

New guidelines on CMR allotments spark strong opposition from millers

Hyderabad: The State government is set to introduce new guidelines for the allotment of paddy for custom milled rice (CMR) operations, which have sparked opposition from rice millers. The proposed policy mandates that millers provide bank guarantees for the allotment of paddy, a move, as the millers organisations claim, primarily driven by Civil Supplies Minister N. Uttam Kumar Reddy. During recent preparatory meetings for the Vanakalam (Kharif) minimum support price (MSP) operations, millers' associations voiced their objections to the State Civil Supplies Corporation (TGSCC) officials. The millers have made it clear that they are not prepared to provide bank guarantees, with some even threatening to boycott the operations entirely if the policy is enforced. The government aims to require bank guarantees for at least 25 percent of the value of the paddy allotments. This change is intended to ensure accountability and timely delivery of CMR, as there have been increasing instances of millers failing to deliver the custom milled rice within the stipulated time, causing delays and financial losses to the government.

Millers argue that the new requirement adds financial strain and complicates the milling process, potentially leading to

delays and increased costs. They also point out that the millers in the State currently hold substantial paddy stocks, including 28 lakh tonnes from the Rabi 2022-23 marketing season and 33 lakh tonnes from previous Kharif and Rabi seasons, questioning the need for fresh paddy allotments under the new guidelines. These stocks with them support CMR operations for the next six to eight months. The TGSCC has assured millers that their concerns will be addressed in a high-level meeting soon. However, the government remains firm on the bank guarantee requirement, citing the need for risk mitigation and financial security. The bank guarantee is seen as a measure to prevent defaults and ensure that millers comply with the terms of the agreement, delivering the processed rice to the Food Corporation of India (FCI) or the state government as required. The ongoing discussions and potential adjustments to the policy seems to be imperative and indicate a need for further dialogue between the government and millers to find a mutually acceptable solution. The outcome of these negotiations will be crucial for the smooth implementation of the new guidelines and the overall success of the CMR operations in Telangana, felt representatives from both sides.



HNA Council formed to promote healthier society

Hyderabad: Aiming for a healthier society, the National Millets Media Portal has launched the Health and Nutrition Ambassador (HNA) Council with 50 doctors and plans to expand the council with 1,000 doctors by the year-end. Coordinator, Dr. Monica Sravanthi said the council aims to transform regular graduates into Health and Nutrition Ambassadors (HNA), who will play a crucial role in spreading knowledge about health and nutrition in the society. At a press meet here on Thursday, Chairman of the National Millets Media Portal, Srinivas Sarakadam shared plans to expand the HNA Council to 1,000 doctors by the end of this year and said it will include professionals from Naturopathy, Allopathy, and Ayurveda. He also announced the upcoming launch of the HNA Council community portal next month, where doctors will contribute articles, health tips, and nutrition insights, offering members deeper knowledge in health and nutrition. Several doctors, including Dr. Akhilaja, Dr. Shaik Mohammed Tabrez, Dr. Sravani Santhoshi, Dr. Srikanth, Dr. Gayathri, also participated in the media



interaction. To become an HNA, candidates must have a regular degree from any dis-

cipline and they will undergo a 20-session training program led by doctors. Interested

individuals can contact 8500384791 or register at www.hnacouncil.com.

Exploring the ‘wonderful world’ of symplectic geometry to solve problems in mechanics

Russian-American mathematician and Wolf Prize laureate Yakov Eliashberg delivered a public talk at IIT Madras on Thursday, as part of the inaugural annual TNQ Distinguished Lecture in Mathematics. The talk was part of TNQ Numbers and Shapes, a new initiative by the TNQ Foundation “to advance the study of mathematics and to support mathematical research in India. This will be through a mentorship and collaboration programme that gives students exposure, guidance, and travel support to enable them to pursue cutting-edge research in pure mathematics”. The flagship event of the initiative is the lecture that will be held in Chennai every year during a week-long workshop. The initiative will focus on geometry and topology, number theory, ergodic theory and dynamical systems, algebraic geometry, and probability and analysis. Commemorating pure mathematics ahead of the lecture, TNQ Foundation head Mariam Ram said, “TNQ launched the Distinguished Lectures in the Life Sciences series in 2008, bringing well-known life science experts to India and giving students and researchers opportunities to interact with their field’s leaders.”

Ms. Ram said she hoped the Foundation’s new mathematics programme would lead to deeper and more meaningful collaborations between mathematicians in India. “These lectures will commemorate India’s and particularly Tamil Nadu’s long history in pure mathematics,” she said, adding, “Our hope is that TNQ Numbers and Shapes will go at least a little way in inspiring students to produce beautiful mathematics.” Professor Eliashberg and Simon Donaldson won the Wolf Prize for mathematics in 2020 “for their contributions to differential geometry and topology”. According to the TNQ Foundation, the emergence of symplectic and contact topology — a field in which Professor Eliashberg is a leader — has been one of the most important and long-term advances in mathematical research in recent decades. He is currently the Herald L. and Caroline L. Ritch Professor of Mathematics at Stanford University.

Symplectic topology The talk was titled “The Strange and Wonderful World of Symplectic Geometry”. At the heart of symplectic geometry is the symplectic manifold. Simply speaking, a manifold is a space that follows the rules of Euclidean geometry locally but could have a non-Euclidean structure globally. This is like how the earth seems flat to an ant crawling on it but is revealed to be spheroidal when an astronaut looks at it from outer space. (A sphere is a type of two-dimensional manifold.) Symplectic geometry is concerned with the area-related characteristics of manifolds with an even number of dimensions (2, 4, 6, 8, and so on).

