

The proportion of women workers participating in the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has touched a 10 year high in the financial year 2022-23. According to the latest statistics available with the Union Rural Development Ministry, 57.8% of the workers who used the scheme this year were women, their highest level of participation since 2012-13.

Of the 15 States (Kerala, Bihar, Tamil Nadu, Maharashtra, Rajasthan, Andhra Pradesh, Madhya Pradesh, Karnataka, Chhattisgarh, Telangana, Odisha, Jharkhand, Assam, Gujarat, and Uttar Pradesh) that The Hindu reviewed, 14 States reported an upward trend in women's participation. The only exception is Kerala, where the drop is miniscule. For the past five years, in Kerala and Tamil Nadu, women's share in the MGNREGS workforce has been hovering between 85% and 90%.

In a world first, six children with rare disorders caused by deletions in the genomes of their mitochondria — the cellular compartments essential for energy generation — have been successfully treated with donor mitochondria from their mothers. Doctors transferred healthy mitochondria into the children's haematopoietic stem cells, which give rise to blood cells. After the treatment, tests showed that some of the children were stronger and caregivers said they spent more time awake and in play.

An intriguing anomaly in data gathered by the Large Hadron Collider (LHC) that raised hopes of a new elementary particle has turned out to be a fluke. In 2014, LHC scientists at CERN, Europe's particle physics laboratory near Geneva, Switzerland, discovered that some massive particles decay more often into electron-positron pairs than into muon-antimuon pairs. This imbalance defied the standard model of physics, which predicts both pairs to occur with roughly the same frequency.

Global vaccination rates are at their lowest since 2008. As the pandemic disrupted health services and cancelled vaccination campaigns, many children missed out on the shots meant to protect them from serious diseases. Even before 2020, vaccination rates had been stagnating. This is partly due to safety concerns, mistrust in public health institutions and politicised perceptions of vaccines — issues that the pandemic exacerbated.

After designing robots that move in ways that mimic animal movements such as walking and swimming, scientists are now considering how to design robots that mimic the gliding motion exhibited by flying snakes. Researchers from the University of Virginia and Virginia Tech explored the lift production mechanism of flying snakes, which undulate side to side as they move from the top of trees to the ground to escape predators or to move around quickly and efficiently (Physics of Fluids).

One family of plants that humans in all parts of the world are closely associated with are the cucurbitaceae. This diversified family

WITH A LARGE START-UP ECOSYSTEM, INDIA IS A BIG MARKET FOR CLOUD SERVICES

1. AWS or Amazon Web Services, one of India's largest providers of cloud-based services, has provided start-up credits that allow aspirant start-ups to use a suite of services from computing, storage, and hosting for free.
2. **Background:** India has the world's third-largest start-up. Over the last 5 years, the number of registered start-ups in India has grown from 452 in 2016 to 84,012. While start-ups in India span a variety of industries from financial tech, gaming and health tech, several are based in the cloud — the servers and data storage accessible via the internet. Data-storage companies are offering a slew of incentives to draw and retain these cloud-based start-ups on their platforms.
3. **Cloud Computing-**It is the on-demand delivery of IT resources (computing power, storage, and databases) over the Internet with pay-as-you-go (pay for a service before you use it) pricing, from a cloud provider like AWS.
4. **Who is using Cloud Computing-**Organisations of every type, size, and industry are using the cloud for a wide variety of use cases. For example, video game makers are using the cloud to deliver online games to millions of players around the world.
5. **Benefits of cloud computing: Agility:** The cloud gives one easy access to a broad range of technologies so that one can innovate faster and build nearly anything that one can imagine. **Elasticity:** With cloud computing, one does not have to over-provision resources upfront to handle peak levels of business activity in the future. **Cost savings.** Deploy globally in minutes.

WHAT LIES AHEAD IN 2023- A NEW SOCIAL MEDIA, METAVERSE, AND MORE AI

1. Around the same time last year (December 2021), India was on the verge of a major technological shift — the transition to 5G. Because the year 2022 has only reinforced our reliance on technology, we will try to figure out what big tech breakthrough awaits us in 2023.
2. **Trends to look out for in 2023:** More intelligent, more pervasive AI-Chat GPT has shown the world that conversational artificial intelligence (AI) is an idea whose time has come. Chat GPT (Generative Pre-trained Transformer) is an Open AI chatbot that was released in November 2022. It is based on top of Open AI's GPT-3.5 family of large language models and is customised using both guided and adaptive learning techniques.
3. **Time for post-social:** As Facebook's user base becomes older by the year, younger users are preferring new platforms like Discord, where conversations happen more in closed groups than in virtual town squares. The evolution of such platforms is already challenging traditional methods of monetising social media engagement.

PUNJAB RENAMES 56 GOVERNMENT SCHOOLS WITH CASTE TAG

1. The Punjab government has ordered to rename of 56 state-run schools that had reference to any caste or community in their existing name. An analysis of the list shows that the majority of 28 schools had 'Bazigar' attached to their names, mainly because they are in colonies inhabited by the population from the Bazigar community.
2. Bazigar is a notified Scheduled Caste community in Punjab. The Punjab government's move to remove reference to caste or community from school names assumes significance in a state where casteism remains deep-rooted, especially in rural areas where there still exists separate gurdwaras and cremation grounds for people from Scheduled Castes.
3. The schools have now been renamed either after the village they are in, or after some local hero, martyr, or a known personality. For instance, the Government Primary School, Balmiki Mohalla in Block-3 of Samana (Patiala) has been renamed as GPS Bhim Rao Ambedkar Mission.

