind of salty language he normally uses in his daily conversation."

"Salty language? What is that?"

"When you say that someone uses salty language, what you mean is that the person uses rather offensive language."

"In other words, the person curses a lot when he speaks."

"Exactly! When he was young, my cousin specialised in telling salty jokes."

"Politicians using salty language is not anything new."

upendrankye@gmail.com

THE DAILY QUIZ

Please send in your answers to
dailyquiz@thehindu.co.in

A quiz on the holy month of Ramzan that began a few days back

V.V. Ramanan

QUESTION 1

Which month of the Islamic calendar is Ramzan or Ramadan?

QUESTION 2

When does the Holy Koran indicate that eating and drinking are permissible during the holy month?

QUESTION 3

Traditionally, the faithful break their fast by eating the fruit of the 'Phoenix dactylifera'. What is the fruit?

QUESTION 4

What is the name of the festival that marks the

end of Ramzan and is celebrated during the first three days of Shawwāl?

QUESTION 5

If the greeting 'Ramadan Mubarak' means 'Blessed Ramadan', what does 'Ramadan Kareem' mean?

QUESTION 6

In Ramadan, the reward for every good deed done is multiplied by what number: 50, 60, or 70?

QUESTION 7

Name the battle that took place in Ramadan 2 AH (March 624 CE) between the Prophet Muhammad-led Muslim army and a relief column of the Meccan Quraysh tribe.



Visual question:

In front of which famous mosque are Muslims sharing Iftar on March 11, 2024? AFP

Questions and Answers to the March 15 edition of the daily quiz:

- The ides falls on this date in months with 30 days. **Ans: 13th day**
 - The assassination of Julius Caesar followed three incidents that turned the conspirators in the senate against him. This was the first incident in which he did this action when the senators reached the temple. **Ans: Didn't stand up**
 - This was the second incident wherein Caesar removed two officials for suspecting him of this action. **Ans: Wanting to become king**
 - This was the third incident, wherein Caesar made this man take-off the crown he had put on Caesar's head. **Ans: Marcus Antonius (Mark Antony)**
 - In Dante's *Inferno*, Satan has three faces in the Ninth Circle of Hell. One is consuming Judas Iscariot, another Gaius Cassius Longinus and the third this man. **Ans: Marcus Junius Brutus**
- Visual: Name the left-most actor. **Ans: John Wilkes Booth**
Early Birds: Rajmohan V| Tamal Biswas| M. Suresh Kumar

Word of the day

Gauzy:
so thin as to transmit light

Synonyms: see-through, sheer, transparent, vapourous

Usage: The gauzy curtains bring in a lot of light.

Pronunciation: bit.ly/gauzyen

International Phonetic Alphabet: /ˈɡɔːzi/

For feedback and suggestions for Text & Context, please write to letters@thehindu.co.in with the subject 'Text & Context'

LASHKAR GAH

21 killed in accident involving bus, tanker, and scooter in Afghanistan



At least 21 persons were killed and 38 injured on Sunday when a bus collided with a fuel tanker truck and burst into flames in southern Afghanistan. Officials said that a bike was also involved in the accident. The accident occurred in the early hours on a key highway that sees traffic between Herat and capital Kabul. AFP

TEHRAN

Iran inks deals worth \$13 billion with domestic oil companies



Iran on Sunday sealed contracts worth billions of dollars with domestic companies to boost its oil production in the face of Western sanctions. The deals worth \$13 billion will increase daily oil production in six major fields and add 3,50,000 barrels per day to the country's daily production of oil. AFP

SEOUL

Blinken arrives in South Korea to attend democracy summit



U.S. Secretary of State Antony Blinken arrived on Sunday in South Korea on the first stop of a brief Asia tour also including the Philippines. Mr. Blinken landed on Sunday afternoon ahead of the third Summit for Democracy on Monday, an initiative of U.S. President Joe Biden, which Seoul is hosting this week. AFP

GOMA

Eight UN troops wounded as fighting escalates in DR Congo



Clashes have broken out between government forces and M23 rebels leaving eight UN peacekeepers injured after a brief lull in fighting in eastern Democratic Republic of Congo, the United Nations said. One of the peacekeepers was "gravely wounded" in the attack on Saturday at Sake, a UN official said. AFP

Putin poised to rule Russia after an election with no other real choices

Early results after counting ballots from 24% of the precincts showed that Putin garnered 88% of the vote; three-day poll happened in a tightly controlled environment where no criticism of the Russian President or Ukraine war was allowed

Associated Press

Russian President Vladimir Putin is poised to extend his nearly quarter century of rule for six more years after a relentless crack-down on dissent – and early returns announced after polls closed in Russia showed he had nearly 88% of the vote with 24% of the precincts counted, according to Russia's Central Election Commission.

The three-day election that began on Friday has taken place in a tightly controlled environment where no public criticism of Mr. Putin or his war in Ukraine is allowed.

Mr. Putin's fiercest polit-



Close scrutiny: People queue outside a polling station during Russia's presidential election in Moscow on Sunday. AFP

ical foe, Alexei Navalny, died in an Arctic prison last month, and other critics are either in jail or in exile.

Navalny's associates have urged those unhappy

with Mr. Putin or the war to protest by coming to the polls at noon on Sunday, a strategy endorsed by Navalny shortly before his death. Team Navalny de-

scribed it as a success, releasing pictures and videos of people crowding near polling stations in various cities across Russia around noon.

The 71-year-old Russian leader faces three token rivals from Kremlin-friendly parties who have refrained from any criticism of his 24-year rule or his full-scale invasion of Ukraine two years ago. Mr. Putin has boasted of Russian battlefield successes in the run-up to the vote, but a massive Ukrainian drone attack across Russia early on Sunday sent a reminder of challenges faced by Moscow.

The Russian Defence Ministry reported downing

35 Ukrainian drones overnight, including four near the Russian capital.

Voting took place over three days at polling stations across the vast country's 11 time zones, in illegally annexed regions of Ukraine and online. While polls closed Sunday night in Russia, voting continued at some embassies around the world.

Cases of vandalism

Despite tight controls, several dozen cases of vandalism at polling stations were reported.

Authorities in Russia have detained some 74 people across the country for protest actions linked to the presidential election.

'Ground operations in Kyiv are possible at some point'

Agence France-Presse
PARIS

French President Emmanuel Macron said in an interview published on Saturday evening that Western ground operations in Ukraine might be necessary "at some point", days after meeting with German and Polish leaders.

