

KERALA CALLING



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NIPMR

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Kerala's Commitment to Inclusive Rehabilitation

In this issue, we highlight Kerala's dedication to inclusivity, rehabilitation, and progressive governance, with the National Institute of Physical Medicine and Rehabilitation (NIPMR) leading the way. NIPMR stands as a model of Kerala's commitment to empowering the differently-abled. Recently recognised by the United Nations, this institution's holistic approach is transforming lives through advancements in assistive technology, virtual reality rehabilitation, and community outreach. NIPMR ensures that recovery extends beyond treatment, offering resources like motion analysis labs and aquatic therapy pools.

Central to NIPMR's mission is the belief that every individual has the right to a life of dignity and opportunity. The institute's assistive technology programmes provide customized, affordable prosthetics and mobility aids that help people lead more independent lives. Furthermore, VR-based therapy, particularly for stroke patients and children with developmental challenges, has redefined rehabilitation, making it more engaging and impactful.

Kerala is driving substantial improvements in public services, local governance, and industrial growth. Recent Local Body Adalats have cut red tape and resolved thousands of long-standing issues, delivering streamlined, transparent services to citizens. From easing property tax burdens to simplifying building permits, the government's approach has been widely appreciated.

Moreover, the state's industrial progress is equally notable. Kerala has become a prime destination for investors, thanks to business-friendly reforms. The Industries Department's efforts have spurred growth in both large enterprises and MSMEs, creating jobs and fuelling economic development. This year, Kerala leads the nation in the Ease of Doing Business rankings, standing as an example of responsible, sustainable progress.

As we look ahead, Kerala remains focused on uplifting its people and building a future-oriented, inclusive society. We invite readers to explore this issue to see how these initiatives are shaping a stronger tomorrow for all.

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KERALA CALLING

OCTOBER 01, 2024_VOL_44_No.12

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Photo Credits

I & PRD PHOTOGRAPHY DIVISION, FACEBOOK, FREEPIK, UNSPLASH & GOOGLE



52 Pages including Cover

Kerala Calling October 01, 2024_VOL_44_No.12

Views expressed in the articles published in Kerala Calling are not, necessarily, those of the government. Kerala Calling welcomes free expression of divergent views and exchange of ideas through its pages.

ENQUIRIES

Editorial : 0471 251 8648

Subscription : 0471 251 7036

TO SUBSCRIBE

Send Rs. 120 as money order to The Director, Information & Public Relations Department, First Floor, Secretariat Annexe, Thiruvananthapuram - 695 001.

The subscription amount will also be received at the State Information Centre, Press Club Building, Thiruvananthapuram. Phone: 0471 251 8471 and at all District Information Offices.

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EDITORIAL MATERIALS

Articles/features appearing in this magazine are either commissioned or assigned. Nevertheless, other articles are also welcome. A maximum of 750 word is appreciated. Such items should be addressed to The Editor, Kerala Calling, First Floor, Secretariat Annexe, Thiruvananthapuram, Pin 695 001.

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Industrial Revolution

Kerala's Industrial Revolution

When Kerala advanced from a modest 15th to 1st in the national Ease of Doing Business ranking within a year, many thought it was simply a stroke of luck. But this undeniable achievement, powered by strong private sector collaboration, has made Kerala Numero Uno—proving the state's suitability for enterprise and making the success even sweeter.

P. Rajeev
Minister for Industries



The Department for Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industry determines the ease of doing business ranking of all states and Union Territories of the nation, based on certain criteria and feedback from private entrepreneurs. Based on the final scores and consumer opinion polls, the states are divided into four categories: Top Achievers, Achievers, Aspirers, and Emerging Business Ecosystems. Though the ranking system was started in 2014, Kerala began to partake in it in 2016. DPIIT sets the Business Reforms Action Plan based on the measures that should be taken by different departments to facilitate easy setup and hassle-free conduct of business. This is passed on to the states yearly. Out of the 352 reforms recommended in 2022, Kerala implemented 340 of them. Thus, Kerala came first in 9 categories. Piyush Goyal, Union Minister for Commerce and Industry, handed over the prize to Kerala for achieving the top position in the Top Achievers category. In 2021, Kerala made a huge leap by jumping 13 points and reaching the 15th position in the Ease of Doing Business ranking. We scored 75.49%

points too.

A Step-by-Step Approach to Betterment

When the current government came into power, we made it a point to listen to all the stakeholders. In the first phase, several meetings were held with industrialists and investors. Talks were held with FICCI, CII, trade unions, etc. We were able to understand their hopes and apprehensions and gave assurance to resolve all issues and take our industrial sector forward. Within one year, this government was able to fulfil that promise. Non-red category enterprises with a capital investment below Rs 50 crore were allowed to set up business and function for three years with a simple K-swift acknowledgment. The government also passed a law to grant a composite license to enterprises with over Rs 50 crore capital investment within just 7 days of application. We also set up an integrated inspection system by combining five departments through the K-CIS portal. This helped to prevent corruption and promote transparency. This system received an overwhelming response from entrepreneurs, and more than 5 lakh enterprises have registered in it. Around 22,000 complaints have been resolved through this system. Grievance Redressal Committees with powers of a civil court were set up at the district and state levels for the timely resolution of complaints from entrepreneurs. This mechanism ensures that the designated officers pay a penalty or face disciplinary action if they fail to provide service to the entrepreneur. A first-of-its-kind initiative in the country, this mechanism has given a huge boost of confidence to entrepreneurs. The completely digitalized system ensures the closure of cases within 30 days of receiving complaints.

The technology clinics set up in every district are yet another measure by the Industries Department to find solutions to issues faced by entrepreneurs and handhold them to success. Experts in technology, management, law, chartered accountancy, marketing, etc., guide entrepreneurs through these clinics. A toll-free number also operates under the Industries Department to clear entrepreneurs' doubts. More than 20,000 queries from entrepreneurs have been answered through the Invest Kerala helpdesk. The Meet the Minister programme was also held to resolve investors' pending issues.

Drawing Investors - The Key to Growth

Along with resolving issues, earnest efforts are being made to attract huge investors to Kerala. The Meet the Investor programme attracted investments totalling Rs 15,000 crore to the state. Over 30 companies, including IBM, Synthite, and Athachi, invested in Kerala. More than 50% of the employees of Tata Elxsi now operate from Kerala. TCS is building a massive campus worth Rs 1,200 crore to offer IT, ITES, and data processing services. Several companies, such as dSpace, Nitta Gelatin, Safran, Acsia Technologies, Dhathri, Vensure, Plant Lipids, Craze Biscuits, Leverage Group, and Nesto, have

announced their investment plans, and some have kick-started their projects.

The idea of private industrial parks stemmed from the thought of how to make good use of private land for industrial purposes. As of now, approval has been granted to 28 private industrial parks. The government grants a maximum of Rs 3 crore to the park by giving up to Rs 30 lakhs per acre for infrastructural development. Two parks have already been inaugurated.

The campus industrial parks, envisioned by the government to encourage entrepreneurship among the student community and strengthen the link between educational institutions and industrial units, are a novel venture. The government provides up to Rs 1.5 crore to each estate for infrastructural development. This project will underscore the pathway to Kerala's future industrial growth.

Small is Indeed Beautiful

The government realised that along with large-scale industries employing state-of-the-art technology, small and medium-scale enterprises will also flourish in our state. The unprecedented success of the Year of Enterprises project proved exactly this. The project was adjudged the best practice of the year in a meeting chaired by Prime Minister Narendra Modi. In the last two and a half years, we were able to start 2,99,326 MSMEs in Kerala. The outcome - Rs 19,402.47 crore worth of investment and 6,36,520 new employment opportunities. It is also notable that more than 93,000 women became entrepreneurs through this project. 1,153 executives were appointed, and 1,034 helpdesks were created at the Panchayat level to facilitate MSMEs' setup. A loan of Rs 10 lakh

Invest Kerala
Toll-free number
1800-890-1030

was given to MSME entrepreneurs at an interest rate of 4%.

All these milestones helped create positive feedback about the government among large industrialists and medium and small-scale investors. The report published by the State-Level Bankers Committee sheds more light on this encouraging trend. The total loan amount for MSMEs in the last financial year is Rs 80,210 crores. If the figures from Kerala Bank are also added, it amounts to a whopping Rs 1 lakh crore. This is a sharp spike from Rs 59,971 crores in 2021, mainly driven by the manufacturing sector.

Mission 1000, a project of the Government of Kerala to scale up 1,000 MSMEs into Rs 100 crore turnover businesses, is ambitiously forging ahead. The Department of Industries has also set up an MSME insurance policy to protect MSMEs from any unforeseen emergencies that may affect their business. The Government of Kerala has formed a 'Kerala brand' initiative



TVS Industrial & Logistics Parks expands into Kerala with state-of-the-art facility in Kochi



Keltron Component Complex's new plant is the country's first supercapacitor manufacturing facility.

to give international quality to all the goods and services from the state and thereby find an international market for them. Coconut oil is the first product to have the Kerala brand. So far, six products have been granted the Kerala brand license.

To promote entrepreneurship and acknowledge their contributions, the government decided to confer the Industries Award to enterprises. As part of this, awards were presented this year to the best-performing enterprises at the district and state levels. Apart from manufacturing, service, and trade businesses in medium, small-scale, large, and mega industrial categories, the performance of export businesses, production startups, and businesses owned by women, scheduled caste, scheduled tribe, and transgender sections were also acknowledged. The 'Make in Kerala' project was planned to manufacture imported goods indigenously. A Memorandum of Understanding was reached with Open Network for Digital Commerce to help MSMEs and retail entrepreneurs enter the online market.