Before Professor Eliashberg’s lecture, M.J. Mahan of the Tata Institute of Fundamental Research, Mumbai, introduced the mathematics that forms the foundation of topology — from Euclid’s proof of the existence of infinitely many prime numbers to the Gauss-Bonnet theorem. “Whether it’s numbers or shapes, there’s something underlying them that can be worked out

with a paper and pencil,” he said. Professor Eliashberg began with a brief history of the central figures of topology, including Henri Poincaré, Misha Gromov, and William Rowan Hamilton. “Solving serious mathematical problems requires many people,” he said. Then he moved to the geometrical aspects of topology and then mechanics. According to him, “symplectic geometry was born as a geometric language of classical mechanics”. Students are taught in schools to solve classical mechanics problems using Newtonian mechanics. Symplectic geometry is connected with the physics of the real world through an alternative approach called Hamiltonian mechanics. For example, say a ball is rolling down a slope. The state of this dynamical system in Hamiltonian mechanics is given by its position and momentum in three dimensions. The combination of these six variables denotes the ball’s phase space, which can be represented and analysed as a symplectic manifold. Symplectic topology offers an alternative approach to solving problems involving systems with complicated phase spaces. As he moved through increasingly involved ideas, Professor Eliashberg also recounted how they have been applied to study problems in thermodynamics, celestial mechanics, and



chaotic systems. Himalayan retreat TNQ Numbers and Shapes and the Institute of Mathematical Sciences (IMSc), Chennai, organised a four-day workshop that Professor Eliashberg has been conducting since September 23. According to Dishant Pancholi of the IMSc, more than 20 students and mathematicians participated.

After the talk, Professor Eliashberg will lead a small group of Indian mathematicians at a retreat in the Himalayas dedi-

cated to working on solutions to a problem in symplectic topology called the nearby Lagrangian conjecture. According to a note on the TNQ website, “Various methods have been developed to address this problem, and several partial results have been obtained, but a complete resolution of the conjecture is still a long way off.” Participants in the workshop and the retreat were selected in a process led by Professor Mahan and Professor Pancholi.

Could global warming impede weather and climate forecasting?

With the record warming of 2023-2024, we are getting a clearer picture of what global warming does. The medley of extremes strewn across the planet have covered the gamut from deadly heatwaves to devastating cyclones and floods, from droughts to wildfires. According to some estimates, the world has already crossed the 1.5° C warming threshold. (That is, the earth’s average surface temperature has increased by more than 1.5° C over the pre-industrial average.) The caveat is that global temperatures are an estimate produced from a combination of data and climate models. Because the 1.5° C limit is part of a demand by the Alliance of Small Island and Developing States, scientists have built models to predict what environmental disturbances crossing this threshold could invite.

However, and more importantly, it is not yet clear how long the warming has to remain above the threshold for the projected impacts to materialise. The spectacular show that nature has put up during 2023-2024 is also a stark reminder that we are far from able to predict the weather and the climate with the requisite skills and spatial-temporal scales to manage disasters effectively. The loss of lives, livelihoods, property, and infrastructure continues to traumatise humanity, especially the poor, who remain very vulnerable to extreme events. 2024 v. our predictions

Meteorologists predicted the 2023 El Niño as early as in the spring of that year, which is remarkable. But the level of warming during 2023-2024 has caught them, and

the public, by surprise because it was much higher than expected from the addition of the so-called mini-global warming by the El Niño to the ongoing background warming. We speculate that water vapour thrown up by the underwater volcano Hunga Tonga–Hunga Haʻapai during 2022 and carbon dioxide emitted by the wildfires exacerbated the warming. The 2023 monsoon was deficit but it did not qualify as an El Niño drought, the reasons for which researchers are yet to diagnose. Predictions from nearly all major weather centres earlier promised a strong La Niña in late 2024. Now this seems less likely. Perhaps nature has another googly in waiting. Similarly, weather forecasts have called for the most intense hurricane season in decades but which has yet to step beyond normal. The monsoon season has evolved erratically and has once again left many parts of India dry while producing devastating floods and landslides in many others. Now 2024 is set to emerge as a monsoon-surplus year yet it can hardly be called a typical La Niña monsoon. The cyclone season in the North Indian Ocean has also been weaker than one would expect in a La Niña year. Some weather centres were very gung-ho about an Indian Ocean Dipole (IOD) emerging in the Indian Ocean but it has played truant so far.

To be clear: this is not a litany of grievances against predictions. It is an expression of caution: that we will be remiss if we don’t learn all the lessons from this extraordinary period of warming vis-à-vis their implications for the future of predictions and

for the climate projections we keep producing. Predictions may pose bigger challenges. A quote often attributed to physicist Niels Bohr is apt here: prediction is difficult, especially if it’s about the future. Weather and climate predictions frequently remind us of this. We do learn our lessons and continue to improve the models and the observational networks we need to produce better predictions. But what if predictions continue to become more difficult with global warming? Put another way, are all the misfires we have had this year just a coincidence or are they a portent of what is to come? Many studies have reported the impacts of warming on hurricanes, monsoons, El Niños, La Niñas, the IOD, etc. But the bigger question is: if the world is already warmer than 1.5° C, are there any conclusions we can draw about how all these natural variabilities have responded thus far? Unfortunately, the period of warming we have experienced of late hasn’t been long enough for us to confidently say what changes we can already detect in the dominant climate modes. The models are amazing in their ability to reproduce all natural modes given just the energy coming from the Sun at the top of the atmosphere. But they are not perfect: model answers often disagree; even the same model can produce different answers depending on its configuration. For example, existing models cannot reproduce monsoon trends in the past half century and are considered unreliable for the future; they can only make skillful forecasts for the present.

“Dussehra Dhamaka Offers” in Big 'C'

Big 'C', the No.1 mobile retail sales company in Andhra Pradesh and Telangana states, has announced Dhamaka offers on the occasion of Dussehra. Company Founder & C.Y.M.D. Shri Yam. Balu Chaudhary revealed the details of these offers. On the occasion of this Dussehra festival, Big C is offering four attractive offers on the purchase of mobiles, he said on the occasion. Four attractive offers on mobile purchase

- 1) Free mobile protection worth Rs.10,000 on every mobile purchase.
 - 2) Instant cashback up to Rs.10k on every mobile purchase.
 - 3) He added that on every mobile purchase, a definite gift worth up to Rs.5,999 will be offered.
 - 4) It also provides attractive facility of buying mobile without any interest and down payment.
- He said that along with the Big 'C' four

offers on the purchase of mobiles, the following offers are also being offered.

> Lucky draw on every OPPO mobile purchase Rs. There is a chance to win 10 lakhs in cash. G On every VIVO mobile purchase there is a chance to win bikes, mobiles & many more prizes through lucky draw. * On every REALME mobile purchase there is a chance to win cars, bikes, & many more prizes through lucky draw. G On every MI mobile purchase stand a chance to win cars, bikes, & many more prizes through lucky draw. Apart from that, they are also providing an attractive facility of buying mobile, smart TV, laptop and air conditioner without any interest or down payment on the ATM card. He added that it is Big C's habit to announce special offers to celebrate every festival and special occasion and this Dussehra is also offering attractive offers. He wished all the public to avail these offers. Yam. Balu Chaudhary Founder & C.Y.M.D.