Last month Mr. Macron refused to rule out putting troops on the ground in Ukraine, which prompted a stern response from Berlin and other European partners.

But the French President has not recanted from his position, but stressed that Western allies would not take the initiative.

"Maybe at some point – I don't want it, I won't take the initiative – we will have to have operations on the



(from left) Emmanuel Macron, Olaf Scholz and Donald Tusk at a press conference at the Chancellery in Berlin on Friday. AFP

ground, whatever they may be, to counter the Russian forces," Macron told newspaper *Le Parisien* in an interview conducted on Friday.

"France's strength is that we can do it".

German Chancellor Olaf Scholz reacted angrily to Mr. Macron's earlier refusal to rule out sending troops to Ukraine and his pointed

comments urging allies not to be "cowards".

Mr. Macron met his German and Polish counterparts in Berlin on Friday, in a show of solidarity behind Kyiv.

After the meeting, Macron said the three countries of the so-called Weimar Triangle were "united" in their aim to "never let Russia win".

EU and Egypt agree to a €7.4-billion deal on energy, migration

Agence France-Presse
CAIRO

The EU chief and five European leaders visited cash-strapped Egypt on Sunday to announce a €7.4 billion financial package focussed on boosting energy trade and stemming irregular migrant flows to the 27-member bloc.

The deal will include billions in credit over coming years for highly indebted Egypt, and stepping up energy sales that could help Europe "move further away from Russian gas", said a senior European Commission official.

European Commission President Ursula von der Leyen – who was joined by the leaders of Austria, Belgium, Cyprus, Greece and Italy – met with Egyptian President Abdel Fattah el-Sisi ahead of the scheduled signing ceremony.

Split-up of funds

The Strategic and Comprehensive Partnership agreement includes five billion euros in loans over four years, 1.8 billion euros in investment and hundreds of millions for bilateral projects including on migration.

Egypt, mired in a painful economic crisis, borders war-battered Libya



EU chief Ursula Von der Layen and Egypt President Abdel-Fattah al-Sissi at the Presidential Palace in Cairo on Sunday. AP

and the centres of two ongoing conflicts – the Israel-Hamas war in the Gaza Strip and Sudan's war between the regular armed forces and the paramilitary Rapid Support Forces.

Haven for refugees
Egypt already hosts around nine million migrants and refugees, including four million Sudanese and 1.5 million Syrians, according to the UN's International Organization for Migration.

The EU official said the deal includes steps to cooperate on "security, counter-terrorism cooperation and protection of borders, in particular the southern one" with Sudan.

The Gaza Strip "will not be the main focus but will be part of the discussion" in Cairo, the official added.

The delegation included three Mediterranean leaders – Italian Prime Minister Giorgia Meloni, her Greek counterpart Kyriakos Mitsotakis and Cyprus President Nikos Christodoulides.

The agreement follows several controversial deals the EU has sealed in northern Africa – with Libya, Tunisia and Mauritania – to stem the flow of irregular migrants across the Mediterranean Sea.

Rome-runners



Contestants run by the Colosseum during the Rome Marathon on Sunday. Three activists from climate movement Last Generation briefly interrupted the marathon before the police arrested them. The group has called for creation of a reparations fund worth €20 billion. AFP

UNICEF chief says Haiti situation resembles chaos of Mad Max

Agence France-Presse
UNITED NATIONS

The UN children's agency chief offered a dire assessment Sunday of the chaotic situation in Haiti, saying it was "almost like a scene out of *Mad Max*," which depicted a violent and lawless post-apocalyptic future.

"Haiti is a horrific situation," UNICEF executive director Catherine Russell told CBS talk show *Face the Nation*.

"Many, many people there are suffering from serious hunger and malnutrition and we are not able to get enough aid to them," with gangs controlling large parts of capital Port-



Mouting misery: Children line up to receive a plate of food at a shelter for families displaced by gang violence in Port-au-Prince. AP

au-Prince as well as key roads leading elsewhere.

The situation is "the worst that anyone has seen in decades," she said.

"It's almost like a scene out of *Mad Max*. That's

basic services," a recent United Nations report warned.

Shipment looted

The challenges facing foreign aid workers – some of whom have been attacked or kidnapped for ransom – were underlined on Saturday when gangs looted a UNICEF shipment intended to provide relief for suffering mothers and children.

As life grows more difficult for Haitians and foreigners, the US Embassy said Saturday it was organizing a charter flight to evacuate its citizens from Haiti. Non-essential embassy staff were evacuated six days earlier.

Netanyahu vows not to stop despite U.S. criticism of Gaza war

Associated Press
TEL AVIV

Israeli Prime Minister Benjamin Netanyahu railed on Sunday against growing criticism from the United States against his leadership amid the devastating war with Hamas, saying the pressure will not stop Israel from achieving "total victory."

In recent days, top officials from the U.S., Israel's staunchest ally which has provided key military and diplomatic support, have publicly voiced their frustration with Mr. Netanyahu. U.S. President Joe Biden accused Mr. Netanyahu of hurting Israel because of the huge civilian death toll in Gaza.

Mr. Netanyahu said that calls for an election now – which polls show he would lose badly – would force Israel to stop fighting and would paralyse the country for six months.

"If we stop the war now, before all of its goals are achieved, this means that Israel will have lost the war, and this we will not allow," he said.

While the international criticism was mainly directed at Mr. Netanyahu and his leadership, his statement painted it as a broader attack on Israel.

Call for Israel polls

U.S. Senate Majority Leader Chuck Schumer, the highest-ranking Jewish official in the country and an Israel supporter, called on Israel to hold a new election, saying Mr. Netanyahu had "lost his way." Mr. Biden expressed support for what he called Mr. Schumer's "good speech."

The U.S. also has expressed concerns about a planned Israeli assault on Rafah, where about 1.4 million displaced Palestinians are sheltering, and support for a new round of talks aimed at securing a ceasefire in exchange for the return of Israeli hostages taken in Hamas's October 7 attack. The Israeli delegation to those talks was not expected to leave for Qatar until after Sunday evening meetings of the Security Cabinet and War Cabinet, which will give directions for the negotiations.