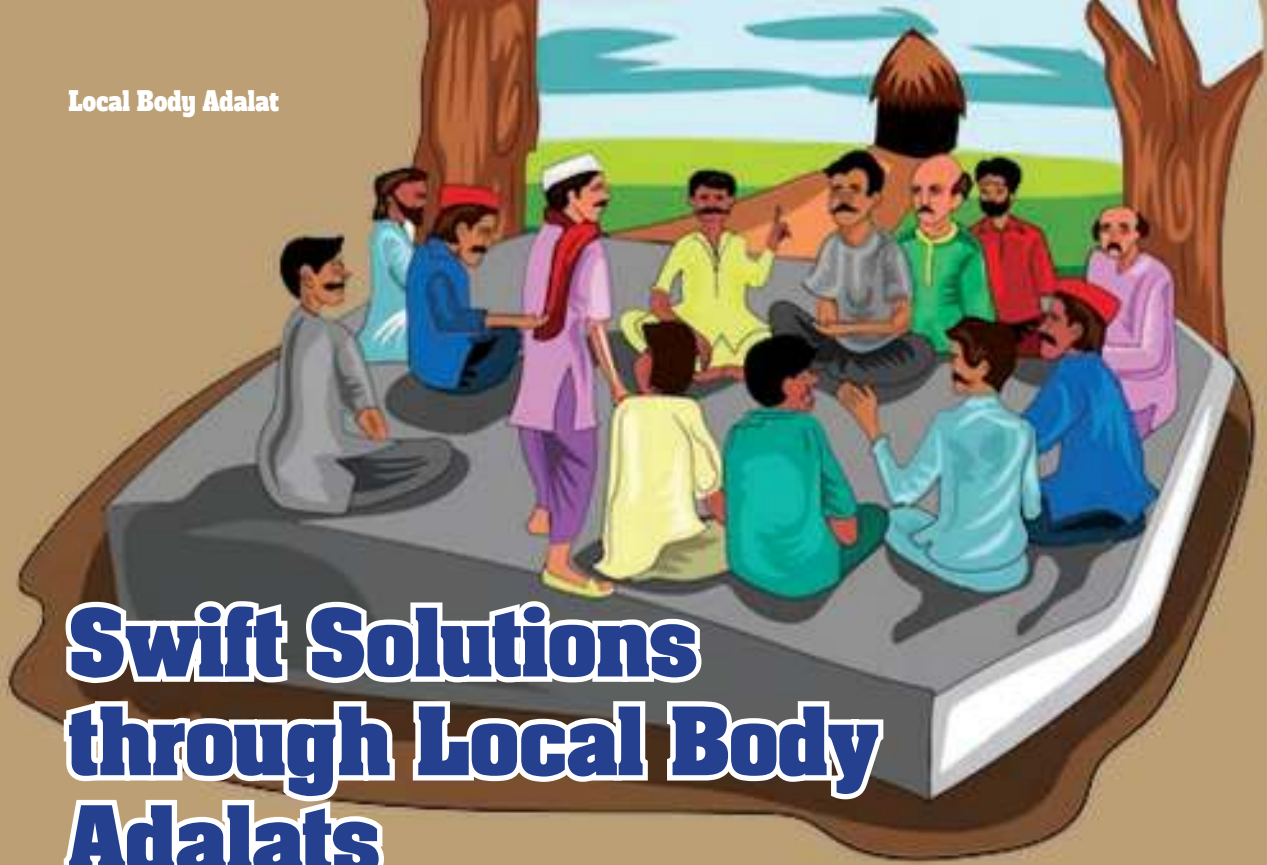
Gone are the days when investors and entrepreneurs in Kerala had to go to every government office and wait for the mercy of officers. This government was able to provide legal and technical support to entrepreneurs to establish a business. Kerala was able to make strides in the Ease of Doing Business ranking

because we mustered the support of entrepreneurs. Kerala, the first to adopt the policy of 'Responsible Investment, Responsible Industry,' is increasingly becoming the most suitable location for green investment and an international destination for responsible investment. The Industrial Policy introduced by our government has turned Kerala into a haven for environment-friendly and less-polluting industries. The government is moving forward in this direction by introducing a new industrial policy and logistics park policy and amending the land lease policy. It is also very optimistic that the industrial sector has welcomed the industrial policy with open arms.

Towards A Brighter Future

Now, Kerala is gearing up for the Global Investors Meet to be held on February 21 and 22, 2025. We have already organized India's first international Gen AI Conclave, Kerala's first international Robotics Roundtable Conclave, Maritime and Logistics Roundtable, Food Tech Conclave, and International Biotechnology and Life Sciences Conclave. Roadshows with investors have been conducted in cities like Chennai, Bangalore, and Hyderabad. More roadshows will be conducted in New Delhi and different countries. In addition, several sectoral conclaves will also be held in the run-up to the Global Investors Meet.

Since we obtained permission for the ambitious Bengaluru-Kochi industrial corridor, the government will strive to complete construction as soon as possible. Let us celebrate in unison this incredible achievement of Kerala in the Ease of Doing Business ranking. As we have been persistent in improving our position in the national ranking, I promise that we will continue our march toward progress.



Swift Solutions through Local Body Adalats

M.B. Rajesh
Minister for Local Self Governments





The Local Body Adalats, led by the Minister for Local Self-Governments, were held successfully across 14 districts and three Municipal Corporations. This initiative streamlined Local Self-Government services and resolved grievances efficiently. The public response exceeded expectations as many long-standing issues were cleared of bureaucratic red tape. Several resolutions have the potential to be implemented state-wide, with legal amendments in progress to support them

Chief Minister Pinarayi Vijayan inaugurated the first of the Local Body Adalats on August 16 in Ernakulam. The final Adalat in this series was held in Wayanad on October 1, marking the conclusion of a highly impactful one-and-a-half-month-long exercise. Most grievances presented at the Adalats were indeed solvable within the existing legal framework, but for various reasons had been left pending for far too. The Adalats proactively streamlined outdated procedures, bringing relief to petitioners and paving the way for broader systemic reforms.

Applications were accepted online up to five days before each Adalat, with decisions being made on-site by a tiered structure of sub-district, district, and state committees, including the Government Adalat Committee led by the Minister. For complaints lodged in person on the day of the Adalats, there was a commitment to resolve them within two weeks. Out of the 17,799 complaints submitted, a remarkable 16,767 have been resolved—more than 92% of the total. Many of these decisions have already been implemented, with only 1,032 complaints remaining, primarily from the Wayanad Adalat. To ensure the timely enforcement of these rulings, a dedicated monitoring cell operates out of the Principal Directorate and the Joint Director's Offices of the Local Self-Government Department.

The final report is expected by October 15, with a participatory review scheduled across three zones to assess the initiative. Special Adalats will also be held to clear backlogs, including those related to municipal corporations, to complete all pending matters by November 15.

It is important to note that the Adalats were never a platform for legitimizing illegal activities. Instead, they addressed technical challenges with impressive efficiency. A key transformation brought about through this initiative has been the shift in the department's mindset—moving from a bureaucratic process to one that prioritises the swift resolution of public grievances within the bounds of the law. Officials who are still resistant to this change have no other option but to adapt soon.

Several important decisions and orders were issued in response to various cases presented during the Adalats. Below are some of the most notable ones:

- For houses with an area of up to 100 sq. meters built on land up to two cents within Corporation or Municipal limits with a road of at least three meters in front, the bylaws will be amended to reduce the front yard to just one meter. This exemption applies to families with no other land suitable for residential purposes and is granted under specific conditions.
- Penalty interest on property tax will be waived until the year 2024-25 for houses up to 80 square meters used as personal residences. These families only need to pay their tax arrears.
- Houses smaller than 60 square meters will not be subject to property tax, even with a UA number. However, buildings with UA numbers larger than 60 sq. meters are currently taxed three times. The government had previously exempted residential houses with less than 60 square meters area, and this relaxation will now also apply to homes with UA numbers.
- Building permits will not be cancelled solely due to a difference in the area of the plot, if all other building conditions are met. This exemption falls under Section 19 (5) of the Kerala Building Rules.
- Buildings constructed on plots bordering streets less than 75 meters long and closed on one end will be allowed to reduce the distance between the street and the building to one meter,



with the consent of all affected property owners. The necessary amendment will be made to Rule 23(2) of the Kerala Building Rules.

- National Highway Service Road access permission will no longer be required for residential house construction. Building permits and numbers can now be obtained from local bodies without this requirement, a change brought about by complaints in various district adalats.
- Local body Secretaries may permit the strengthening of buildings partially demolished for road widening without increasing the area or number of floors. The premises need not be surrendered free of charge to qualify for this exemption. Rule 66 of the Kerala Building Rules will be amended to reflect this change.
- The definition of “low-risk structures” in the Kerala Panchayat Building (Regularisation of Unauthorised Construction) Rules, 2024, will be revised, setting clear limits on building violations for each use. For multi-use buildings, regulations will be modified to ensure each portion adheres to these limits.
- The common practice of erecting temporary structures for protection from the sun and rain, such as roofing sheets on the sides, will not be considered separate construction. This exemption, subject to certain conditions, will be incorporated into Rule 23(1) and 23(2) (bf) of the Kerala Building Rules. The exemption will be granted only if it is ensured that there are no illegal factors involved, like the sheets extending to the road. No additional floors or prohibited uses will be allowed under these structures.
- Even if houses built under the LIFE Housing Scheme receive a UA number, the final instalment will still be sanctioned. A general

directive has been issued to this effect.

- Ownership transfer of houses with UA numbers will now be permitted, subject to the original terms and conditions. The technical hurdles in changing ownership will be addressed, and the new owner will inherit the same obligations as the previous one. Building numbers and owner information will be updated as part of property tax collection.
- Houses in long-term residence areas, such as Scheduled Caste sanctuaries, will not be denied a house number due to lack of title or tax receipt. In tribal settlements (Ooru land) and revenue land, UA numbers will be granted under certain conditions, and the K Smart system will be updated to allow for this concession.
- A general directive has been issued to ensure that land purchased by the Local Self-Government for housing and given to beneficiaries is suitable for construction.
- A special state-level committee will be appointed to address cases where families were granted financial aid for house construction but failed to do so and are now directed to repay the fund and interest. The committee will consider the duration of benefit and the family’s circumstances before deciding.
- Conditional concessions will be granted for houses built under the LIFE scheme that are irreparably damaged by natural disasters during construction.



Notable Outcomes

The Adalats resolved numerous individual grievances, with several decisions poised to impact thousands across the state. In cases with broader implications, state-wide orders have been issued to prevent similar issues, with legislative amendments under consideration if required.