Community Mourns Loss of Social Worker Kanakadurga



Social worker Kanakadurga Shradhanjali held at Begumpet Country Club on Thursday. Former CBI Joint Director, Mr. Lakshminarayana, expressed deep sorrow over his sister Kanakadurga's untimely demise. "The loss of our sister who considered social service as the ultimate goal, is the most painful thing," he said.

Mr. Lakshminarayana highlighted Kanakadurga's remarkable contributions over the past ten years, stating she had carried out numerous service programs. "She was very polite to everyone, big or

small. The absence of a person with a good mind and good thinking is a matter that moves everyone," he added.

Kanakadurga's husband spoke about the void her passing has left in their household, saying, "In our house, the elder brother used to take care of all the work. We have lost a great person."

Kanakadurga's daughter, Aisharya, was visibly moved as she shared her thoughts about her mother. "There are no words to say about my mother, my mother will always be with us," she said.

ChatGPT maker OpenAI raises \$6.6 billion in fresh funding as it moves away from its nonprofit roots

OpenAI said Wednesday it has raised \$6.6 billion in venture capital investments as part of a broader shift by the ChatGPT maker away from its nonprofit roots. Led by venture capital firm Thrive Capital, the funding round was backed by tech giants Microsoft, Nvidia and SoftBank, according to a source familiar with the funding who was not authorised to speak about it publicly. The investment represents one of the biggest fundraising rounds in U.S. history, and ranks as the largest in the past 17 years that doesn't include money coming from a single deep-pocketed company, according to PitchBook, which tracks venture capital investments. Microsoft pumped up OpenAI last year with a \$10 billion investment in exchange for a large stake in the company's future growth, mirroring a strategy that tobacco giant Altria Group deployed in 2018 when it invested \$12.8 billion into the now-beleaguered vaping startup Juul. OpenAI said the new funding "will allow us to double down on our leadership in frontier AI research, increase compute capacity, and continue building tools that help people solve hard problems." The company said the funding gives it a market value of \$157 billion and will "accelerate progress on our mission." The influx of money comes as OpenAI has been looking to more fully convert itself from a nonprofit research institute into a for-profit corporation accountable to shareholders. While San Francisco-based OpenAI already has a rapidly growing for-profit division, where most of its staff works, it is controlled by a nonprofit board of directors whose mission is to help humanity by safely building futuristic forms of artificial intelligence that can perform tasks bet-

ter than humans. That sets certain limits on how much profit it makes and how much shareholders get in return for costly investments into the computing power, specialised AI chips and computer scientists it takes to build generative AI tools. But the governance structure would change if the board follows through with a plan to convert itself to a public-benefit corporation, which is a type of corporate entity that is supposed to help society as well as turn a profit. Along with Thrive Capital, the funding backers include Khosla Ventures, Altimeter Capital, Fidelity Management and Research Company, MGX, ARK Invest and Tiger Global Management. Microsoft said in a brief statement Wednesday that it looks forward to continuing its OpenAI partnership. Nvidia, a leading designer of the chips needed to build and run AI systems, declined to comment. The amount of each funder's investment has not been disclosed. Not included in the round is Apple, despite speculation it might take a stronger interest in OpenAI's future after recently teaming up with the company to integrate ChatGPT into its products. Brendan Burke, an analyst for PitchBook, said that while OpenAI's existing close partnership with Microsoft has given it broad access to computing power, it still "needs follow-on funding to expand model training efforts and build proprietary products." Burke said it will also help it keep up with rivals such as Elon Musk's startup xAI, which recently raised \$6 billion and has been working to build custom data centers such as one in Memphis, Tennessee. Musk, who helped bankroll OpenAI's early years as a nonprofit, has become a sharp critic of the company's commercialisation.

Telangana shooters dominate with 15 medals at the XV South Zone Shooting Championship Competitions



Hyderabad, October 03, 2024: The XV South Zone Shooting Championship Competitions 2024, featuring Shotgun events (NR & ISSF) from September 27th to October 01st, 2024, at the SATS Shooting Range in Gachibowli, Hyderabad concluded triumphantly today under the guidance of Shri. Amit Sanghi, President of the Telangana Rifle Association (TRA) in Hyderabad. This prestigious event witnessed more than 250 event wise Athletes from the southern states across India. 1. Andhra Pradesh, 2. Karnataka, 3. Kerala, 4. Puducherry, 5. Telangana, 6. Tamil Nadu

The matches has been conducted for Juniors – 21 years, Born in 2003 or after, Masters age between 45 - 60 years, Senior Masters age between 60 - 70 years, Super Masters above 70 years age categories. The XV South Zone Shooting Championship Competitions 2024 saw the shooters from Telangana excel, winning a total of 15 medals across various events. The Telangana contingent showcased their remarkable skills and determination, cementing their position as a powerhouse in the shooting sports arena. Mr. Amit Sanghi, President of the Telangana Rifle Association (TRA) and Vice President of the NRAI commended the successful competition and acknowledged the contributions of the participants. He thanked NRAI officials and the Sports Authority of Telangana for their support. He congratulated the finalists and prize winners, praised their dedication and hard work, and wished them continued success. The awards ceremony, held at the SATS Shoot-

ing Range in Gachibowli, honored winners across categories. Athletes were recognized for their exceptional skills and outstanding achievements. The Telangana shooters won a total of 15 medals at the XV South Zone Shooting Championship Competitions 2024:- 6 Gold Medals- 4 Silver Medals- 5 Bronze Medals

The Telangana medalists are:

Gold Medalists:

1. Fazal Ahmed Shoeb Mohammed - Telangana - Clay Pigeon Double Trap Shooting (NR) Championship Master Men (Individual) - 31/60
2. Mohammed Naael Khan - Telangana - Clay Pigeon Skeet Shooting (NR) Championship Men (Individual) - 35/50
3. Dr. Tripuraneni Prabhakar Chowdary - Telangana - Clay Pigeon Skeet Shooting (NR) Championship Super Masters' Men (Individual) - 17/50
4. Muneq Battula - Telangana - Clay Pigeon Skeet Shooting (ISSF) Men - 108+48 (F)
5. E. Anil Kumar Reddy - Telangana - Clay Pigeon Skeet Shooting (ISSF) Super Master Men - 62/125
6. E. Chetan Reddy - Telangana - Clay Pigeon Skeet Shooting (ISSF) Master Men - 107/125
7. Yuvek Battula - Telangana - Clay Pigeon Skeet Shooting (ISSF) Junior Men - 111/125
8. Gautham Reddy Thota - Telangana

- Clay Pigeon Trap Shooting (NR) Championship Junior Men (Individual) - 39/50

9. K. Muktaruddin Ahmed Ansari - Telangana - Clay Pigeon Trap Shooting (ISSF) Senior Master Men - 105/125

10. Kynan Chennai - Telangana - Clay Pigeon Trap Shooting (ISSF) Men - 117 +45 (F)

11. Akrama Mohd Nahdi (Clay Pigeon Trap Shooting NR Men - 42/50

Silver Medalists:

1. Mohammed Ashar Raof - Telangana - Clay Pigeon Skeet Shooting (NR) Championship Men (Individual) - 35/50

2. Mohammed Saleem Moosa - Telangana - Clay Pigeon Skeet Shooting (ISSF) Master Men - 92/125

3. Muneq Battula - Telangana - Clay Pigeon Skeet Shooting (ISSF) Junior Men - 108/125

4. Ahmed Ali Khan - Telangana - Clay Pigeon Trap Shooting (ISSF) Junior Men - 98/125

5. Mohd. Mujahid Ali Khan - Telangana - Clay Pigeon Trap Shooting (ISSF) Master Men - 108/125

6. Mohd. Mujahid Ali Khan - Telangana - Clay Pigeon Trap Shooting (ISSF) Men - 108+44 (F)

Bronze Medalists:

1. Amrender - Telangana - Clay Pigeon Double Trap Shooting (NR) Championship Master Men (Individual) - 28/60

2. E. Chandan - Telangana - Clay Pi-

geon Skeet Shooting (NR) Championship Men (Individual) - 30/50

3. Yuvek Battula - Telangana - Clay Pigeon Skeet Shooting (ISSF) Men - 111+34(F)

4. Shrey Reddy Earla - Telangana - Clay Pigeon Skeet Shooting (ISSF) Junior Men - 95/125

5. Omer Bin Asim Basamala - Telangana - Clay Pigeon Trap Shooting (NR) Championship Men (Individual) - 36/50

Tuition teacher sexually assaults minor girl in Hyd

Hyderabad: A minor girl was allegedly sexually assaulted by a tuition teacher in Film Nagar.

The teacher Ramulu, allegedly made sexual advances and also sexually assaulted the 15-year-old girl, who is studying in class ten.

The incident though delayed in being reported, was brought to the attention of the girl's mother, who subsequently lodged a complaint with the local police.

The Film Nagar police have registered the case and took up investigation. The suspect was yet to be arrested.

How we went from charming to rescuing snakes

In the 'old days' if you found a snake in your garden, you screamed and sent for the snake charmer. If he was not too busy entertaining a crowd with his basketful of deadly if defanged cobras and his been (a musical wind instrument) and maybe a mongoose, he would come over and find the snake. Well, he had to because otherwise he would have had none, to entertain you with. So India earned a reputation of being a land of snake charmers. Today, there's a new breed of snake charmers around in Africa, Australia, the United States and India: usually comprising gung-ho young men or women, or couples who love snakes and do their best for them. This means, rescuing them from unsuitable locations and releasing them in areas more congenial to the reptiles. And since this is the age of information, the whole procedure is professionally videoed and made into a production complete with suitable background music scores.

So is this all really for self-aggrandisement? Not quite because their main intention is (a) to rescue the snake from its unsuitable accommodation and prevent it from being killed or biting someone. And (b), to educate the awed crowd on how to deal with snakes and avoid attracting them into their homes and from getting bitten. And if the worst happens — what to do

Some 50,000 to 60,000 people die of snakebites in India every year, many needlessly and most in our vast rural areas. Rice fields attract cobras like a Michelin-starred restaurant would a gourmand because of the number of rats, bandicoots and frogs they (both?!) harbour. So do homes where grain and other foodstuffs are stored and spilt in dark corners. People working in fields and those at home, cooking (usually women) are barefoot; a careless step on a cobra or Russell's viper lying low and well, that's that. Most rural folks don't have access to suitable hospitals where anti-venom is available or don't have the transport to take them there in time. Anyway, many of them believe that the traditional hocus pocus jiggery-pokery treatment suggested by the local witch doctor or traditional healer will cure them. It does not.

Actually, it's a sort of conundrum that only a country like India can throw up. While millions worship snakes and many live congenially along with them, there are equally those who will stone and beat them to death on sight regardless of whether they are venomous or not. Snakes are offered milk (which, they don't drink) and flowers and women and children can be seen going about their daily chores and games while cobras zigzag around them! Or else they are battered to death. It's not only the rural areas that may be affected. More and more snakes are being rescued from houses in cities — Bangalore, Chennai, New Delhi, and Mumbai — and states like Goa, especially during the monsoons, when water floods their holes and they seek shelter.

What the modern snake-rescuing stalwarts are trying to do is to put forward and

encourage a more rational and sensible attitude. It's better not to have cobras or vipers in the corner of your kitchen, or up in the rafters in the first place. So, ensure your home and its surroundings are clean and there is no malba piled up outside. Wear footwear in the fields (if possible) and mind where you put your feet. Stamp around when walking along paths, especially after dark — snakes are deaf but sense vibrations and will hasten away because they are more afraid of you than you are of them. The rescuers do go a bit goo-goo gaga over the snakes they manage to rescue but then, most snakes really are quite beautiful, what with their lacquered scales and stunning colour combinations. And no, they're not slimy. Remember all those (very expensive) snakeskin shoes, handbags, wallets and belts that once were in vogue (and a status symbol)? Till the Government banned the trade in snakeskins (in 1976, I think) those world champion snake-catchers, the Irulars of Tamil Nadu, used to meet the demand for snakeskins. The ban meant they lost their livelihoods until American herpetologist Romulus Whitaker (whom Indian snakes must be worshipping), suggested a simple solution. Let the Irulars catch snakes so they could be milked for their venom to make anti-venom, the only known cure for snakebite. After all, there was a dire shortage of anti-venom in the country. After a three-week stay (and donation of their venom), the snakes are to be released back into the wild. It's now