TIDAL DISRUPTION EVENT

1. Telescopes operated by the National Aeronautics and Space Administration (NASA) recently observed a massive black hole devouring a star. The astronomical phenomenon of the destruction of a star by a black hole is formally called a tidal disruption event (TDE).
2. **About TDE:** A tidal force is a difference in the strength of gravity between two points. If the tidal force exerted on a body is greater than the intermolecular force that keeps it together, the body will get disrupted. During a TDE, the tidal force of a black hole disrupts the star in the

includes watermelons, melons, cucumbers, pumpkins, and squashes. Less widely cultivated cucurbits include the bitter melon, wax gourd, snake melon, sponge melon, and ridge gourd. Cucurbits are usually hairy climbers, and male and female flowers are separate. Their fruit — which comes in a wide range of colour, flavour, shape, and size — are valued as components of healthy diets.

They grow well in India's geoclimatic. The sowing season is usually from November to January, with fruits ripening in the summer. The extremely wide range of flavours and sizes among the cucurbits, from sweet watermelons to the bitter melon, are a result of shuffling of the contents of their mosaic like chromosomes. Thus, a cucumber has seven chromosomes and a melon has 12, even though they belong to the same genus (Cucumis).

India has abstained from voting in the UN General Assembly on a resolution that asked the International Court of Justice (ICJ) for its opinion on the legal consequences of Israel's "prolonged occupation" and annexation of the Palestinian territory. The draft resolution "Israeli practices affecting the human rights of the Palestinian people in the Occupied Palestinian Territory, including East Jerusalem" was adopted on Friday, with 87 votes in favour, 26 against and 53 abstentions, including by India.

From January 1, GST would not be payable on housing units rented to the proprietor of a proprietary concern if such accommodation has been rented in his individual capacity to be used as his residence only, the CBIC has said. However, the proprietor would be liable to pay GST on reverse charge mechanism basis at 18% in case such accommodation is being used for his proprietary concern. The Central Board of Indirect Taxes and Customs (CBIC) also notified amendments in GST rates effective from January 1, 2023 for certain goods and services, as per the recommendations of the GST Council in its meeting on December 17.

Janaki Ballabh, a veteran Indian translator, and writer who was among few Indians who lived and worked in China during some of its most turbulent moments, from the late 1950s to the years right after the Cultural Revolution, passed away in Beijing on Friday. He was 94. Mr. Ballabh spent years working for the Foreign Languages Press in Beijing, translating a range of Chinese works into Hindi. He continued translations well into his retirement and beyond turning 90, until worsening health came in the way.

vicinity. While about half of the star's debris continues its original path, the other half is attracted by the black hole's gravitational pull.

3. The gradual growth of this material bound to the black hole produces a short-lived flare of emission, known as a tidal disruption event. The event is formally called AT2021ehb and took place in a galaxy with a central black hole about 10 million times the mass of our sun. TDEs are attractive to astronomers because of their observability and short duration, and the opportunity to study the impact of black holes' gravity on materials around them.

VIBRANT VILLAGE PROGRAMME(VVP)

1. Union Home Minister asks border-guarding forces to strengthen Vibrant Village Programme and ensure welfare programmes are implemented. Key points highlighted by HM: Soldiers on the ground and fencing were necessary but borders can be truly secured when "we create villages with people who are concerned for the country".
2. **About the VVP:** It was announced in the 2022-23 budget with an aim to enhance the infrastructure in border villages along India's border with China. Activities include Housing, Tourism promotion, Road Infrastructure, Renewable Energy, livelihood generation etc. Promotes community knowledge in the border management. Other similar initiatives: Border Area Development Programme (BADP); Border Infrastructure and Management Scheme etc.

NCW ISSUES MEMO ON PREVENTION OF SEXUAL HARASSMENT

1. The National Commission for Women (NCW) has asked all states to ensure that coaching centres and educational institutes strictly enforce the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.
2. **The Commission has also asked:** To conduct awareness programmes on the Act among all stakeholders in order to ensure that cases of sexual harassment at work are reported responsibly and effectively. To ensure that these coaching centres are registered with the relevant authorities and a background check is conducted on those responsible for running the centres.
3. **The Sexual Harassment of Women at Workplace Act, 2013: Background:** The Vishakha Guidelines were issued by the Supreme Court (in Vishakha and others v. The State of Rajasthan 1997) with the primary goal of creating a framework for workplace sexual misconduct redress and grievance processes. The Act of 2013 was motivated by these guidelines.
4. **About the Act of 2013:** Objective: Its goal is to safeguard women's rights at work and make the workplace a safer place for them. It also serves as a platform for both avoiding and addressing problems.
5. **Provisions of the Act:** It is applicable to all sectors including organised and unorganised sectors. It defines a workplace as an extended space by covering any place visited by an employee during his or her employment which would include transportation, etc. Internal Complaint Committee (ICC): Any corporation or organisation with more than 10 employees to establish an ICC to hear and address sexual harassment allegations.
6. Local Complaint Committee in each district where there are less than 10 workers. Duties of employer: The employer must disclose the legal repercussions of engaging in sexual harassment-related activities, as well as the composition of the ICC. Penalties: If an employer fails to comply with the regulations, a penalty of Rs. 50000 may be imposed, and the licence may be revoked.



"Your efficiency is inversely proportionate to the choices you have."

DR. KHAN
(KSG)