- A significant ruling benefited Ettumanoor's Sanjos Special School. Sister C. Anupama, representing the school, requested an exemption from supervision charges for fitness certificates, essential for special schools, old age homes, and shelters for the destitute that operate without fees. The Adalat's favourable ruling extends this exemption to all charitable institutions meeting government standards. Sister Anupama, moved by the decision, pledged that the savings would support further charitable activities.
- Another critical case saw a breakthrough in amending marriage records. Sooraj had sought correction in a marriage certificate—previously impossible despite similar amendments allowed for birth and SSLC certificates. The Adalat's decision now enables such corrections based on gazette notifications, easing processes for citizens facing issues with official records, especially for visa applications.
- In a heartening outcome, the Kollam Adalat directed the urgent construction of a bridge for a differently-abled child and his family. Libna, a mother of three, described the hardship of transporting her eldest son, who battles cancer and has lost a leg, to medical appointments without a bridge across the stream by their house. Recognising her plea, the Adalat invoked Section 213 of the Panchayati Raj Act to ensure immediate construction. The Anchal Panchayat President committed to swift action, with Libna expressing heartfelt gratitude for the state's intervention.

- The maximum travel distance to an emergency exit in buildings will be increased to 45 meters, up from the current 30 meters, as per the latest National Building Code amendment.
- Building tax on buildings constructed by ex-servicemen for community programs has been re-assessed. For buildings up to 100 square meters, the tax in Gram Panchayats will be reduced from Rs. 70 to Rs. 40 per square meter, and in municipalities from Rs. 80 to Rs. 60.
- To avoid discrepancies in the area of government-aided school buildings and delays in permits or fitness certificates, accurate data on these buildings will be included in the Sanchaya database. Many school buildings, despite being old and functional, are not recorded properly in Panchayat or Sanchaya databases. Once proper documents proving a building's existence are submitted, these buildings will be included in the database without a regularization fee. The fitness certificate will cover only the carpet area, and ancillary buildings such as toilets and kitchens will also be recorded. School principals or managers are required to submit affidavits and necessary applications regarding the area of ancillary buildings on time to ensure proper documentation.
- When a house is built based on a permit, and violations are pointed out during occupancy due to errors in the permit's issuance, the government will adopt a general approach to allow occupancy.

Action will be taken against officials who wrongfully issued permits and against licensees who prepared incorrect documents.

- The sale of land in small plots without obtaining a development permit from local bodies has come to the government's attention. This has resulted in situations where plot owners lose access to public facilities. As a result, permits are often denied to owners of these small plots. The rules will be amended to prevent this, ensuring that plot owners are not penalized for the illegal activities of developers, and violators will face strict action.

Out of the 17,799 complaints submitted, a remarkable 16,767 have been resolved—more than 92% of the total. Many of these decisions have already been implemented, with only 1,032 complaints remaining.

- In the case of Laksham Veedu colonies, gram panchayats will notify the Revenue Department after assessing the eligibility for issuing revised property titles to those living in houses transferred from previous owners. According to Local Self-Government Department Order 1147/2019, local bodies are advised to coordinate with the Revenue Department to determine if the current residents qualify

for assistance. Based on the Revenue Department's order dated 30/06/2015, there is a provision to regularise these transfers and issue revised titles. Local self-governing bodies have been instructed to take the necessary steps and inform the Revenue Department accordingly.

- A recommendation has been made to the Kerala Coastal Zone Management Authority to extend the time limit for regularizing





houses constructed without permission under the Coastal Management Act.

- Commercial establishments situated in non-residential buildings constructed before the Building Rules came into effect will continue to be licensed without requiring an occupancy change.
- Instructions have been issued to enable couples to appear before the Registrar of Marriages via video conference. Couples getting married in gram Panchayat too can apply to appear before the Registrar online and get married, offering a more convenient process.
- Local authorities will be allowed to assist children with cerebral palsy by providing diapers for school, regardless of their family's financial situation. Funds from the Local Self-Government's own budget or sponsorships may be used for this, and it will be included in project guidelines.
- The specifications for mini Material Collection Facilities (MCFs) built under the National Rural Employment Guarantee Scheme can now be tailored to the needs of local bodies. This decision follows complaints that the standard size approved by the Employment Guarantee Mission was too small. A general directive will be issued by the government to address this.

The government has taken a firm stance on issues arising from official negligence in the Adalats. In the Kozhikode District Adalat, the problem of disability pensions being delayed due to data entry errors by officials was brought to light. Similarly, another case emerged where a beneficiary convener had been in debt for 15 years due to non-payment of dues, a consequence of officials failing to check measurements for a drinking water scheme. The authorities have now agreed to pay the outstanding amount with interest,

which will be charged to the responsible officer.

The Adalat has also successfully resolved several long-standing disputes. A decades-old conflict between Meenadam and Pampady over a drinking water scheme was settled, finally providing potable water to 18 wards across both panchayats. Another major achievement was reassigning 29 families,

It is important to note that the Adalats were never a platform for legitimizing illegal activities. Instead, they addressed technical challenges with impressive efficiency.

who had been mistakenly included in the Nedumbram Panchayat of Pathanamthitta, back to the Thalavadi Panchayat in Alappuzha. This issue had been unresolved for over three decades.

The complex task of removing 29 houses from the property tax register of Nedumbram Panchayat and adding them to the Thalavadi Grama Panchayat was also completed.

Thousands of long-pending problems and complaints were addressed in the Adalats. However, the government aims to create a system where legitimate grievances can be resolved without the need for such forums. To achieve this, efforts to modernize the local governance system are well underway.

Where Wings are Sewn, Where Dreams are Grown - NIPMR



Nirmalya T. Sundar
Freelance Writer

What if, in the heart of a small Kerala village, an institution was quietly changing the way we think about rehabilitation for the differently-abled?

That's exactly what the National Institute of Physical Medicine and Rehabilitation (NIPMR) at Kallettumkara, Thrissur, is doing. Recently awarded the United Nations Task Force Award 2024, NIPMR has risen to international prominence for its groundbreaking work in assistive technology and holistic rehabilitation.

Founded under Kerala's Department of Social Justice, NIPMR offers comprehensive care to individuals with disabilities, addressing everything from cerebral palsy and autism in children to stroke recovery in adults. A multidisciplinary team—comprising physiotherapists, speech therapists, psychologists, and special educators—works together to create personalized treatment plans aimed at not just recovery but

empowerment.

Where NIPMR truly stands apart is in its use of cutting-edge technology. The institute has pioneered the use of virtual reality in therapy, turning rehabilitation into an engaging, interactive experience, particularly for stroke patients. Its motion analysis labs, equipped with advanced diagnostic tools, allow for precise monitoring of progress, enabling customized therapies based on real-time data. Meanwhile, the institute's aquatic therapy pool provides a unique recovery method for individuals with physical injuries or developmental challenges, offering a gentle yet effective path to regaining mobility.

However, NIPMR's vision extends beyond therapy. Its special school prepares children to blend seamlessly into mainstream education, splitting their time between NIPMR and local schools, ensuring both academic and social development. For adults, vocational training programs in fields such as tailoring, baking, and horticulture open doors to employment and self-reliance. The institute's differently-abled-friendly supermarket, staffed by trainees, is a tangible example of this philosophy in action.

Reaching far beyond its physical location, NIPMR extends its services to rural and remote communities through its mobile therapy units. These specially equipped buses travel to areas with limited access to rehabilitation, bringing expertise directly to those in need. The 'Rehab Express' initiative even offers in-home therapy, ensuring that patients who cannot travel receive the same level of care.

This is the story of NIPMR—a quiet force revolutionising rehabilitation, empowering individuals with disabilities to reclaim their lives and chart their own futures.

A Special School Indeed!

Classes are held in pre-primary, primary, secondary, pre-vocation levels in the ratio of one teacher for 4 children. Classrooms are built with hi-tech facilities and are embellished with paintings designed specifically for persons with intellectual and developmental disabilities. Children attend classes in NIPMR for 3 days and go to regular school for 2 days a week. Teachers train the students to hone their skill sets and to interact better with schoolmates. The special school tries to identify the talents of children, give them utmost encouragement and help them



blend effortlessly with the mainstream. At NIPMR, children are enriched with special education, physical education, musical therapy and personalised treatment sessions. Apart from classrooms, the institution houses music room, sports and game activity area, technical library, aquatic recreation facility and musical garden. Most advanced treatment facilities are available here including psychiatry, psychology, paediatrics, ophthalmology, dental, ENT.

A Silent Revolution

Applying state-of-the-art technology and giving bespoke care to patients, NIPMR is spearheading a riveting transformation of the field of rehabilitation. The Centre for Mobility & Assistive Technology in NIPMR has been life-changing to many patients. This department designs and manufactures prosthetic limbs for patients. Each product is customised to suit individual measurements, manufactured within a short span of time, modified according to the patient's comfort, under the supervision of a clinical team. The products are made available at a discounted price. The Prosthetics and Orthotics wing functions with qualified technicians. A multi-disciplinary team assesses every product for feasibility, usability, comfort, fit, biomechanics, observational gait analysis etc. A weekly Assistive Technology clinic operates at NIPMR. In addition, medical camps are held at local self government level and the required medical equipments



The Audiology and Speech Language Pathology department identifies problems in speech, language, communication and hearing and takes remedial measures. The Developmental Therapy Unit evaluates the progress of growth milestones of children from birth to six years and designs tailor-made treatment guidelines for each child. Parents are also taught to give training to children at home. The psychology wing makes effective intervention for conditions associated to neuro development disorders such as Autism, Spectrum Disorder, Attention Deficit Hyper Activity Disorder, Intellectual Disability, Developmental Delay and Learning Disabilities.

Sense the Change

The Aquatic Rehabilitation Centre is an exceptional feature of NIPMR. With the heated aquatic therapy pool started in 2021, persons with physical or sensory disabilities are able to have better motor skills and become more independent. Individual aquatic therapy treatments are given to for patients who have gone through road accidents, amputations, fractures, stroke, spinal cord injury etc. Water rehabilitation for children with developmental delays, cerebral palsy, autism, ADHD etc have proved to be very helpful.

for each person are listed out.