Despite the talks, Mr. Netanyahu made it clear

Chuck Schumer, the highest-ranking Jewish official and an Israel supporter, had said that the Israeli PM had 'lost his way'

he had no plan to back down from the fighting that has killed more than 31,000 Palestinians, according to local health officials. More than five months have passed since Hamas's attack on southern Israel killed 1,200 people and left another 250 hostage in Gaza.

Mr. Netanyahu said that calls for an election now – which polls show he would lose badly – would force Israel to stop fighting and would paralyse the country for six months.

"If we stop the war now, before all of its goals are achieved, this means that Israel will have lost the war, and this we will not allow," he said.

While the international criticism was mainly directed at Mr. Netanyahu and his leadership, his statement painted it as a broader attack on Israel.

Rafah attack imminent

"No international pressure will stop us from realizing all of the goals of the war: Eliminating Hamas, freeing all of our hostages and ensuring that Gaza never again constitutes a threat to Israel," he said.

Mr. Netanyahu also reiterated his determination to attack Hamas in Rafah and said that his government approved military plans for such an operation. "We will operate in Rafah. This will take several weeks, and it will happen," he said.



A farmer looking at his crop in a field in Vietnam's Mekong Delta region, known as the country's rice bowl. AFP

Vietnam's 'rice bowl' about to crack as saltwater levels rise

Agence France-Presse
HANOI

Vietnam faces nearly \$3 billion a year in crop losses as more saltwater seeps into arable land, state media reported on Sunday, citing new research.

The damage would likely centre on the Mekong Delta region, known as "Vietnam's rice bowl" because it provides food and livelihoods for tens of millions of people, research from the country's Environment Ministry showed.

Saltwater levels are often higher in the dry season but they are intensifying due to rising sea levels, droughts, tidal fluctuations, and a lack of up-stream freshwater.

The resulting crop losses could amount to 70 trillion dong (\$2.94 billion), state media VnExpress reported, citing new research from the Water Resources Science Institute, which is under the Environment Ministry.

The research presented at a conference on water resource management on Friday, found that among the most impacted parts of the region would be the southernmost Ca Mau province, which could lose an estimated \$665 million.

Earlier this month, the Department of Water Resources warned saline intrusion could impact around 80,000 hectares of rice and fruit farms in the Mekong Delta.

Salt intrusion in the area between 2023-2024 was higher than the average, according to the National Center for Hydro-Meteorological Forecasting.

The delta suffered an unusually long heatwave in February, leading to drought in several areas and low water levels in the region's canals.

Gemini's racial images are warning of tech titans' power to 'influence' views

Google CEO Sundar Pichai last month slammed errors by his company's AI app, after images of ethnically diverse Nazi troops forced it to temporarily stop users from creating pictures of people; many feel the stumble highlights the inordinate power held by a handful of companies over AI platforms

Agence France-Presse
AUSTIN

For people at the trend-setting tech festival in Texas, U.S., the scandal that erupted after Google's Gemini chatbot cranked out images of Black and Asian Nazi soldiers was seen as a warning about the power artificial intelligence can give tech titans.

Google CEO Sundar Pichai last month slammed as "completely unacceptable" errors by his company's Gemini AI app, after gaffes such as the images of ethnically diverse Nazi troops forced it to temporarily stop users from creating pictures of people.

Social media users mocked and criticised Google for the historically inaccurate images, like those showing a female black U.S. Senator from the 1800s – when the first such Senator was not elected until 1992.

"We definitely messed up on the image generation," Google co-founder Sergey Brin said at a recent AI "hackathon," adding that the company should have tested Gemini more thoroughly.

Folks interviewed at the popular South by Southwest arts and tech festival in Austin said that the Gemini stumble highlights the inordinate power a handful of companies have



Shot in the foot: With Gemini, Google engineers tried to rebalance the algorithms of AI models to provide results which better reflected human diversity, but the effort backfired. REUTERS

over the artificial intelligence platforms that are poised to change the way people live and work.

"Too woke" "Essentially, it was too 'woke,'" said Joshua Weaver, a lawyer and tech entrepreneur, meaning Google had gone overboard in its effort to project inclusion and diversity.

Google quickly corrected its errors, but the underlying problem remains, said Charlie Burgoyne, chief executive of the Valkyrie applied science lab in Texas.

He equated Google's fix of Gemini to putting a

Band-Aid on a bullet wound.

While Google long had the luxury of having time to refine its products, it is now scrambling in an AI race with Microsoft, OpenAI, Anthropic and others, Mr. Weaver noted, adding, "They are moving faster than they know how to move." Mistakes made in an effort at cultural sensitivity are flashpoints, particularly given the tense political divisions in the U.S., a situation exacerbated by Elon Musk's X platform, the former Twitter.

"People on Twitter are very gleeful to celebrate any embarrassing thing

that happens in tech," Mr. Weaver said, adding that reaction to the Nazi gaffe was "overblown."

The mishap did, however, call into question the degree of control those using AI tools have over information, he maintained.

In the coming decade, the amount of information – or misinformation – created by AI could dwarf that generated by people, meaning those controlling AI safeguards will have huge influence on the world, Mr. Weaver said.

Karen Palmer, an award-winning mixed-reality creator with Interactive Films Ltd., said she could

imagine a future in which someone gets into a robo-taxi and, "if the AI scans you and thinks that there are any outstanding violations against you... you'll be taken into the local police station," not your intended destination.

AI is trained on mountains of data and can be put to work on a growing range of tasks, from image or audio generation to determining who gets a loan or whether a medical scan detects cancer.

Cultural bias

But that data comes from a world rife with cultural bias, disinformation and social inequity – not to mention online content that can include casual chats between friends or intentionally exaggerated and provocative posts – and AI models can echo those flaws.

With Gemini, Google engineers tried to rebalance the algorithms to provide results better reflecting human diversity. The effort backfired.

"It can really be tricky, nuanced and subtle to figure out where bias is and how it is included," said technology lawyer Alex Shahrestani, a managing partner at Promise Legal law firm for tech companies.

Even well-intentioned engineers involved with training AI cannot help but bring their own life experience

and subconscious bias to the process, he and others believe.

Mr. Burgoyne also castigated big tech for keeping the inner workings of generative AI hidden in "black boxes," so users are unable to detect any hidden biases. "The capabilities of the outputs have far exceeded our understanding of the methodology," he said.

Experts and activists are calling for more diversity in teams creating AI and related tools, and greater transparency as to how they work – particularly when algorithms rewrite users' requests to "improve" results.