being found that apparently the anti-venom produced from say cobras in one part of the country may not be as effective if applied to a cobra snakebite received in another part of the country. So many more institutions and NGOs are required to set up snake-milking dairies and anti-venom labs all over the country! Then, there are those who think snakes make ideal pets. Burmese pythons were imported to the US (Florida was one dream destination) in large numbers and when they grew XXL

and Junior turned up missing from the breakfast table and were released into the Everglade swamps en masse, where they ran afoul of the local ecosystem and ate everything up. Worse they bred with Indian pythons and became twice as dangerous — able to attack from both the water and the trees. So much so, that the Irulars were summoned to catch them. It's stuff like this that really needs to be taught in (especially rural) schools all over the country. So much more useful and practical than Algebra!

Global South most bullish in September, India ranks 3rd in optimism: Survey

Global South "The markets most pessimistic about the future were Peru (14%), France (22%), Hungary (23%) South Korea (23%) and Türkiye (23%). Further, only 4 in 10 global citizens were upbeat about the future," the survey states. The Global South was most bullish during September, with India ranking third in optimism, according to the Ipsos What Worries the World global survey. The survey, which showed that optimism was the most buoyant in the global South, placed the markets of Singapore (82 per cent) at the first spot, followed by Indonesia (65 per cent) and India (65 per cent).

It stated that 'crime and violence' emerged as the world's highest concern, displacing inflation to the second spot. It also highlighted that worry around unemployment and inflation has further receded among urban Indians, and 65 per cent of the section believes that India is headed in the right direction. "Global South including India is the axis of growth and optimism, while some of the other markets are witnessing either economic slowdown or are impacted by the wars. Though all markets are impacted by the war, as we live in a global village, but some markets have re-



oriented their strategies to pump in growth by forging newer economic alliances to offset the impact of global crisis," said Amit Adarkar, CEO, Ipsos India. "PM Modi for instance has been visiting newer markets to enhance mutual trade ties with Saudi Arabia, Singapore, UAE, Brunei. India signed a major pact for semi-conductors with the US and Singapore," Adarkar

added. "The markets most pessimistic about the future were Peru (14%), France (22%), Hungary (23%) South Korea (23%) and Türkiye (23%). Further, only 4 in 10 global citizens were upbeat about the future," the survey states. The findings showed that global citizens were most worried about crime and violence with alarming levels of violence showing no signs of abating.

Can Kerala's policy to limit antibiotics misuse lead to reduced AMR?

With the successful launch of Operation Amrith (Antimicrobial Resistance Intervention for Total Health) to completely stop the over-the-counter sale of antibiotics without prescriptions by the end of 2024, Kerala has seen a sharp decline in the irrational use of antibiotics in people. According to media reports, there has been a sharp fall of ₹1,000 crore in the sale of antibiotics through hospitals and medical stores across Kerala in the last one year.

In early January this year, Kerala became the first State in the country to ban the over-the-counter sale of antibiotics without a prescription. By doing so, it was enforcing the Indian government's 2011 H1 rule to prohibit OTC sale of antibiotics without a prescription. The 2011 H1 rule prohibits the sale of all antibiotics — first, second, and third-line — without a prescription. Even when the Indian government in 2013 tweaked the rule to allow first-line antibiotics to be sold over-the-counter without a prescription, Kerala went ahead and enforced the 2011 H1 rule. The 2011 rule was modified by the Indian government to allow the sale of first-line antibiotics as a complete ban on OTC sales for all classes of antibiotics would have caused more harm than good — it would have greatly restricted access to even the first-line medicines, especially in remote places where doctors are not always available. Kerala was able to enforce the 2011 H1 rule as it has a high doctor-patient ratio, availability of doctors in most places, and the vastly different health care-seeking behaviour of the people in the State.

While Kerala has been able to enforce the 2011 H1 rule and reduce antibiotic misuse, no other State in India has enforced even the modified 2013 H1 rule. Despite having a good patient-doctor ratio, there are pockets in the southern States, including Tamil Nadu and Karnataka, where availability of doctors is an issue and where people cannot easily visit a doctor for various reasons.

"Kerala's proactive measures against antimicrobial resistance (AMR) are laudable but the fight against AMR cannot be limited to one State. AMR knows no borders, and Kerala's efforts will have limited impact in reducing antimicrobial resistance unless neighbouring States too adopt similar policies," says Dr. Abdul Ghafur, Consultant in infectious diseases at the Apollo Hospital in Chennai, and Coordinator, Chennai Declaration on AMR. "Kerala should consider adopting the modified H1 rule of 2013, which monitors only second and third-line antibiotics while allowing the sale of first-line antibiotics without a prescription to continue without strict monitoring. This approach would balance the need for antibiotic stewardship with healthcare access and economic considerations, ensuring that Kerala sets a practical and scalable example for other Indian States.

"Currently, Kerala imports at least 60% of broiler chicken, eggs and vegetables from neighbouring States, many of which have no AMR regulations in place for humans, animals and agriculture. According to the Kerala State Planning Board report 2022-2027, vegetable production in the State meets just 40% of Kerala's re-

quirement. Similarly, Kerala produces only about 42% of the eggs requirement while relying on other States for the balance. As per a June 2023 report in The Hindu, Kerala imports nearly 70% of broiler chicken from Tamil Nadu. "Studies, including my own research, have shown that these imported food products often carry antibiotic residues and drug-resistant bacteria, which enter the human gut and transfer their resistance genes to other bacteria. This creates a continuous cycle of AMR spread, which undermines Kerala's local efforts," he says.

With no other State enforcing the national regulation on antibiotic use in agriculture and poultry, the production and spread of antibiotic-resistant bacteria will continue to be a major problem in India. With Kerala relying majorly on other States for vegetables, eggs and broiler chicken, the State continues to be vulnerable to the continuous import of antibiotic-laden products. "

For Kerala's AMR efforts to have a lasting impact, there are two possible courses of action — Kerala should become self-sufficient and stop importing poultry, eggs and vegetables from other States or it can work to convince the neighbouring States to implement strict AMR action plans," says Dr. Ghafur. Other States will begin enforcing strict AMR policies only if they can be implemented.