One of the most groundbreaking developments in the field of rehabilitation is the application of virtual reality, a technology enhanced therapeutic method. At NIPMR, virtual reality based motor rehabilitation unit, virtual rehabilitation unit and instrument guide and motion analysis lab are utilised to expedite the process of healing. The medical condition of the patient is visually recorded, documented and evaluated in instrument guide and motion analysis lab. The vital statistics are assessed before the commencement of therapy, so that the results of therapy are evaluated objectively. Virtual rehabilitation unit gives most advanced treatment for persons suffering from stroke, paralysis or cognitive deficit. Post stroke patients are given simulation exercises using a video game approach. Virtual reality based motor rehabilitation aims to improve the walking ability of patients.

Physiotherapy plays a significant role in the diagnosis and management of various diseases ranging from paediatric to senile medical conditions. The Physiotherapy wing at NIPMR enables patients to overcome disabilities through exercise-based approach. It helps in the effective management of stroke, orthopaedic conditions, rheumatoid arthritis, cardio-respiratory diseases etc. Occupational therapy helps to mitigate difficulties and improve the living conditions of patient.





The Sensory Park gives special sensory opportunities to differently-abled children. The Park is built child-friendly and keeping all safety standards as per the American Disability Association Standards.

The Sensory Garden has been designed in such a way that visitors can derive utmost sensory experiences there. The garden is laced with a rich variety of more than 50 medicinal plants. Each pathway in the garden is designed in a unique way. There is a musical garden too.

At your Doorstep

Wheels Trance, a modified ambulance with hydraulic lift, is used to transport persons with disabilities. Besides, NIPMR reaches out to bedridden patients and offer services at home. Through Rehab Express, NIPMR, along with Kerala Social Security Mission, gives therapy sessions at home. A low-floor bus of KSRTC has been modified to suit the needs and physiotherapy, occupational therapy, speech therapy services are extended in this manner. The Rehab Express camps at places where therapy services are

not available, upon the request of local self governments and voluntary organisations. Through Rehab on Wheels project, therapists visit buds schools and extends services like audio test, speech therapy, psychotherapy and occupational therapy.

Educate & Employ

NIPMR also conducts numerous academic courses. NIPMR offers a Bachelor course in Occupational Therapy affiliated to Kerala University of Health Sciences and a 2 year Special Education Diploma course approved by RCI.

Through Em-voc project, differently abled persons above the age of 18 years are given vocational training. Different types of skill training such as training in computer, horticulture, baking, housekeeping, tailoring etc are imparted here.

NIPMR also houses a differently-abled friendly super market where persons trained through Em-voc are employed. The services of NIPMR are not limited to children and adults with special needs. The institute offers special camps and self-employment training to parents of the patients too. NIPMR makes it a point that the parents are also given the opportunity for self-realisation, along with their children. Parents feel motivated to follow their interests once they witness the transformation of their children into confident, self-reliant personalities.

Assistive Technology for Alleviating Tension



Chandrababu C.
Executive Director, NIPMR



Vidhupriya K.K.
Associate Professor, Prosthetics and Orthotics

Assistive technology empowers people with disabilities to lead fuller, more independent lives by providing tailored tools for mobility, communication, cognition, and self-care.



“For most people, technology makes things easier. For people with disabilities, however, technology makes things possible.” — Mary Pat Radabaugh

The World Health Organization estimates that around 1.3 billion people suffer from severe disabilities, equating to about 16% of the global population. In India, approximately 2.68 crore individuals live with disabilities, according to the 2011 national census, which accounts for 2.21% of the population. A 2015 survey by the Government of Kerala identified 793,937 disabled persons in the state. These statistics underscore the challenges societies face in alleviating the difficulties of people with disabilities and supporting them in leading fulfilling lives.

To enable differently-abled individuals to live to their fullest potential, a supportive environment and essential resources are necessary. This is where assistive technology plays a crucial role. Assistive technology encompasses all systems, devices, and services that aid people with disabilities, helping them overcome obstacles. This rapidly advancing health technology sector promises beneficiaries greater freedom and self-esteem.

Assistive technology can include simple tools or advanced tech-driven equipment, assisting people with special needs in areas like mobility, cognition, communication, vision, hearing, and self-care.

Assistive Technology for Mobility

Devices designed for people with mobility challenges assist in changing and maintaining body position and enable movement from place to place. The mobility aid used depends on individual needs, ability, and psychological status. Such devices, used by those with disabilities, injuries, or fall risks, enhance freedom, confidence, and self-esteem, while reducing pain. Common mobility aids include:

- Walking aids
- Canes, crutches
- Walking poles
- Walkers
- Portable ramps
- Wheelchairs
- Mobility boots
- Transfer boards
- Handrails and grab bars
- Prosthetics and orthotics

Assistive Technology for Cognition

Assistive technology devices or software are widely employed in rehabilitation to support cognitive

impairments, assisting with emotions, memory, concentration, calculation, planning, and time management. These technologies benefit individuals affected by conditions such as stroke, dyslexia, Alzheimer's disease, multiple sclerosis, and traumatic brain injury, with memory aids proving particularly useful.

Assistive Technology for Communication

Assistive technology for communication helps individuals with speech disorders express themselves and enhances their functional capabilities. A variety of devices assist in overcoming communication barriers, including:

- Augmentative and alternative communication (AAC) tools
- Picture boards
- Text-to-speech and speech-to-text software
- Eye-tracking devices
- Smartphones

Assistive Technology for Vision

For visually impaired users, assistive technologies provide a level playing field. According to WHO, at least 2.2 billion people worldwide have vision impairments, underscoring the importance of these tools. Vision-assistive devices include:

- Smart glasses
- Magnifiers
- Speech-to-text software
- Screen reader technology
- Braille displays

Assistive Technology for Hearing

Hearing-assistive technology helps individuals hear and understand more clearly or express thoughts with ease. Devices available include:

- Assistive listening devices, like amplification systems
- Alerting devices that connect to doorbells, telephones, or alarms, using loud sounds or blinking lights to notify those with hearing loss
- Augmentative communication devices aiding expression for individuals with speech disorders

Assistive Technology for Self-Care

Self-care technology assists individuals with daily activities, promoting health, preventing disease, and coping with illness. Self-care assistive devices include:

- Bathing aids like bath seats, transfer benches, shower chairs, and bath boards



- Toileting aids like frames, surrounds, seat raisers, and static commodes
- Dressing aids for handling fasteners, buttons, and zippers
- Feeding aids like specialized cups, bowls, plates, and utensils for independent eating

A Comprehensive Approach to Assistive Technology

Proper evaluation, fitting, training, and regular follow-up are essential for successful assistive technology use. At NIPMR, a team of experts evaluates each patient's needs and recommends suitable devices. A trial run ensures that each device fits properly, followed by training for patients and caregivers on correct usage. Regular follow-ups confirm the device continues to meet the patient's evolving needs.

NIPMR offers advanced facilities for assistive technology services, specializing in manufacturing prosthetics, orthotics, and splints, among other devices. A team of qualified professionals supports every step—from design and manufacturing to delivery and follow-up—ensuring that each patient receives suitable, high-quality devices.

Our focus is on making life possible and easier for our patients, fulfilling their needs and enhancing their safety and quality of life. At NIPMR, we believe that living life to the fullest is a fundamental right for all.

Revolutionising Recovery Through Virtual Reality

Virtual reality-based rehabilitation is transforming healthcare by providing an immersive, personalised, and effective therapy experience that enhances recovery across physical, cognitive, and psychological domains



Virtual Reality (VR)-based rehabilitation is revolutionising how healthcare professionals approach physical, cognitive, and psychological therapy. Leveraging immersive technology, this innovative method allows patients to engage in rehabilitation exercises and simulations that replicate real-world environments, making the therapy process more engaging, personalized, and effective.

Virtual reality-based rehabilitation is gaining momentum across various medical fields due to its versatility, ease of use, and capacity to deliver more immersive, patient-centred care. As VR technology advances, its applications in rehabilitation expand, transforming how patients recover from injuries, surgeries, and chronic conditions.



Anna Daniel
Principal, Occupational
Therapy NIPMR

What is Virtual Reality-Based Rehabilitation?

Virtual reality-based rehabilitation refers to the use of immersive VR environments to deliver therapy aimed at improving motor, cognitive, and psychological functions. Through VR headsets, motion-tracking sensors, and interactive software, patients can engage in tailored rehabilitation exercises that simulate real-life scenarios or create controlled environments where specific skills can be practiced.

Unlike traditional rehabilitation, VR-based therapy provides a highly interactive experience. Patients are not only guided through exercises but also immersed in virtual environments that can stimulate the senses, improve motivation, and encourage greater participation in therapy.

How Does VR-Based Rehabilitation Work?

The core elements of VR-based rehabilitation include:

1. **VR Headsets:** Patients wear a VR headset that immerses them in a 3D virtual environment. This allows for an interactive experience where they can see and respond to visual cues.
2. **Motion Sensors and Controllers:** These devices track the patient's movements and provide real-time feedback. Whether using handheld controllers or full-body tracking, patients' movements are recorded and analyzed to ensure they are performing exercises correctly.
3. **Virtual Environments:** VR-based rehabilitation can create diverse environments tailored to a patient's specific needs. For example, someone recovering from a stroke may practice walking in a virtual park, or a patient with a fear of heights might engage in graded exposure therapy in a safe, controlled virtual setting.
4. **Therapeutic Software:** Software programs are designed to offer interactive exercises for various types of rehabilitation—ranging from physical therapy and neurological recovery to mental health.



therapy. These programs adapt to the patient's progress, ensuring that challenges are appropriately scaled as the patient improves.

VR-Based Rehabilitation at NIPMR

The National Institute of Physical Medicine and Rehabilitation (NIPMR) in Kerala, India, has adopted Virtual Reality (VR) as part of its advanced rehabilitation therapies. This innovative approach integrates immersive software and neuro-rehabilitation tools like Neuroforma, which enhance traditional physical therapy for patients with neurological and musculoskeletal conditions.

VR-based rehabilitation leverages immersive, 3D environments where patients can perform interactive exercises tailored to their specific needs. These environments provide real-time feedback, motivating patients and allowing therapists to monitor progress more effectively. The immersive software used at NIPMR creates a multisensory experience, helping patients improve balance, coordination, motor skills, and cognitive functions in a more engaging manner.