A challenge is how to appropriately build in perspectives of the world's many and diverse communities, Jason Lewis of the Indigenous Futures Resource Center and related groups said here.

At Indigenous AI, Mr. Lewis works with farflung indigenous communities to design algorithms that use their data ethically while reflecting their perspectives on the world, something he does not always see in the "arrogance" of big tech leaders. His own work, he told a group, stands in "such a contrast from Silicon Valley rhetoric, where there is a top-down 'Oh, we're doing this because we are going to benefit all humanity' bullshit," receiving laughter.

Shamrocks on



Jolly green: A performer jokes with members of the military ahead of the annual St. Patrick's Day parade in Dublin in Ireland on Sunday. AFP

Low-cost rural clinic offers solace to patients in impoverished Zimbabwe

Agence France-Presse
MOUNT DARWIN

Outside a hospital in rural Zimbabwe, scores of people wait patiently under trees or inside small tents for news of their loved ones.

Vendors sell snacks, fruits and drinks to drivers queuing at the gates of what has become an unlikely sought-after healthcare destination in the impoverished southern African country.

Zimbabwe's public health system has all but collapsed under years of mismanagement, amid shortages of funds, staff, medicine and equipment.

When in need, those who can afford it, including government Ministers, fly overseas to seek treatment.

Some check into private, but relatively expensive clinics in Harare. Many



A group of pregnant women exercise at the Karanda Mission Hospital in Mount Darwin, Zimbabwe on March 2. AFP

others make the trip to Mount Darwin, a small village in the parched countryside about 200 km north of the capital and home to the Karanda Mission Hospital.

Funded by the Evangelical church of Zimbabwe and run by three North American doctors, the hospital originally set up to cater to rural folks has built a reputation as one of the

best in the country. The 150-bed clinic treats up to 1,00,000 people a year and is almost always full, says medical director, Paul Thistle, a Canadian physician.

Charging affordable rates, it draws patients from well beyond its catchment area. Some come from as far as neighbouring Zambia.

Ahead of elections in

August last year, President Emmerson Mnangagwa opened a new "state-of-the-art" clinic in a battle-ground district of Zimbabwe's second-largest city, Bulawayo. But critics say that for years, flashy ribbon-cutting exercises have not been followed by systemic reforms to salvage the health sector. Many hospitals lack equipment for magnetic resonance, radiography, cancer treatment and other procedures.

"The sector has suffered from years of gross underfunding and investments," said Itai Rusike, who heads the Community Working Group on Health, an umbrella advocacy group. "The depleted health personnel are also highly demotivated owing to dwindling real incomes, poor working conditions and under-equipped health institutions."

British brass band marches on with miners' legacy, 40 years after milestone strike

Agence France-Presse
WAKEFIELD

Memories of the U.K.'s once-mighty mining industry are fading but 40 years after an epoch-defining strike, Carlton Main Frickley Colliery Band still embodies the close ties that once bound the community.

"It's like the band, when times are hard, we stick together," said Ray Sykes, chairman of the year-long 1984-85 strike, from the practice hall that has been his second home for 70 years.

Miners at Frickley Colliery, in the Yorkshire town of South Elmsall in northern England, prided them-

selves on being "second to none" during the action against planned pit closures.

Very few broke the strike, which was once described as "the decisive social and economic confrontation of Britain's post-war era" that hastened the demise of heavy industry.

The mine, which employed 3,000 workers at its height, eventually succumbed and shut in 1993.

However, the mines were the foundation of the regional economy, and without them, communities are still suffering economically.

But the brass band marches on – consistently still ranking in the world's

top 10 – and keeps Frickley on the international map.

Mr. Sykes, 77, said the heaviest toll had been the gradual fracturing of the community bond, forged in the unforgiving and often dangerous subterranean world of heat and dust.

"Losing camaraderie" Camaraderie spread throughout the community above, he said. "Sadly we are losing it, and you can see it happening in the village," he said.

He likened the pit closure's effect on the community to "a son losing his father".

The community's social life largely revolved around



In tune: Members of the Carlton Main Frickley Colliery Band take part in a rehearsal in their band room in South Elmsall, England. AFP

the mine – including not only the band but local football club Frickley Athletic, which is still plying its trade four leagues below professional level.

On Saturday, the club marked the anniversary by

wearing the same shirt as the team wore in 1984. On the back was written "The Miners United will never be defeated".

Hundreds packed the club's 100-year-old main stand, which was decorat-

ed with a flag depicting firebrand union boss Arthur Scargill being arrested during the strike.

Wounds unhealed

But wounds opened during the miners' strike are not yet fully healed.

"The violence in the village was quite nasty, really nasty, and I would not like to see that ever, ever again," said Mr. Sykes, whose father and grandfather both worked at the pit.

Pete Wordsworth, a miner from the age 16, who stopped working in 2015, said the most ardent strikers "are still saying that they would not speak to a miner who went back to

work. They are really, really bitter."

He is now deputy mine manager at the National Coal Mining Museum in Wakefield, which has special exhibitions marking the strike's anniversary.

"All the small villages had really good communities and everybody pulled together," he said, in the shadow of the old mine's winding gear. But pit closures "fragmented" those communities, he said. Miners moved to find work and more educated people left.

Even the celebrated band came close to shutting during the strike, as financial hardship whittled its numbers down to just eight.

Its reputation for excellence was its saving grace, helping it to attract talented players from hours away with no links to the pit.

They are now trumpeting the area's heritage and identity.

"That's what keeps this band going, the name," said a visibly emotional Mr. Sykes, beating his hand on the 119-year-old band's logo, over his heart.

One such newcomer is cornet player Tabby Kerwin, who makes a two-hour round trip for each of the twice-weekly practices. "Everyone does it for the love of it and for the legacy, for the history," she said before practice.

'Women gig workers on the road to financial security'



Fast buck: The women riders earn ₹10,000 a month on an average and additional income from extra trips. FILE PHOTO

T.E. Raja Simhan

Kamala (name changed) delivered a cake in her first assignment with a food delivery platform. The 25-year-old Chennai resident says she is excited to take up her new job as a delivery executive. "I have two daughters and my husband owns an auto. I love riding a two-wheeler; delivering items will help me earn a few thousand rupees a month," she says.