The 2011 H1 rule, which prohibits the OTC sale of all classes of antibiotics, will not be implementable by other States. It is for this reason that Kerala has to step back and enforce the modified 2013 H1 rule to get the neighbouring States to enforce the rule and initiate the process of reducing antibiotic use in veterinary and agriculture. "The adoption of such a stepwise, adapt-

The Rann of Kutch evolved when waters of the Arabian Sea made incursions into this region 150-200 million years ago. Geological upheavals led to the rise of a landmass that cut off the Kutch basin from the sea. The Little Rann of Kutch lies at the end of the Gulf of Kutch and covers an area of 5,000 sq.km, chiefly in the Surendranagar district of Gujarat. For most of the year, this landscape consists of vast, barren and white salt flats. A striking alteration occurs when the monsoon sets in, and the Rann turns into a shallow wetland. About 75 elevated pieces of land turn into islands, called bets by the local Agariya and Maldhari communities.

The Little Rann of Kutch is home to the wild ass sanctuary, which is the only remaining habitat of the Indian wild ass (*Equus hemionus khur*), locally called khur. About 6,000 of these sandy and brown creatures live in this area. The terrain they occupy is harsh through most of the year, and the vegetation is dry and xerophytic. Khur, like donkeys and other members of the *Asinus* subgenus, possesses a remarkable ability to locate sustenance in desolate environments. Their digestive systems



able model will ensure that Kerala's efforts to combat AMR are not in vain and will inspire other States to follow suit," he says. "Once the modified H1 rule is successfully

implemented at least in the neighbouring States, these States can progressively work towards a more comprehensive ban on OTC antibiotic sales."

Surviving in India's salt desert

are adept at processing even the most arid vegetation. The khur has outlasted predators such as the cheetah and the lion, which were last spotted in this region in the 1850s. The khur is almost the size of a zebra, and lives for 21 years. Stable groups of khur consist of females and their young. Stallions tend to be loners, especially in the breeding season. On the flat terrain of the Rann, they are capable of bursts of up to 70 km per hour. Life can be tough for the mares, as gestation periods are long, 11 to 12 months, and concurrent lactation and pregnancy is sometimes seen. The khur have recently overcome a near-extinction event on account of diseases. The viral African Horse sickness, and Surra (caused by the protozoan parasite *Trypanosoma evansi* and spread by biting insects) had decimated many herds, and only a few hundred survivors were estimated in the 1960s.

Analysis of the mitochondrial DNA of the khur by scientists at the Government Vidarbha Institute of Science in Amravati has indicated a low level of genetic diversity. This is because of a genetic bottleneck caused by disease outbreaks, which

left only a small number of survivors. Thanks to persistent conservation efforts, the population of the khur has shown an upward trend in recent decades.

Conflicts with humans The salt marsh attracts human enterprise — 30% of India's salt comes from the Little Rann. Every year, a seasonal migration transforms this mirage-like landscape, bringing in 5,000 families and a surge of heavy vehicular traffic. This influx, coupled with extensive cattle grazing, poses a major threat to the delicate ecosystem and its wildlife. Irrigation canals that bring water to the southern rim of the Little Rann can also add salinity to the soil. Increased human presence, both for salt farming and agriculture, has led to a dispersal of the khur.

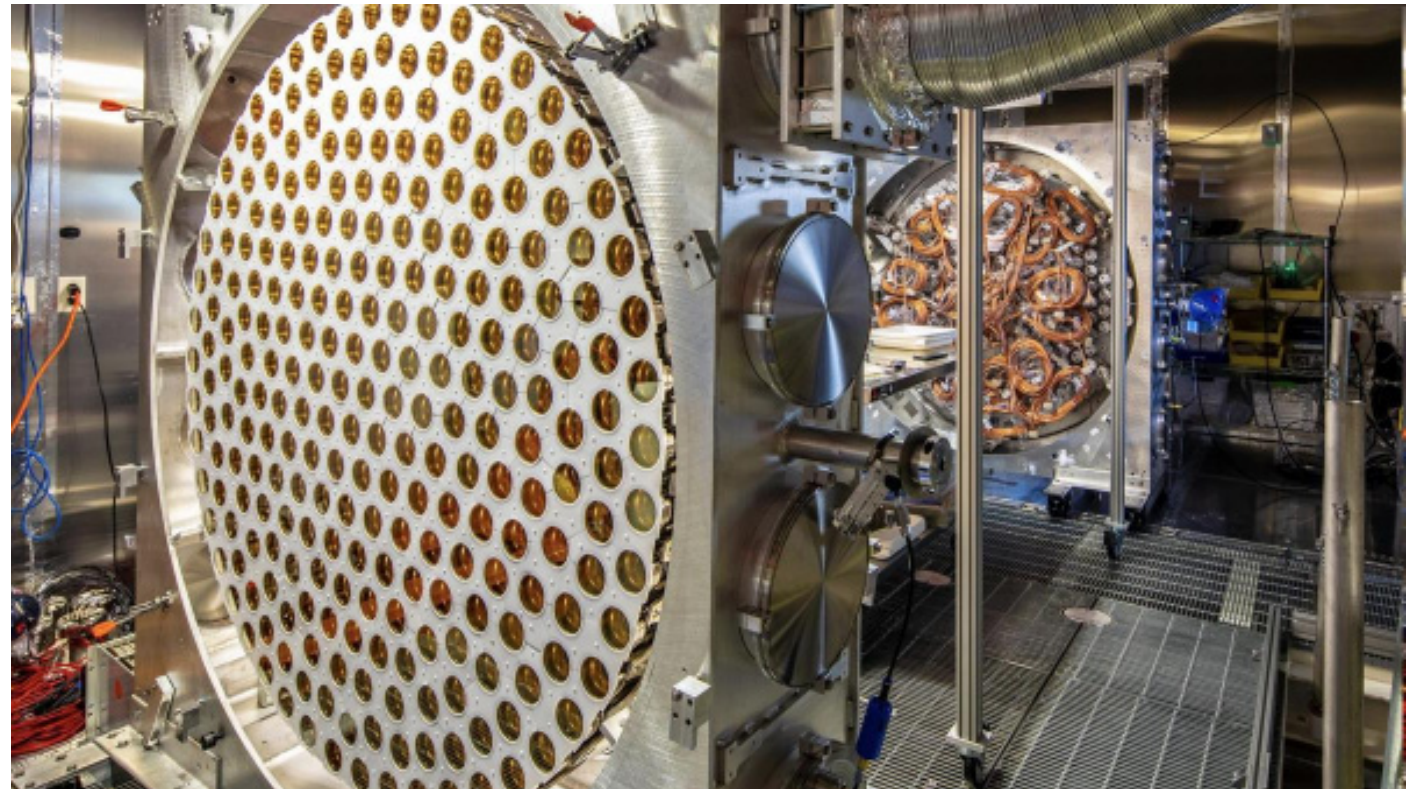
Herds are seen in adjoining areas of Gujarat and even Rajasthan. In the process, the wild ass has acquired the reputation of a crop raider. Other animals such as the nilgai and feral pigs cause more damage to crops, but the khur gets disproportionately blamed. A proper separation of the sanctuary's starkly beautiful landscape from human-dominated areas would be better for both.