Neuroforma combines physical exercises with cognitive tasks, targeting neuroplasticity—the brain's ability to rewire itself. This dual approach supports recovery from stroke, traumatic brain injuries, and neurodegenerative diseases like Parkinson's.

NIPMR uses the Virtual reality based rehabilitation in the following areas.

1. Physical Rehabilitation

VR in physical rehabilitation enables patients to perform exercises in a safe and engaging virtual environment. This approach is especially beneficial for individuals recovering from injuries, surgeries, or conditions that affect mobility and motor skills.

Key benefits of VR in physical rehabilitation:

- **Safe Simulations of Real-World Activities:** Patients can practice walking, balance, or fine motor skills in virtual environments without the risk of injury. VR enables activities that would be difficult or risky in the real world, like walking on uneven terrain or navigating obstacles, all while ensuring patient safety.
- **Motivation and Engagement:** Traditional physical therapy can be repetitive and monotonous, which may lead to poor patient adherence. VR makes therapy more interactive and fun, often gamifying exercises to encourage consistent participation.
- **Real-Time Feedback and Progress Monitoring:** VR systems can provide instant feedback on movements and posture, allowing patients to correct their technique immediately. Therapists can also track progress with data from each session, helping to adjust treatment plans based on performance.
- **Enhanced Motor Learning:** VR stimulates visual, auditory, and kinesthetic feedback, which helps improve motor learning and coordination. This is particularly useful for stroke rehabilitation,



where patients must relearn basic movements and motor functions.

2. Cognitive Rehabilitation

Cognitive rehabilitation helps patients recover or improve cognitive functions such as memory, attention, problem-solving, and executive functioning. VR-based cognitive rehabilitation is particularly useful for patients recovering from traumatic brain injuries (TBIs), stroke, or neurodegenerative conditions like Alzheimer's disease.

Key benefits of VR in cognitive rehabilitation:

- **Simulated Cognitive Challenges:** VR environments allow patients to practice real-life cognitive tasks in a controlled setting, such as navigating a grocery store, remembering daily tasks, or following directions. These scenarios challenge cognitive skills like memory recall, spatial awareness, and decision-making.
- **Neuroplasticity Stimulation:** VR exercises stimulate the brain's natural ability to rewire itself, known as neuroplasticity. By engaging in repetitive cognitive tasks in VR, patients can create new neural connections, aiding in cognitive recovery.
- **Customizable Cognitive Exercises:** The VR environment can be tailored to match the patient's cognitive ability, making the tasks appropriately challenging while not overwhelming. As patients improve, the difficulty of tasks can be scaled up.
- **Safe, Stress-Free Environment:** Cognitive rehabilitation in VR allows patients to make mistakes without real-world consequences,

reducing anxiety and building confidence as they practice challenging cognitive tasks.

3. Psychological Rehabilitation

VR-based psychological rehabilitation offers an innovative approach to treating mental health conditions, including anxiety disorders, PTSD, and phobias. Virtual reality exposure therapy (VRET) allows patients to confront their fears or anxiety-inducing situations in a safe, controlled manner.

Key benefits of VR in psychological rehabilitation:

- **Controlled Exposure Therapy:** VR allows patients to face anxiety-triggering scenarios gradually, making exposure therapy more accessible and less overwhelming. For example, someone with a fear of flying can simulate an airplane ride in VR, allowing them to face their fear in a controlled way before trying it in the real world.
- **Emotional Regulation:** VR environments are immersive, which helps patients practice coping strategies for managing stress, anxiety, or trauma in real time. They can learn to regulate their emotional responses in VR, making it easier to apply these skills in real-world situations.
- **Reduction in Therapy Stigma:** The immersive and engaging nature of VR can reduce the stigma some patients feel about seeking mental health therapy. Virtual environments make the therapy process feel less clinical and more personalized.
- **Effective for PTSD:** Veterans or individuals who have experienced trauma can use VR to revisit distressing events in a controlled environment, helping them process the trauma and gradually reduce symptoms of PTSD.

4. Paediatric Rehabilitation, Including Sensory Issues

Children with developmental delays, motor impairments, or sensory processing disorders (SPD) benefit greatly from VR-based rehabilitation. The gamified nature of VR therapy makes it especially engaging for younger patients, who often struggle with traditional therapy methods. Moreover, VR's ability to manage sensory stimuli makes it an ideal tool for addressing sensory issues in children with conditions like autism spectrum disorder (ASD).

Key benefits of VR in paediatric rehabilitation:

- **Controlled Sensory Exposure:** VR-based rehabilitation allows therapists to create controlled sensory environments, where stimuli such as sound, light, textures, and visual elements can be



precisely modulated. For individuals with sensory hypersensitivities, this controlled exposure helps desensitize them to overwhelming stimuli in a gradual and safe manner. Conversely, those with hyposensitivities can be exposed to more intense stimuli to help increase their responsiveness.

- **Customizable and Gradual Desensitization:** One of the major challenges in managing sensory issues is finding the right balance between exposing patients to stimuli and avoiding overwhelming them. VR allows for fully customizable sensory environments where stimuli can be introduced and adjusted at a pace that suits the individual's tolerance levels. This gradual desensitization is crucial for building tolerance to uncomfortable stimuli without causing distress.
- **Safe and Engaging Sensory Integration Therapy:** Sensory integration therapy traditionally involves real-world activities that can be stressful or overwhelming for patients. VR-based rehabilitation provides a safe alternative, allowing patients to interact with sensory stimuli in a controlled, virtual environment. This reduces the risk of sensory overload, creating a more positive therapeutic experience. Additionally, the immersive and game-like nature of VR makes therapy more engaging, particularly for children. They can practice activities that target sensory processing in a fun and interactive way, improving their motivation and participation in therapy.
- **Improved Sensory-Motor Coordination:** For individuals with sensory issues, especially those involving motor control challenges (such as dyspraxia or motor coordination difficulties), VR-based rehabilitation can enhance sensory-motor integration. By simulating activities that require coordinated movements in response to sensory cues, VR helps patients develop better awareness of their bodies and improve their motor responses to sensory input.
- **Reduced Anxiety in Sensory-Rich Environments:** Many individuals with sensory processing issues experience high levels of anxiety in environments that overwhelm their senses (e.g., noisy public spaces, crowded areas, or brightly lit rooms). VR-based rehabilitation can simulate these challenging environments in a controlled way, allowing patients to practice coping strategies and sensory regulation techniques before encountering these environments in real life.

By gradually introducing these stimuli in a virtual world, patients can practice regulating their sensory responses and develop confidence in their ability to handle sensory-rich environments, which can significantly reduce anxiety in real-life situations.

- **Personalized and Adaptive Therapy:** VR technology allows for highly personalized rehabilitation plans that cater to each individual's specific sensory needs. The virtual environments can be adapted in real time based on the patient's progress, ensuring that therapy remains challenging yet manageable.

This adaptability makes VR an ideal tool for managing the diverse and often unpredictable nature of sensory processing issues, offering real-time flexibility that is difficult to achieve in traditional therapeutic settings.

- **Real-Time Feedback and Progress Monitoring:** VR systems equipped with motion sensors and other tracking technologies provide real-time feedback on how patients are responding to sensory stimuli. This data can help therapists assess the patient's sensory tolerance levels and adjust the therapy accordingly. Continuous monitoring of progress ensures that patients are exposed to just the right amount of sensory input at each stage of their rehabilitation.

By tracking metrics such as heart rate, movement, and behavioural responses to sensory stimuli, therapists can tailor therapy sessions to optimize outcomes, providing a more precise and data-driven approach to sensory rehabilitation.

Benefits of VR-Based Rehabilitation

1. **Engagement and Motivation:** One of the primary advantages of VR-based rehabilitation is its ability to make therapy more engaging and motivating for patients. Traditional

rehabilitation exercises can become repetitive and tedious, but the immersive nature of VR transforms therapy into an interactive experience that feels like play. This boosts patient adherence and encourages long-term participation in the rehabilitation process.

2. **Personalization:** VR-based rehabilitation offers a high degree of customization. Therapists can tailor virtual environments and exercises to meet each patient's specific needs, abilities, and progress. This individualized approach ensures that patients are challenged at the right level while avoiding frustration or injury.
3. **Real-Time Feedback:** Motion sensors and software in VR rehabilitation systems provide instant feedback to both the patient and therapist. This helps ensure exercises are being performed correctly, minimizes the risk of injury, and allows therapists to make real-time adjustments to therapy plans based on the patient's performance.
4. **Safe and Controlled Environment:** VR allows patients to practice skills in a safe, controlled environment that can be difficult to replicate in the real world.
5. **Cognitive Stimulation:** For patients undergoing cognitive rehabilitation, VR offers mental exercises that stimulate memory, attention, and problem-solving skills. Immersive environments challenge the brain to adapt and respond in ways that can promote





neuroplasticity and cognitive recovery.

6. **Data Collection and Progress Monitoring:** VR-based rehabilitation systems automatically collect data on the patient's performance, tracking progress over time. This data-driven approach allows therapists to monitor improvements, adjust therapy plans accordingly, and provide quantifiable evidence of recovery.

Challenges and Limitations

1. **Cost:** VR-based rehabilitation requires specialized equipment, including VR headsets, motion sensors, and therapeutic software, which can be expensive for both healthcare providers and patients. However, as technology becomes more widespread, costs are expected to decrease.
2. **Technological Limitations:** Not all patients may be comfortable with or have access to the required technology. Some may experience motion sickness or discomfort during VR sessions, limiting the duration or frequency of use.
3. **Therapist Training:** The implementation of VR in rehabilitation requires therapists to undergo specialized training. They must be able to integrate virtual reality tools effectively into their treatment plans and understand how to monitor and adjust VR-based therapy sessions.
4. **Lack of Physical Interaction:** In some cases, hands-on guidance and manual adjustments are necessary to ensure patients perform exercises correctly. While VR offers real-time feedback, it cannot fully replace the hands-on assistance that therapists provide during traditional therapy sessions.