More and more women like Kamala are joining the last-mile delivery service, zipping through the streets on bikes to deliver food and other packages to customers across the city. The riders earn ₹10,000 a month on average, with additional income dependent on any extra trips they can manage each day.

Of the estimated 10-12 lakh delivery riders across sectors like e-commerce, food delivery, and quick commerce, nearly 80,000 are women, says Yeshab Giri, Chief Commercial Officer, Operational Talent Solutions, at leading HR company Randstad India. Though there is a huge gap between the number of male and female riders, hiring of women in the sector is increasing by 30-35% every year due to the improved work culture, safety in operations, and higher compensation, Mr. Giri says. "With our female delivery partner onboarding programme, over 2,000 inspiring women leverage our platform to participate in, and earn from last-mile deliveries," says Rakesh Ranjan, CEO, Food Delivery, Zomato. (The writer is with The Hindu businessline)

Rolls-Royce rolls out the 'most complex clock face' in its history

Luxury carmaker unveiled Arcadia, the third custom-made 'Coachbuild Droptail' in the world, recently; Assembly took five months and the wood sections took 8,000 hours to create, according to the company; Droptail is said to be the first roadster body style in Rolls-Royce's modern history

NEWS ANALYSIS

S. Ronendra Singh

You can see, but you can't touch it! It was an exclusive 'Coachbuild' preview of the latest Rolls-Royce Motor Cars model for just a few of us from around the world, before the magnificent piece of art was to be handed over to a multi-billionaire client in the evening.

At a private ceremony in the Flower Field Hall at Gardens by the Bay, Singapore, the Coachbuild masterpiece was kept under wraps until some detailing and presentation was to be made. And, the wait of a few minutes before it was unwrapped was worthwhile.

The company presented the 'Arcadia', the third Coachbuild Droptail commission - a uniquely pure reflection of Droptail's principal design, featuring the most complex clock face in Rolls-Royce history.

The assembly alone took five months, wood sections took 8,000 hours to create before the Arcadia emerged. Droptail is the first roadster body style in Rolls-Royce's modern history, the company said.

"The Rolls-Royce Arcadia Droptail demonstrates the true nature of a Coachbuild proposition in completely transforming the



Bespoke luxury: At a private ceremony in Singapore, the Coachbuild masterpiece was kept under wraps until some detailing and presentation was to be made. SPECIAL ARRANGEMENT

character of a motor car. With Arcadia Droptail we witness daring in minimalism and subtlety, informed by the lifestyle of an individual who has a unique appreciation for British luxury," Anders Warming, Design Director of the company said at the unveiling.

Presenting the Arcadia, he said in creating this historic motor car, "we once again prove our peerless abilities in synthesising and executing bespoke design at its highest level."

This coachbuild commission takes its name from the mythical realm of Arcadia, a place depicted in Ancient Greek mythology as 'Heaven on Earth' - a land renowned for its natural beauty and perfect har-



mony. Like the haven that inspires its name, Arcadia Droptail was envisioned by the client as a refuge from the complexities of their business life, the company said. The company has programmes called Bespoke and Coachbuild, wherein the designers, engineers and staff at Rolls-Royce work together with the client from day one, to build such models.

The U.K.-based company says that every Rolls-Royce that leaves the Home of Rolls-Royce at Goodwood includes some bespoke elements. These range from subtle but significant touches - an individual exterior colour that evokes childhood memories, or the client's initials embroidered on the headrests - to highly complex artworks requiring months or years of design and technical development.

"The significance of Rolls-Royce Arcadia Droptail lies in its subtlety. It is a projection of an individual who values clarity and precision in all areas of their life - from their passion for fine cuisine, their highly curated personal and professional spaces and affinity with contemporary de-

sign," said Alex Innes, Head of Coachbuild Design, Rolls-Royce Motor Cars.

But, it is easier said than done as the engineers and designers of Rolls-Royce often have to tackle unique demands from clients.

Jonathan Simms, Head of Bespoke, Rolls-Royce, cites the example of a client who wanted some silk materials they had been using to be used in the car which they were buying. However, Rolls-Royce had to tell them the company had to run some tests before it could be fitted in the car as such materials should last as long as the car ages.

"When I talk to them about our test standards, they sometimes say 'are you crazy'. They tell us that it will be a ceremonial car and they will use it only on special occasions, so please to use the material," he explains.

He said as a general rule, everything is tested, but there are occasions where the client will make specific requests, and Rolls-Royce would need to match their requirement. And, that is why the company takes months and years to test those materials/ fabrics so that they last.

"It sounds like a cliché, but when we talk about relationships with our clients we really mean it. When we are into the Bespoke

commissions, it's very rare that we won't have the client coming to Goodwood, meeting us or we meet them where they are and we really get to know much about them because if you know someone well, then you can be convinced...And, then our designers and our craftsmen will start work with the client," Mr. Simms explains.

"When we start to make the car physically - the first parts - that's when many of the clients love to come to Goodwood and actually see those parts being made, and many of them get very emotional," he said. As the most exclusive division of Bespoke, Rolls-Royce Coachbuild is the marque's equivalent of haute couture. It empowers clients to create completely unique Rolls-Royce motor cars beyond the brand's product portfolio, participating in every stage of its development over a number of years.

Arcadia Droptail is one such product that took four-and-a-half years to be fully built and handed over to the client. The interesting part is that Rolls-Royce never shares the price of such a product (the Arcadia is estimated to cost about \$25 million), and the identity of the customer.

(The writer, who is with The Hindu businessline, was recently in Singapore at the invitation of Rolls-Royce Motor Cars)

Floored by tradition



Tiles to go: An employee takes tiles out from the oven at Tuillerie de Niderviller, an artisan tile-maker, in Niderviller, north eastern France. More than 200 years old, the factory is the last traditional tiliary in Lorraine, operating with machinery dating back to 1928 in an approach to preserving heritage. AFP

Kolkata port gearing up for ₹800-cr. container berth upgrade

Mithun Dasgupta

In an ambitious endeavour, Syama Prasad Mookerjee Port, Kolkata (SMPK), plans to reconstruct and mechanise two container berths at the Netaji Subhash Dock of the Kolkata Dock System (KDS) within two years.

SMPK aims to award the ₹800-plus crore public-private partnership (PPP) projects in the next three months.

The Ministry of Ports, Shipping and Waterways had earlier this month approved the projects for the re-construction of berth No. 8 and the mechanisation of berth No. 7 and 8 at the Netaji Subhash Dock. The foundation stone



Rathendra Raman

for the project was laid by Prime Minister Narendra Modi on March 1, 2024.