Not just nothing, dark matter quests close in on dire 'neutrino fog'

They were representing about 200 of their colleagues involved in the design, building, and operation of the LUX-ZEPLIN (LZ) experiment located 1.5 km below the earth's surface at the Sanford Underground Research Facility in South Dakota, USA. Their news: their band of scientists had placed the tightest restrictions yet on the identity of the particles that made up dark matter. It was a null result: it didn't say what the particle's identity was but suggested which identities the particle couldn't have. And it didn't prompt disappointment from the physics community. Instead, it prompted resignation. Experiments similar to LZ — such as XENON-nT in Italy, PandaX-4T in China, and dozens of others around the world — have been turning up empty-handed for decades now despite heroic efforts. Dark matter and its hand-shake

Dark matter is the invisible stuff making up most of the mass in the universe, responsible for giving the cosmos its current looks. Stars, gas, and planets contribute only 15% to the universe's mass. The simplest contender for the make-up of dark matter is a previously unknown type of particle that doesn't interact with photons, and lives — i.e. without disintegrating, unlike most particles — for at least the age of the universe, about 14 billion years. This raises a question: does dark matter ever touch us? More precisely, can atomic nuclei and electrons scatter dark matter particles when they come close? Several theories of dark matter indeed predict this handshake between the visible and invisible. The issue is how we can detect it. A sail to catch the wind. In 1985, physicists Mark Goodmann and Ed Witten proposed a new strategy that has since mushroomed into an entire sub-field of experimental physics. (This is the same Witten of string theory fame. Thus the most theoretical of physicists has spawned an industry of experiments, proving the artificiality of divisions within physics. It is ironic that if dark matter is discovered in an underground laboratory, Witten will be awarded the Nobel Prize for something he has spent the least time on.) We are all familiar with the pancake shape of the Milky Way galaxy. This disk of stars is embedded in a ball of dark matter about 100,000 lightyears across. In the Solar System, every teaspoon of space contains about two protons' weight of dark particles. These particles blow as a wind into us from all directions at one-thousandth the speed of light.

Goodman's and Witten's (GW) idea was to catch this wind in a "sail" — a chunk of metal placed deep underground to shield against other radiation from space. If a nucleus in the metal were seen to recoil spontaneously, it must be the invisible bump of dark matter. In Ernest Rutherford's gold foil experiment, his team shone a well-understood beam at a mysterious target. GW's idea was the reverse: an enigmatic beam on a familiar target. The goal of the experiment is to measure two quantities: the unknown mass of the dark particle and the unknown rate at which atomic nuclei scatter dark matter particles. Physicists track this rate using a variable called the cross-



section. Consider the passage of light in vacuum, in glass, and in a piece of rock. In the first case a photon travels unimpeded; in the second it travels a good distance before being scattered by an atom; and in the third it is immediately stopped. We then say, for these three cases respectively, that the scattering cross-section is zero, small, and enormous. Transparency needn't apply to light alone: any medium can be quantifiably transparent or opaque to any particle type. GW's proposal would have measured the cross section for dark matter to scatter on nuclei down to 10-38 cm², already a staggeringly tiny quantity. It would imply that dark matter would have to traverse 10 billion km of rock before being stopped.

'The neutrino fog' These mousetraps for dark matter have since come a long way. Where GW proposed the use of a kilogram of metal for a day, today scientists expose tonnes of liquid xenon and argon to the dark-matter wind for years. The advantage of going bigger and running longer is that one can catch dark matter that is ghostlier, i.e. with a smaller cross section. As a result, we can now say with a straight face that we have ruled out dark matter-nucleus cross sections of 10-44 cm², a million times smaller than the GW limit. This is just the announcement LZ made in August. Could we go on making our detectors bigger and probe arbitrarily smaller cross sections? Not quite. Future detectors that will weigh tens to hundreds of tonnes will also register much more noise from the scatters of other ghostly particles, especially neutrinos forged in the Sun's interior and in the earth's atmosphere. In fact, PandaX-4T and XENONnT are already reporting this issue. The resignation following LZ's announcement is partly for this reason: scientists had hoped to reveal dark matter's identity before facing this "neutrino fog". Telling dark matter

and neutrino signals apart in future searches is a challenge that drives a great deal of research. Every last drop Scientists are actively pursuing other avenues of research, too. One is to detect dark particles that are lighter than atomic nuclei, for these would scatter feebly off the target nucleus. Picture a bug hitting a truck, which would hardly move the vehicle. The goal is to develop technology to perceive the slightest of energy transfers, which involves

building detectors using special materials that are currently restricted to the realm of condensed matter physics. Thus the hunt for dark matter, like that of the Calydonian boar, unites many talents. That is not surprising: the effort to decipher the natural world has always drawn every last drop of human ingenuity. Nirmal Raj is an assistant professor of theoretical physics at the Centre for High Energy Physics in the Indian Institute of Science, Bengaluru.

Epic Games accuses Samsung, Google of scheme to block app rivals

"Fortnite" video game maker Epic Games on Monday accused Alphabet's Google and Samsung, the world's largest Android phone manufacturer, of conspiring to protect Google's Play store from competition.