The Future of VR-Based Rehabilitation

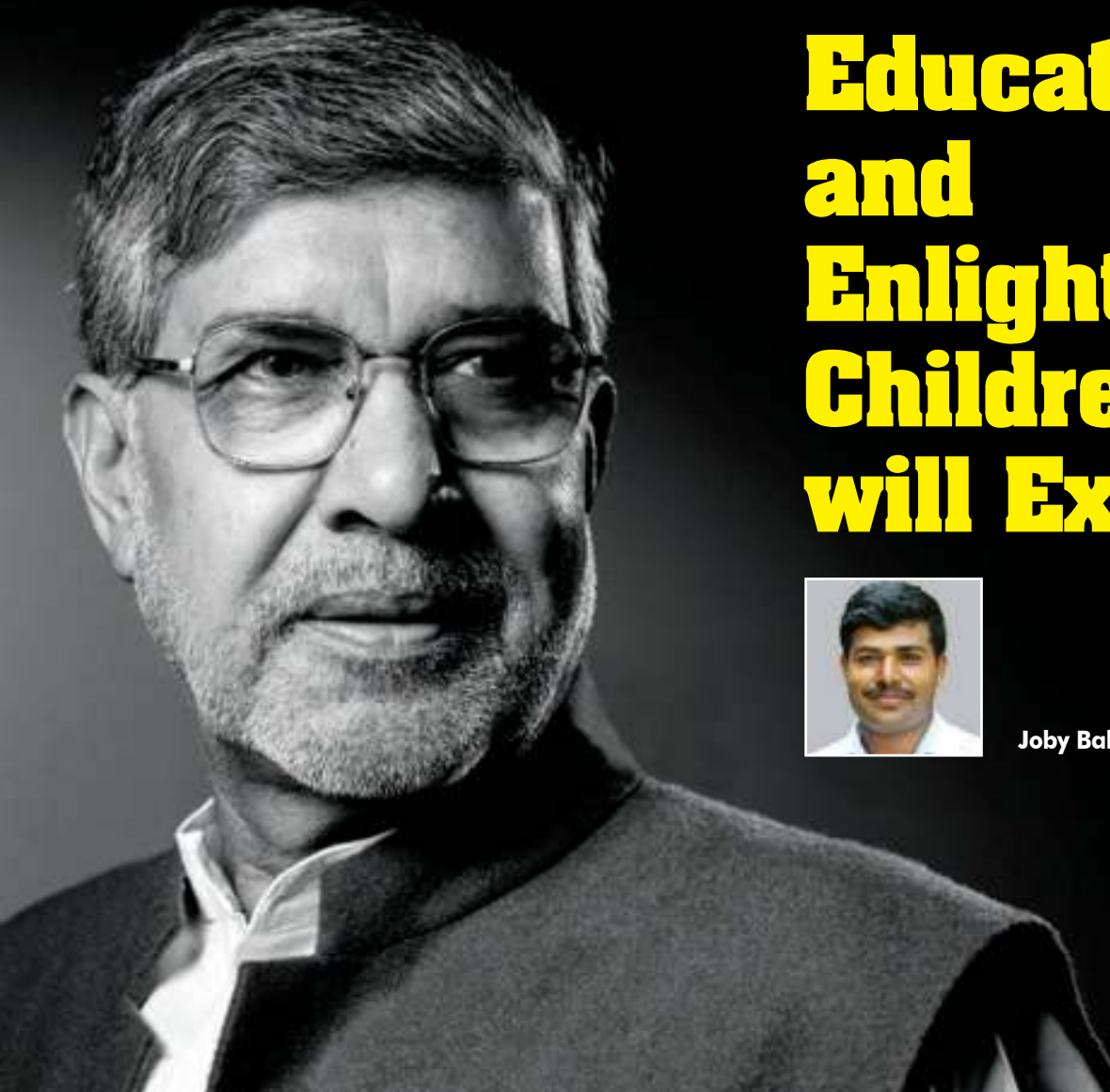
The future of VR-based rehabilitation is promising, with ongoing technological advancements that are making the technology more affordable, accessible, and powerful. Improvements in VR headsets, motion tracking, and haptic feedback systems (which allow users to feel physical sensations) will further enhance the realism of virtual environments and provide even more effective rehabilitation experiences.

Additionally, the integration of artificial intelligence (AI) will enable more personalized therapy plans that adapt in real time to each patient's performance and progress. AI could analyze patient data and automatically adjust exercises to optimize recovery, leading to more efficient and effective therapy.

As the use of VR-based rehabilitation expands, it is likely to become a standard tool in physical therapy, neurological recovery, cognitive rehabilitation, and mental health treatment. Its ability to make therapy more engaging, personalized, and effective positions it as a key player in the future of healthcare.

Virtual reality-based rehabilitation is transforming the field of rehabilitation by offering an immersive, interactive, and personalized approach to therapy. From physical and cognitive rehabilitation to psychological and paediatric care, VR's immersive environments provide patients with opportunities to practice essential skills in a controlled, motivating, and safe manner. For individuals with sensory issues, especially children, VR offers a unique solution that enables them to manage and integrate sensory stimuli more effectively.

As VR technology continues to evolve, it will play an increasingly central role in rehabilitation, making therapy more accessible, personalized, and effective across a wide range of conditions. By incorporating these cutting-edge technologies, NIPMR provides patients with a comprehensive, engaging, and effective path to rehabilitation, bridging the gap between traditional therapy and modern, tech-driven solutions.



Educate and Enlighten, Children will Excel



Joby Baby

The venerated Nobel Peace laureate, Kailash Satyarthi continues to dedicate his life for the safety and welfare of children. In 2014, he had become only the second Indian after Mother Theresa to win the esteemed Nobel Peace Prize. Kailash Satyarthi gets candid in a conversation in Kuwait, where he had visited to attend a function.

Was it easy to become a child rights activist ?

It has got to do something with the compassion we feel towards children. An image I saw when I was around 6 years old left a huge impact upon me. On my way to school, I saw a cobbler and his son. The boy was working with his father, missing out on school education. When I enquired, the father expressed helplessness. His words were “we are born to work”. I can still recall the indignation

and anguish I felt at that time. That small boy was missing out on all the happiness of life and knowledge-gaining and he had to struggle to make ends meet. At that time, I wished to grow up and do something for such children. In 1980, I left my teaching job and set up an NGO called Bachpan Bachao Andolan.

Over the decades, has people’s attitude towards child slavery undergone a change? Are people more informed now?

Things have definitely changed for the better. We all must be able to work vigorously towards ending child slavery for good. Individuals and organizations must build awareness and give greater focus to end this vice. In order to achieve this, we must include this in the Sustainable Development Goals.

Is education system and child exploitation connected in any way?

Yes, of course. We must ensure that all children get quality education. Parents must make sure that children are sent to schools. Governments and social institutions must facilitate this. Things are definitely changing. But if you ask me, it has not gained the required momentum. But, before changing the education system, we need to transform the current social system.

How can we prevent children from getting engaged in unlawful activities?

I am the happiest when I see the smiling faces of children. I hate myself when I see desperation in a child's face. Children are pure and innocent. If they are driven towards wrongful activities, it is certainly not their fault. The circumstances have to be blamed. I cannot explain the joy I feel each time a child rescued from slavery spots a beaming smile.

How do children inspire you?

Children are truly my inspiration. For me, children should be their own saviors. They should become their own voice. They should serve as catalysts and guiding force. The global march against child slavery in 1998 exemplifies the power of children. The voices of young kids resonated in the Geneva International Labour Convention. Children themselves narrated their harrowing experiences in front of numerous dignitaries like Prime Ministers and Presidents of different countries. This demonstrated to the world the resoluteness and awareness that children have regarding this issue.

So, there are several lessons to be learnt from children, right?

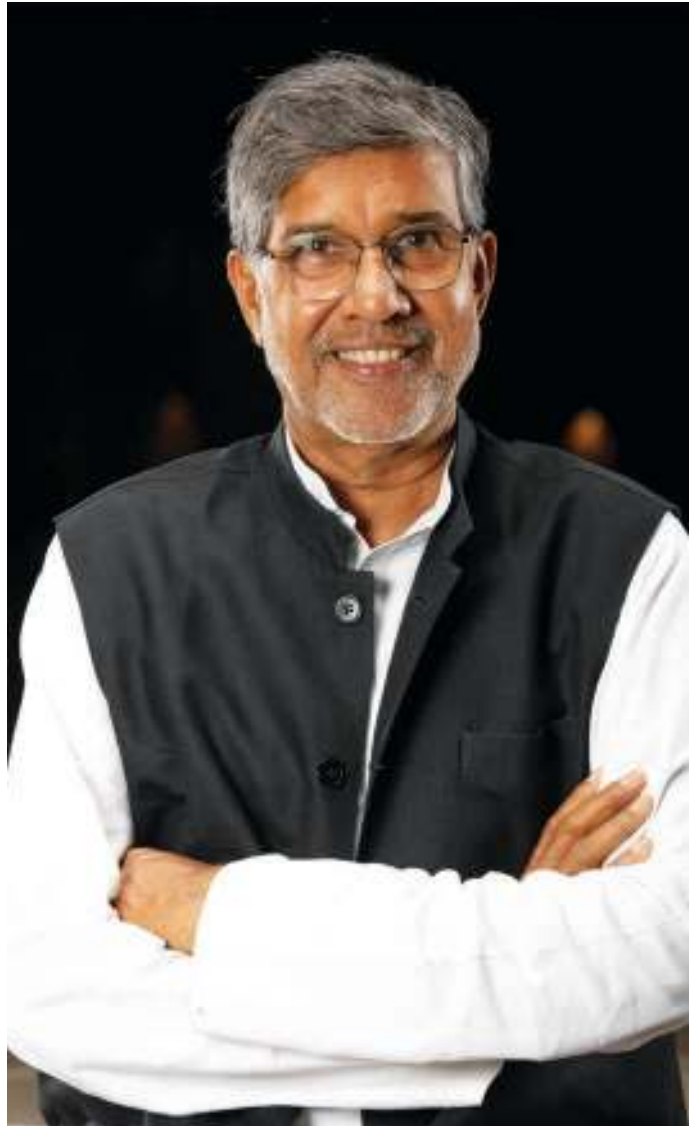
Children symbolize innocence. I tell everyone I meet to rekindle the innocence of childhood days. Stay a child always and you will see the magic of life unfold before you.