Shorter wait for ships

"The projects for the reconstruction and mechanisation of berths at Netaji Subhash Dock of Kolkata Dock System are a part of the government's drive to enhance container and cargo handling capacity,

and further mechanisation of SMPK," said SMPK chairman Rathendra Raman.

"Tender for the projects has already been floated. We are looking to complete the process and award the projects within the next 3 months," he added.

The projects will be executed on a 'design, build, finance, operate, and transfer' (DBFOT) mode.

"After the completion of the projects, the container handling capacity of berth No. 7 and 8 at Netaji Subhash Dock will stand at 0.48 million TEUs.

Later, it can go up to 0.78 million TEU. Under this project, three rail-mounted quay cranes (RMQCs) will be installed. It will reduce the detention

time of ships at the dock and increase efficiency," said Mr. Raman.

Sagarmala projects

Comprising two dock systems, KDS and Haldia Dock Complex (HDC), SMPK, formerly known as Kolkata Port Trust, currently has a combined cargo handling capacity of about 87.5 million tonnes (MT).

The port authorities plan to increase the combined capacity to 115 MT by 2030 through 15 PPP projects. Three projects, worth ₹733 crore, have been awarded, while the rest, cumulatively worth about ₹5,200 crore, are in the pipeline.

(The writer is with The Hindu businessline)

Young Chinese again want to study abroad, just not in the U.S.

Associated Press
WASHINGTON

In the Chinese city of Shanghai, two young women seeking an education abroad have both decided against going to the United States, a destination of choice for decades that may be losing its shine.

For Helen Dong, a 22-year-old senior studying advertising, it was the cost. "It doesn't work for me when you have to spend 2 million (yuan) (\$2,78,000) but find no job upon returning," she said. Ms. Dong is headed to Hong Kong this fall instead.

Costs were not a concern for Yvonne Wong, 24, now studying comparative literature and cultures in a master's program at the University of Bristol in Bri-

tain. For her, the issue was safety.

"Families in Shanghai usually don't want to send their daughters to a place where guns are not banned - that was the primary reason," Ms. Wong said. "Between the U.S. and the U.K., the U.K. is safer, and that's the biggest consideration for my parents."

With an interest in studying abroad rebounding after the pandemic, there are signs that the decades-long run that has sent an estimated 3 million Chinese students to the U.S., including many of the country's brightest, could be trending down, as geopolitical shifts redefine U.S.-China relations.

Cutting people-to-people exchanges could have a lasting impact on relations



Fear psychosis: The Chinese government has sidelined English education, hyped gun violence in the U.S., and portrayed the U.S. as a declining power. AFP

between the two countries.

"International education is a bridge," said Fanta Aw, executive director of the NAFSA Association of

International Educators, based in Washington. "A long-term bridge, because the students who come today are the engineers of the future. They are the

politicians of the future, they are the business entrepreneurs of the future.

"Not seeing that pipeline as strong means that we in the U.S. have to pay

attention, because China-U.S. relations are very important."

Ms. Aw said the decrease is more notable in U.S. undergraduate programs, which she attributed to a declining population in China from low birthrates, bitter U.S.-China relations, more regional choices for Chinese families and the high costs of a U.S. education.

But graduate programs have not been spared. Zheng Yi, an associate professor of mechanical and industrial engineering at Northeastern University in Boston, has seen the number of Chinese applicants to one of the school's engineering programs shrink to single digits, compared with 20 to 30 students before the pandemic.

He said the waning interest could be partly due to China's growing patriotism that nudges students to attend Chinese institutes instead.

'Here to stay'

Andrew Chen, CEO of Pittsburgh-based Whole-Brain Education, which has advised Chinese students in the U.S. for the past 14 years, said the downward trend is here to stay. "This is not a periodic wave," he said. "This is a new era." The Chinese government has sidelined English education, hyped gun violence in the U.S., and portrayed the U.S. as a declining power. As a result, Mr. Chen said, Chinese families are hesitant to send their children to the U.S. Beijing has criticised the

U.S. for its unfriendly policy toward some Chinese students, citing an executive order by former President Donald Trump to keep out Chinese students who have attended schools with strong links to the Chinese military.

The Chinese foreign ministry also has protested that a number of Chinese students have been unfairly interrogated and sent home upon arrival at U.S. airports in recent months. Spokeswoman Mao Ning recently described the U.S. actions as "selective, discriminatory and politically motivated."

State Department spokesman Matthew Miller said fewer than "one tenth of 1%" of Chinese students have been detained or denied admission.

CUP NAMDE

We have got it, it is for the fans: Shreyanka on WPL triumph



SHIV KUMAR PUSHPAKAR

Over the last few years, the *Ee Sala Cup Namde* (The Cup is ours this time) slogan of RCB has remained the pet troll of the social media. Not anymore. "They keep saying *Ee Sala Cup Namde* and we got it. That's it guys... this is for the fans," said RCB off-spinner Shreyanka Patil after the triumph.

MR. COOL

Shreyanka credits coach Williams for keeping the RCB dugout calm



SPORTZPICS/WPL

Shreyanka Patil lauded RCB head coach Luke Williams for keeping the dressing room calm. "Day in and day out we put in our hard work and felt like family. We did not know Luke much. During the last game that we won against Mumbai Indians, he shed tears of joy. We hope to do more of this," said Shreyanka.

UNBELIEVABLE

The support for all the teams has been phenomenal, says Perry



SHIV KUMAR PUSHPAKAR

The talismanic Ellyse Perry topped the run-makers' chart in the WPL with 347 runs, and the Australian all-rounder said the support for the teams throughout the event was very heartening. "Pretty bonkers, to be honest. It's another level for us — the support for all the teams has been phenomenal and it's been unbelievable."

SPECIAL ONE

The young Shreyanka has got the world at her feet: Perry



SHIV KUMAR PUSHPAKAR

Ellyse Perry praised spinners Sophie Molineux and Shreyanka Patil for changing the complexion of the game in the final. "She [Molineux] turned the match on its head. The rest of the spinners backed her up. Shreyanka is such a young player and she has got the world at her feet. It was a special performance," said Perry.