Epic said it would file a lawsuit in U.S. federal court in California alleging that a Samsung mobile security feature called Auto Blocker was intended to deter users from downloading apps from sources other than the Play store or Samsung's Galaxy store, which the Korean company chose to put on the back burner.

Samsung and Google are violating U.S. antitrust law by reducing consumer choice and preventing competition that would make apps less expensive, said U.S.-based Epic, which is backed by China's Tencent said. "It's about unfair competition by misleading users into thinking competitors' products are inferior to the company's products themselves," Epic Chief Executive Tim Sweeney told reporters.

"Google is pretending to keep the user safe saying you're not allowed to install apps from unknown sources. Well, Google knows what Fortnite is as they have distributed it in the past." Google did not immediately respond to requests for comment. Samsung said it planned to "vigorously contest Epic Game's baseless claims." Epic said Samsung's Auto Blocker was designed to blunt the impact of a U.S. verdict that Epic won against Google in December 2023 that is expected to force the company to make apps easier to obtain from other sources. Epic said it will also raise its competition concerns with regulators in the European Union, which has long scrutinized Google's business practices. Epic had earlier faced off with Google and Apple over their rules of charging up to 30% commission on app store payments. After getting banned for nearly four years, it was available again on iPhones in the European Union and worldwide on Google's Android devices last month.

OpenAI to remove non-profit control and give Sam Altman equity: Report

ChatGPT-maker OpenAI is working on a plan to restructure its core business into a for-profit benefit corporation that will no longer be controlled by its non-profit board, people familiar with the matter told Reuters, in a move that will make the company more attractive to investors. The OpenAI non-profit will continue to exist and own a minority stake in the for-profit company, the sources said. The move could also have implications for how the company manages AI risks in a new governance structure. Chief executive Sam Altman will also receive equity for the first time in the for-profit company, which could be worth \$150 billion after the restructuring as it also tries to remove the cap on returns for investors, sources added. The sources requested anonymity to discuss private matters.

"We remain focused on building AI that benefits everyone, and we're working with our board to ensure that we're best positioned to succeed in our mission. The non-profit is core to our mission and will continue to exist," an OpenAI spokesperson said. The details of the proposed corporate structure, first reported by Reuters, highlight significant governance changes happening behind the scenes at one of the most important AI companies. The plan is still being hashed out with lawyers and shareholders and the timeline for completing the restructuring remains uncertain, the sources said. The restructuring also comes amid a series of leadership changes at the startup. OpenAI's longtime chief technology officer Mira Murati abruptly announced her departure from the company on Wednesday. Greg Brockman, OpenAI's president, has also been on leave. Founded in 2015 as a non-profit AI research organization, OpenAI added the for-profit OpenAI LP entity in 2019 as a subsidiary of its non-profit, securing capital from Microsoft to fund its research. The company captured global attention with the launch of ChatGPT in late 2022, a generative AI app that spit out human-like responses to text queries, which has become one of the fastest-growing applications in history with over 200 million weekly active users, igniting a global race to invest in AI. Along with ChatGPT's success, OpenAI's valuation has skyrocketed from \$14 billion in 2021 to \$150 billion in the new convertible debt round under discussion, attracting investors such as Thrive Capital and Apple.

The company's unusual structure, which gives full control of the for-profit subsidiary to the OpenAI nonprofit, was originally set to ensure the mission of creating "safe AGI that is broadly beneficial," referring to artificial general intelligence that is at or exceeding human intelligence. The structure came into focus last November during one of the biggest boardroom dramas in Silicon Valley, where members of the non-profit board ousted Altman over a breakdown in communication and loss of trust. He was reinstated after five days with overwhelming support from employees and investors. Since then, OpenAI's board has been refreshed with more tech executives, chaired by Bret Taylor, former Salesforce co-CEO who now runs his own AI startup. Any corporate changes need



approval from its nine-person non-profit board. The removal of non-profit control could make OpenAI operate more like a typical startup, a move generally welcomed by its investors who have poured billions into the company. However, it could also raise concerns from the AI safety community about whether the lab still has enough governance to hold itself account-

able in its pursuit of AGI, as it has dissolved the superalignment team that focuses on the long-term risks of AI earlier this year. It's unclear how much equity Altman will receive. Altman, already a billionaire from his multiple startup investments, has previously stated that he chose not to take an equity stake in the company because the board needed a majority of disinterested

directors with no stake in the company. He has also said he has enough money and is doing it because he loves the work. The new structure of OpenAI would resemble that of its major rival Anthropic and Elon Musk's xAI, which are registered as benefit corporations, a form of for-profits that aim to promote social responsibility and sustainability in addition to making profits.

LinkedIn goes local, adds 10 new language options, including Telugu

New Delhi: Leading professional networking platform LinkedIn on Thursday announced it has added 10 new language options, including four Indian regional languages. The new language options are Vietnamese, Greek, Persian, Finnish, Hebrew, Hungarian, along with four Indian regional languages — Bengali, Marathi, Telugu and Punjabi. The new additions bring LinkedIn's support to five Indian languages, including Hindi, it said in a statement. We're excited to announce that LinkedIn is now more inclusive and accessible than ever. We've expanded our language support to include 10 new languages, each representing a vibrant part of our global community," said Chief Product Officer Tomer Cohen. LinkedIn's member base in India has surpassed 135 million, with engagement rates growing at 20 per cent year-over-year. India stands as LinkedIn's second-largest and fastest-growing market. By adding these languages, LinkedIn aims to bridge language barriers on the platform, allowing more people to establish deeper professional identities and engage more meaningfully with their networks. "With these additions, our platform now supports a total of 36 languages, helping professionals around the



world connect, communicate, and collaborate more effectively," said Cohen. Last month, the Microsoft-owned platform appointed Kumaresh Pattabiraman as new Country Manager and Product Head in India. According to Pattabiraman, LinkedIn has evolved from being just a jobs platform to becoming a dynamic global community where professionals connect for jobs, learning, networking, and knowledge

sharing. India is among the top five countries with the fastest-growing AI talent and has the highest AI skill penetration globally, and LinkedIn members are using AI skills three times more frequently than the global average. LinkedIn recently launched a new video experience in India, in a bid to tap into one of the fastest-growing markets with uploads growing 60 per cent year-on-year in the country.