What would be your advice to parents?

If I were a child, I would expect my parents to be my friends. I would tell them – Don't pamper and spoil me. Don't help me too much. Have confidence in me and I will show you how I will prosper in life.

Last year, you had been to Kerala and visited our State Legislature and called on our Chief Minister. How was the visit like?

It was indeed a pleasant experience. Though I had heard quite a lot about Kerala, personally visiting the state was extraordinary. The Kerala Legislature, for the first time in India's history, had conducted a literary



fest. I was fortunate to be part of it. Kerala has a strong and dedicated government. Only knowledge and education can open the doors towards human rights. Kerala is a model to the nation in this regard.

We have lost so many children to war. What do you feel?

We are living in a world where technology, economic stability and supply chains are all in an advanced stage. However, these are also the times when there is a great deal of inequality between countries. In many places, kids are being used in hazardous occupations. There is a lack of accountability and compassion. Kids are not responsible for these current wars viz. Russia-Ukraine war, Israel- Hamas war. But sadly, children are the worst affected. I strongly condemn these wars.

Kindly elaborate on the activities of Parent Circle.

I am really happy that Parent Circle is working towards the betterment of society. I invite everyone to join this fight. We shall strive together to make a change.

Forging Futures

All Set for Huddle Global



Huddle Global, the largest beachside start-up festival in the country, will kick off in November at the Leela Convention Centre, Kovalam. The summit, organised by the Kerala Startup Mission, will be inaugurated by Chief Minister Pinarayi Vijayan. Huddle Global seeks to facilitate the convergence of start-up aspirants, entrepreneurs, and investors

Kerala has developed a highly dynamic start-up ecosystem with young entrepreneurs brimming with futuristic ideas. Not one to rest on its laurels, the state continuously works to enhance this ecosystem and encourage young minds to innovate. Huddle Global, a global summit conducted by the Kerala Startup Mission, is a significant step toward this goal. As Kerala gears up for yet another Huddle meet, hopes are high.

The global summit aims to elevate Kerala's start-up sector and

expand the state into a global manufacturing hub for technology-driven products and services. As the most vibrant start-up ecosystem in the country, Kerala, through Huddle Global, envisions attracting investors from various sectors. Over 150 investors from across the world will converge in Kovalam on November 28, 29, and 30. The summit will see the participation of over 5000 start-ups and around 200 mentors, with an expected attendance of more than 10,000 people.

Kerala is increasingly becoming a sought-after destination for investors. Huddle Global aims to simplify the process of establishing businesses in the state. The state's recent top performance in the national ease of doing business ranking will be an added advantage.

Huddle Global has served as a launchpad for numerous start-ups. Ventures in Edutech, Augmented Reality, Virtual Reality, Fintech, Life Sciences, Spacetech, Healthtech, Blockchain, Internet of Things, E-Governance, Artificial Intelligence, and Machine Learning will be present at the event. Since 2018, Huddle Global summits have seen the participation of over 5000 start-ups.

Over the years, Huddle has earned a reputation as a productive platform for young entrepreneurs who gain valuable insights. Among the most enriching sessions are those with globally acclaimed start-up entrepreneurs sharing their journeys. Starry-eyed newcomers return from the summit well-equipped, and groomed by industry experts in areas like business development, strategy, fundraising, and marketing. Sessions led by industrialists, heads of research organizations, and representatives from various universities add to the summit's enriching experience.



Dr. Krishna Ella, the co-founder and Chairman of Bharat Biotech, shares his experience in setting up a food processing unit in Kerala. The project, initially set to be built in Chennai, was shifted to Ankamali. Bharat Biotech International Limited, the company that produced COVID-19 vaccines like Covaxin and iNCOVACC, is one of the leading companies in the global pharmaceutical market. This Padma Bhushan recipient lauds Kerala's measures towards building ease of doing business and endorses the state's investor-friendly ecosystem.

"My colleagues had warned me against investing in Kerala. I was told that Kerala is as volatile as a stock market. After a meeting with the Minister of Industries, P. Rajeeve, I decided to give it a try. Within 8-9 days of applying through KSIDC, I received the allotment for setting up the unit. No lobbying was required. I applied like an ordinary citizen. Kerala is the only state in India where we can establish an industrial unit in any village.

There is a huge false campaign going on against the state. I can vouch from my own experience that this is far from the truth. The Government of Kerala has brought in a big change. Kerala has become the most suitable destination for setting up industries."

The Kerala Startup Mission aims to enhance the start-up ecosystem by promoting the growth of new ventures. Start-ups get an unparalleled opportunity to exhibit their products to investors and engage with leaders in the technology and industrial sectors. Investors can identify the best start-ups and make swift investment decisions. Panel discussions with investors offer youngsters insights into available investment opportunities.

Huddle Global also seeks to improve communication between entrepreneurs and academic experts. The event includes a startup expo, roundtable conferences, investor meets, workshops, and mentor meetings to facilitate meaningful dialogue.

The three days of the Huddle Global summit are filled with activity, including investor open pitches, the IEDC hackathon, national and international start-up exhibitions, an investor café, funding announcements, and corporate investment declarations. Panel discussions with international embassies, business organizations, and industry experts help start-ups explore global business opportunities. Young entrepreneurs gain valuable lessons on networking and mentor speed dating. Many start-ups find themselves fortunate to sign memorandums of understanding with various organizations on this platform.

The Kerala Startup Mission (KSUM), established in 2006 to promote youth entrepreneurship in the state, has registered around 6000 start-ups to date. Investments worth 5800 crore rupees have been funnelled into the state. KSUM aims to create a supportive infrastructure for start-ups and encourage technology-driven entrepreneurship. Today, Kerala boasts 504 innovation centres, over 10 lakh square feet of incubation space, 64 incubators, and 23 mini fab labs under KSUM.

Kerala Aims to be India's Life Sciences Innovation Hub



Adarsh Onnatt



Kerala is on a mission to transform its life sciences sector, creating a dynamic ecosystem that unites healthcare, biotechnology, and industry for future growth.

Kerala is swiftly positioning itself as a leading force in innovation in life sciences, with ambitious plans to blend healthcare, biotechnology, and industry into a robust ecosystem to drive future growth. This vision was articulated at BioConnect 2.0, the second edition of the state's flagship life sciences conference, at the Hyatt Regency. The event, hosted by Kerala Life Sciences Industries Park (KLIP)

in collaboration with the Kerala State Industrial Development Corporation (KSIDC), showcased Kerala's proactive approach to creating a knowledge-driven economy.

Inaugurating the conference, Kerala Chief Minister Pinarayi Vijayan emphasized the state's commitment to fostering an environment conducive to research, innovation, and entrepreneurship, particularly in biotechnology and healthcare. Reflecting on Kerala's resilience during past health crises, such as the NIPAH virus outbreak and the COVID-19 pandemic,



the Chief Minister highlighted the importance of leveraging these experiences to build a more sustainable and innovative healthcare infrastructure.

At BioConnect 2.0, Kerala leaders laid out a vision to make the state a life sciences hub, establishing Centres of Excellence in fields like microbiomes, nutraceuticals, and genome research to drive innovation.

similar hubs across the state to drive this agenda forward,” said the Chief Minister. His speech outlined a roadmap for Kerala’s transformation, with plans to create Centres of Excellence focused on cutting-edge research in microbiomes, nutraceuticals, and genome studies. These centres will serve as incubators for new technologies for early disease detection and prevention.

The Chief Minister’s vision aligns with Kerala’s strategic goals to attract global investments, foster industrial growth, and create employment opportunities, particularly in life sciences and

“Kerala is laying the groundwork for a knowledge-based society, integrating healthcare, industry, and research. The Life Sciences Park in Thonnakkal is pivotal to this vision, and we are planning to establish

biotechnology. He pointed out that the state’s emphasis on research and development (R&D) is key to achieving this goal.

Building a Business-Friendly Environment

The state’s industrial transformation is not limited to life sciences alone. Minister for Law and Industries P. Rajeev, in his Presidential address, underscored Kerala’s rise in the Ease of Doing Business rankings as evidence of the state’s commitment to creating a favourable investment climate. “Kerala’s rise to the top of the Ease of Doing Business rankings underscores our commitment to building a business-friendly environment,” he said.

Minister Rajeev also announced the establishment of the CSIR-NIIST Centre for Innovation, Technology, and Entrepreneurship at Bio 360 Life Sciences Park. This center will focus on scientific research and commercialising new discoveries, creating a vital link between academia and industry. He further highlighted Kerala’s growing contribution to the national medical equipment sector, noting that the state accounts for 25% of India’s medical equipment output and has ambitious plans to double this share in the coming years.

Innovation and Health Resilience

Veena George, Kerala’s Minister for Health, Women, and Child Welfare, took the stage to commend the resilience of the state’s healthcare system. “Kerala’s successful handling of crises like NIPAH and COVID-19 has set a national benchmark for public health response,” she said.



In line with Kerala's long-term healthcare strategy, Minister George announced the establishment of the Institute of Advanced Virology. This new institute will play a critical role in researching viral diseases and developing preventive strategies, positioning Kerala as a global hub for life sciences under the "One Health" initiative, which integrates human, animal, and environmental health.

Industry Leaders Laud Kerala's Efforts

The event's keynote address was delivered by Padma Bhushan Dr. Krishna Ella, Chairman and Managing Director of Bharat

Biotech International Ltd. Dr. Ella praised Kerala's focus on biotechnology and innovation, commending the state's efforts in creating a business-friendly environment that fosters healthcare and technology integration. "Kerala is the only state in the country where research and development have become an essential part of life sciences," Dr. Ella stated.

"While the world struggled to contain NIPAH, Kerala swiftly curbed its spread. The state's healthcare system is unparalleled, and Kerala has truly set an example for the rest of India," Dr. Ella remarked. His praise for Kerala's



business-friendly policies was echoed by several other industry leaders who attended the event.