Red-hot spinners help Royal Challengers strike gold

Molineux, Shreyanka and Asha cast a spell over DC's batters as the team slips from 64 for no loss to get bundled out for 113; vital contributions at the top of the order see the Bengaluru side through



Over the moon: It was a night to remember for the members of the Royal Challengers Bangalore team as they prevailed over Delhi Capitals in a low-scoring final. SHIV KUMAR PUSHPAKAR

SCOREBOARD

DELHI CAPITALS

Meg Lanning lbw b Shreyanka 23 (23b, 3x4), Shafali Verma c Wareham b Molineux 44 (27b, 2x4, 3x6), Jemimah Rodrigues b Molineux 0 (2b), Alice Capsey b Molineux 0 (1b), Marizanne Kapp c Devine b Asha 8 (16b), Jess Jonassen c Smriti b Asha 3 (11b), Radha Yadav run out 12 (9b, 2x4), Minnu Mani lbw b Shreyanka 5 (3b, 1x4), Arundhati Reddy b Shreyanka 10 (13b), Shikha Pandey (not out) 5 (5b), Taniya Bhatia c Richa b Shreyanka 0 (1b); Extras (w-3): 3; Total (in 18.3 overs): 113.

FALL OF WICKETS

1-64 (Shafali, 7.1 overs), 2-64 (Jemimah, 7.3), 3-64 (Capsey, 7.4), 4-74 (Lanning, 10.4), 5-80 (Kapp, 13.1), 6-81 (Jonassen, 13.3), 7-87 (Minnu, 14.1), 8-101 (Radha, 16.2), 9-113 (Arundhati, 18.2).

RCB BOWLING

Renuka 2-0-28-0, Molineux 4-0-20-3, Perry 2-0-14-0, Devine 1-0-9-0, Wareham 3-0-16-0, Shreyanka 3-3-0-12-4, Asha 3-0-14-2.

ROYAL CHALLENGERS

Smriti Mandhana c Arundhati b Minnu 31 (39b, 3x4), Sophie Devine lbw b Shikha 32 (27b, 5x4, 1x6), Ellyse Perry (not out) 35 (37b, 4x4), Richa Ghosh (not out) 17 (14b, 2x4); Total (for two wickets in 19.3 overs): 115.

FALL OF WICKETS

1-49 (Devine, 8.1), 2-82 (Smriti, 14.6).

CAPITALS BOWLING

Kapp 4-0-20-0, Capsey 3-0-13-0, Shikha 4-0-11-1, Radha 1-0-18-0, Arundhati 3-3-0-26-0, Jonassen 2-0-15-0, Minnu 2-0-12-1.

Toss: Delhi Capitals.

RCB won by eight wickets with three balls to spare.

WPL SEASON 2

Lavanya L
NEW DELHI

With a fine display of the astrophysiological properties of a good spin attack, Smriti Mandhana-led Royal Challengers Bangalore beat Delhi Capitals by eight wickets to lift its maiden Women's Premier League title at the Arun

Jaitley Stadium here on Sunday.

Coach Jonathan Batty, skipper Meg Lanning and batting first — time and again this combination has proved futile in league finals in the Women's Big Bash League and even in last year's WPL final which DC lost to Mumbai Indians. Lanning and Shafali Verma looked like they were batting on two different wickets. Where Shafali was striking the ball clean, Lan-

ning looked tentative right from the third ball of the innings where miscommunication nearly saw her lose her wicket. With Shafali taking charge, DC got to 61 in the PowerPlay, the joint best tally in the first six overs this season. However, Sophie Molineux was the out-of-syllabus question that left the league leader in tatters.

She removed Shafali Verma (holed out to Georgia Wareham at deep mid-

wicket), Jemimah Rodrigues (who got on one knee to sweep missing the ball completely as it hit the stumps) and Alice Capsey (a brain fade that saw her trying to scoop the ball only to lose her stumps) in the span of four balls.

Seeing the purchase Molineux got from the wicket, Smriti stuck to spin, bringing her death-overs combo of Shreyanka Patil and Asha Sobhana into play. As she did a week ago,

Shreyanka got Lanning trapped leg before yet again, with the ball headed straight for her middle stump. From there on, DC slipped deeper into the quicksand, finally folding for 113 with nine balls left unfaced, its lower-order's batting hiccups proving to be its Achilles' heel again.

Smriti's ploy to strangle with spin was spot on. RCB's four tweakers gave away only 62 runs, bowling 35 dot balls between them.

What particularly hurt DC was the period between the 7th and the 14th over (7.4 overs to be precise) which saw no boundaries.

Lanning, with her poker face on, did not let RCB have it easy. Sophie Devine and Smriti got off to a confident start putting on 49 runs before Shikha Pandey got Devine in the ninth over. Lanning bowled out her premiere pace options — Marizanne Kapp and Shikha — within the first 12 ov-

ers, potentially looking for their wicket-taking form to come through. The pair did well to keep things tight, bowling 26 dot balls in total and giving away 33 runs.

Jess Jonassen was introduced only in the 14th over with RCB needing 42 off as many deliveries. Smriti's off-spin weakness got the better of her as Minnu Mani sent her back. If the target wasn't so low, this fielding effort would have been a masterclass in how to de-

fend with Test intensity in a T20 game by Lanning and Co., but 113 was far too less even for the genius of the world's most decorated leader.

In what tied the win up with a perfect bow, Richa — who, a week ago, was reduced to tears when she couldn't see out a win against the same opponent — hit the winning runs.

The propellers



Stars of the night: Molineux, centre, started the slide by picking up three wickets in an over and Shreyanka took over to return a four-wicket haul. Perry then guided the team home in a tricky chase. SHIV KUMAR PUSHPAKAR

Meteors, Defenders notch up victories

PVL

Saikat Chakraborty
CHENNAI

Mumbai Meteors defeated Delhi Toofans 15-11, 12-15, 15-12, 17-15 in a Super 5 clash of the Prime Volleyball League season three here at the Jawaharlal Nehru Indoor Stadium on Sunday.

Toofans were unable to get into the first set and fell behind early.

The Delhi outfit came alive in the second set, led by the strong attack of S. Santhosh. The Meteors took the third set thanks to some good play from Amit Gulia.

The fourth set too was a close one, with neither team able to gain a significant advantage. In the end, it was Meteors who came out on top. Despite the

loss, the Toofans have still qualified for the knockouts.

Reigning champion Ahmedabad Defenders pulled off a dramatic come-from-behind win against Calicut Heroes. Despite losing the first two sets, Defenders fought back valiantly to win 16-18, 13-15, 15-11, 15-8, 15-13.

Their victory was fuelled by an exceptional team performance. Captain Muthusamy Appavu and star attacker Angamuthu led the charge, guiding their team to a crucial win. This sets up a clash against the Delhi Toofans in the eliminator, with the ultimate goal of facing Calicut Heroes again in the finals.

The results: Mumbai Meteors bt Delhi Toofans 15-11, 12-15, 15-12, 17-15; Ahmedabad Defenders bt Calicut Heroes 16-18, 13-15, 15-11, 15-8, 15-13.



Rising to the occasion: The Mumbai outfit prevailed in a four-setter against Delhi Toofans. M. VEDHAN



EMMANUAL YOGINI

I have passed on my 17-year experience to the younger guys

I would love to be involved in cricket, either coaching or doing something with fast bowlers or youngsters, but it will definitely be something related to the game

INTERVIEW

Dhawal Kulkarni

Amol Karhadkar

He was born the day Sachin Tendulkar made his First Class debut. And even before he made his First Class debut, Dhawal Kulkarni was playing along side the man himself in the Indian Premier League.

More than his 14 India caps – 12 ODIs and two T20Is – and a unique record of being the only pacer to have played at least a game in each of the first 13 IPL editions, Kulkarni emerged as a domestic stalwart.

After being a leader of Mumbai's pace pack for a majority of his 17 seasons with the domestic powerhouse, Kulkarni hung up his boots after picking up a wicket off his last ball to end his career with five Ranji Trophy titles. He takes a look at his career in an interview.

Why do you think it's time to pass on the mantle to a younger generation?

There are a lot of talented youngsters and fast bowlers in Mumbai and that's why I think that I should pass on the mantle to the younger guys. It's been 17 years, a long journey. Whatever experience I have got in these 17 years, I have made sure that I have passed it on this year to the younger guys.

This whole season, more than playing, you have been involved in taking care of the bowling group...

I want to give back to cricket because cricket has given me so much. The knowledge I have received from the greats of cricket, I would like to pass it on to the younger guys.

There's no point keeping it to myself. So that is going to be the next thing.

I would love to be involved in cricket, either coaching or doing something with fast bowlers or younger guys. But it will definitely be something related to cricket.

For an Indian pacer, playing 100 First Class games is a big deal.

No, no, I am not thinking about the

numbers because numbers are just numbers. What I have done in these years counts more than numbers and I have had a good career. To win five of the six finals I have featured in is quite special.

Can you tell us why the Sportstar Trophy (Mumbai age-group selection tournament) is so dear to you?

Before playing in the Sportstar Trophy (u-17), I was a batting all-rounder and I used to bat for my school teams and even when I was just about in the circuit. I used to bat higher up the order. Then I used to bowl with the new ball, but the game-changer was the Sportstar Trophy.

I received the best bowler award in that tournament and from there on I thought that I should focus more on bowling than batting and this is where I am now.

Once you made that switch to being primarily a bowler, the rise was even more rapid than as an opening batter, right?

Yes. I was picked in the Mumbai under-17 team as a fast bowler and from there I picked up wickets.

Then I played two years of under-10, was with the India U-19 team and from there, the real journey began playing professional cricket.

Then after the under-19 level, I got into the Ranji squad.

What is it that gets the best out of you in the finals?

It means a lot because you work really hard during the season, the pre-season you do a lot of fitness, put in a lot of hard yards in the entire domestic season.

There are seven to eight league games when you play the Vijay Hazare Trophy, the Syed Mushtaq Ali Trophy and after those league games in Ranji Trophy, there are the knockout games. You have to win the league games to be a part of those knockouts.

And once you get there, whenever I played the knockouts, I used to give it more than 100% because I used to think about the hard yards that I have put in throughout the season and the championship is what you dream of at the start of the season. Once you hold the trophy in the hand, it's a special feeling.



Even before you made your international debut, you had played with Tendulkar in the IPL? What was it like playing with him in the Ranji knockouts in your debut season?

It was a big moment for me because sharing the dressing room with him, you know, just looking at him, his routines, the process that he used to follow was a different feeling. It was like sitting next to God and as a youngster I always looked up to him. I also wanted to become like him.

Whoever played cricket back then wanted to be like Tendulkar. I was one of them and I was lucky enough to have spent time with him. Even after my first season, another Ranji Trophy

that we won, he was a part of that final as well. So the experience that he shared with me was very much helpful for my whole career.

Despite being on a roll in Mumbai's colours, opportunities were far and few in international cricket. How did you manage that phase?

I always took it as a challenge. It was something that was not in my hands. I always focused on my cricket and wanted to do well. Whenever I had the ball in my hand, I wanted to go out there and perform.

Never did I think about being picked or not picked for India. I used to be disappointed when I was little young, but then I took it in my stride. I took it

in a positive way and took it as a challenge. Every time I took the field, I wanted to prove it, prove it to myself rather than anyone else, that I am better than others. And whenever I walk onto the field, I try to become better. Yes, I do think I should have played more international cricket that I did, but that hasn't prevented me from giving my best for Mumbai.

In the latter half, when your body wasn't really actually supporting you as much as you would have wanted, how challenging was it to keep your place in a team like Mumbai?

Getting an India opportunity or not, getting injured or not getting picked is part and parcel of the game for every athlete. I always took it in my stride whenever I got injured.

I always thought about how will I come back fitter than what I was; and that drove me every time I got injured.

I had to speak to myself. I used to ask myself why was it that I got injured so often and how I can improve my regime. Over the last few years, I focused on what I should do that more than I should not do.

If you were to pick top three moments of your career, what would they be?

The first would be the India ODI cap that I got from M.S. Dhoni. The second, my first season for Mumbai – winning the Ranji Trophy for the team. And the third would be the Ranji final (in 2009-10) against Karnataka.

I played a big role with the bat, scored 87 runs (batting at No. 7) and that changed the game. And from there it was a very interesting. It went till the last day last, last session and I played a huge role with the ball as well. Truly a remarkable game.

Any regrets?

Won't call it regret as such, but I I could have worked harder to earn the Test cap is what I would like to say.

How would you like to be remembered?

The one who always gave 100%, a perennial team man and a good human being – more than anything else, a good individual is what you want to be.