Pioneering Biomedical Device Development

On the second day of BioConnect 2.0, a session titled 'Enhancing the Medical Device Industry Ecosystem' highlighted Kerala's potential to become a national leader in biomedical device development. The state's strategic advantages—including a skilled workforce, abundant natural resources like rubber, and strong research

Kerala's competitive edge in this space.

However, panellists noted that to fully capitalize on this opportunity, Kerala needs to attract semiconductor manufacturing companies and establish more testing laboratories to validate and certify new products. The absence of these facilities poses a challenge to the state's biomedical ambitions.

Thomas John, MD of Agappe Diagnostics, stressed the importance of government support in enabling Kerala to become a global player in healthcare innovation. He highlighted the potential for growth in home care diagnostic devices and veterinary diagnostics, sectors that are expected



institutions—were lauded as critical factors in reducing production costs and increasing competitiveness in the medical device sector.

Santhosh Kumar, CEO of Harrisons Malayalam

With strategic initiatives like the Institute of Advanced Virology and local production advantages, Kerala aims to lead in medical device development and public health resilience

synthetic rubber can be produced for just ₹300 with natural rubber," he said, emphasizing

Ltd., pointed out that local production using natural rubber could significantly reduce costs for medical devices. "A product that costs ₹5,000 using

to see significant demand in the coming years.

Looking Ahead

BioConnect 2.0 successfully brought together key stakeholders from government, industry, and academia to chart a course for Kerala's future as a leader in life sciences innovation. The conference underscored the state's potential in biotechnology, healthcare, and biomedical device development, fuelled by a business-friendly environment and a focus on R&D.

With continued investment in infrastructure, talent, and innovation, Kerala is well on its way to becoming a hub for life sciences, driving not only regional but national growth in these critical sectors.

The unstoppable journey of food safety triumph

K. Jyothinath
Freelance Writer



India's path to global economic power hinges on one key factor: food safety. Kerala has once again set the gold standard, topping the State Food Safety Index (SFSI) 2024 by the Food Safety and Standards Authority of India (FSSAI) for the second consecutive year, reaffirming its commitment to high standards and public health

The State Food Safety Index, launched in 2018-19, isn't just a fancy list—it evaluates Indian states and union territories on five key fronts: Human Resources and Institutional Data, Compliance, Food Testing-Infrastructure and Surveillance, Training and Capacity Building, and Consumer Empowerment. And guess what? Kerala isn't just playing by the rules; it's rewriting them.

Kerala's Recipe for Success

Celebrating this remarkable achievement, Kerala's Health Minister Veena George made this proud announcement on social media; "Kerala achieves historic achievement in food security at the national level. Kerala holds the first position for the second consecutive year in the Food Security Index... This achievement is a recognition for the excellent work done by Kerala in the field of food security. Congratulations to all the employees of the Food Safety Department who worked alongside to achieve this."

Kerala's success doesn't happen by chance. The state is all about rigorous inspections, relentless sample collection, and a zero-tolerance attitude toward food safety violations. What makes it stand out? Its



cutting-edge NABL-accredited labs are miles ahead of the game. These labs don't just test food samples—they get to the core of safety by ensuring the standards are met in every nook and corner of the state.

“These labs not only support routine food inspections but also enable randomised testing of food products across urban and rural regions. With advanced equipment, Kerala can now conduct genetically modified organism (GMO) testing and analyse chemical residues, which were challenging in the past,” points out a senior official with the Food Safety Department. It's not just words—these labs are turning safety promises into action.

Smart initiatives that work

Kerala didn't just reach the top by doing the bare minimum. Its innovative programmes are

the real game-changers:

Operation Matsya: This initiative is on the lookout for fish adulteration—a big deal in a seafood-loving state like Kerala.

Operation Jaggery: Focuses on making sure the sweet stuff is safe, especially during festive seasons.

Operation Holiday: Launched during peak tourist seasons, this one makes sure all the hotspots are safe for food lovers.

Clean Street Food Hub: Because street food should be delicious and safe, right? This programme elevates hygiene standards, keeping both locals and tourists happy.

These schemes are Kerala's secret sauce—ensuring food safety with an aggressive yet thoughtful approach. Whether it's street food or high-end eateries, Kerala is serious about keeping things clean, safe, and consumer-friendly.

Food safety from the ground up

Kerala's food safety drive isn't confined to bustling cities

and five-star restaurants. It's a state-wide mission, reaching the farthest villages and schools:

Food Safety Gram Panchayat Project: Implemented in 140 panchayats, it's a grass-roots movement to ensure safety even in the most remote areas.

Safe and Nutritious Food at School Project: In 500 schools, children are learning healthy eating habits and are served food that's safe and nutritious.

Food Safety Awareness Classes: Over 3,000 awareness classes have been held, making sure food handlers and the public know what's at stake.

It's not just about enforcing rules—it's about building a culture where everyone, from food handlers to schoolchildren, understands and values food safety.

Empowering consumers - engaging businesses

Kerala knows that consumer empowerment plays a critical role in ensuring food safety. A health official in the state puts it best: "Consumer empowerment is strengthened through awareness campaigns and programmes that

educate the public on their rights and responsibilities concerning food safety."

Kerala's collaboration with consumer protection bodies has led to awareness campaigns on food adulteration, hygiene standards, and proper labelling. Through its Eat Right Kerala campaign, the state has created an environment where consumers make informed choices, and businesses are encouraged to maintain high standards. Digitalization efforts, such as online license issuance and food testing reports, have made compliance easier and transparency stronger.

For a safer tomorrow

But Kerala isn't just stopping at today's challenges. The state's focus on sustainable practices is pushing it toward a safer tomorrow. The Ruco initiative, which repurposes used cooking oil, is a perfect example of how Kerala is tying food safety with environmental consciousness. This





forward-thinking approach is making sure food safety evolves with the times.

And there's more. Operations like Shawarma Special Task Force target high-risk foods, making sure that local delicacies like shawarma are prepared to the highest safety standards. The ban on unsafe practices, like the use of green eggs in mayonnaise, shows Kerala is willing to take tough decisions to keep its people safe.

Institutional backbone

Let's not forget how it all started. Kerala was the first state in India to set up a Food Safety Commissionerate. This wasn't just a bureaucratic formality—it was a declaration that food safety would be a top priority. With the slogan "Safe Food for Healthy Life", the state's focus on ensuring clean, nutritious, and safe food for all has made it a pioneer in the country.

The Right to Good Food Nation campaign,

which Kerala launched, captures the state's mission: good food is a fundamental right, and the government will do everything it can to make that right a reality.

A legacy of leadership

In 2016, Kerala implemented the National Food Security Act, further solidifying its role as a leader in food security and safety. This act, alongside the Pinarayi Vijayan government's long-term plans, has made Kerala's food safety achievements a legacy, not a flash in the pan.

As Veena George rightfully points out, "The government is leading the country towards a better food culture." Through Eat Right Places of Worship, LIFE (Leadership in Food Safety), and other innovative initiatives, Kerala is showing the country that food safety isn't just about following regulations—it's about creating a culture where good food is a right, and safe food is a guarantee.

For Kerala, food safety isn't just about topping charts—it's about setting the standard for a nationwide revolution. With a holistic, forward-thinking approach, the state is proving that food safety goes beyond policy—it's a promise.

Spotlight on Seniors

October 1st is observed, world over, as the International day of older persons, since 1991. It is aimed to recognize the valuable contributions of the senior citizens to the society and acknowledge their life experience.



Dr. Prathapan P.
Director, Centre for Gerontological Studies

The theme for the year 2024 is ‘spotlight on older persons in emergencies in the face of natural calamities, pandemics and conflicts.’

Kerala has the distinction of having the highest life expectancy in India. Naturally, the proportion of older persons in the total population is the highest. Interestingly, geriatric population is the fastest growing section in Kerala. The reasons can be attributed to the impeccable health care system of the state, general health awareness of the society, the success of family planning and the high rate of migration to other countries for education and employment by younger people.

Kerala has, in recent times, been more susceptible to natural calamities like Tsunami, Okhi, floods in 2018, 2019 and landslides in Wayanad and Idukki districts. In those difficult times, the military, voluntary organizations and public spirited citizens worked along with the government in rescue operations and rehabilitation of the affected families.

Secondly, pandemics like Nipah Virus, Covid-19, Malaria, Chikun gunya and Dengue infested in recent times. The multi-tier health service system of Kerala that ranges from primary health centres to medical colleges, offers all medical services to citizens. Traditional medicine like Ayurveda and Siddha are also readily available. The state fares well in social security measures and has a well-administered public distribution system. Horticulture and Dairy Development departments are widespread.

Many senior citizens are subjected to different types of discrimination, exploitation, neglect, economic insecurity, dependency, abuse and isolation. The conflicts predominantly occur within families.

Old age homes are usually meant for those senior citizens who have no one to look after. Kerala has weaved a protective network of old age homes for the elderly. There are more than 500 old age homes run by voluntary organizations that are receiving grant from the Government and 16 Old age homes run directly by the Social



Justice Department. It is commendable that the department had framed a Manual for the administration of old age homes and Rules for Registration and Recognition of old age homes. Further the Government had constituted 27 Maintenance Tribunals in Kerala with a view to protect the life and property of senior citizens. The Police Department has Janamaithri Police Stations. There exists a toll free telephone number 14567 for counselling care of senior citizens. The Tribunals need to be empowered, with adequate personnel and training to sensitize the issues relating to the aged so that the provision of the Act gets implemented in letter and spirit. The Kerala State Policy for Senior Citizens 2013 also envisages the care and protection of Senior citizens socially and economically.

On the International day of older persons, attention is sought on these issues. Since, Kerala has a highest proportion of senior citizens, this social problem requires more qualified attention. More attention must be given to impart and

promote digital literacy among older persons. Greater intergenerational bonding can give a sense of security in the old age. Stringent measures to prevent discriminatory and abusive behavior against elderly are also the need of the hour. The focus should be on giving publicity and awareness regarding the functioning of Maintenance Tribunals, human rights of older persons and the schemes and programmes for older persons.

Vayomitram project may be extended

Age friendly Grama Panchayath Scheme which was implemented in Mundoor, Karimpa, Kavumba and Perumputhuseri Panchayaths (in Palakkad district); and Manikkal, Vembayam and Puzhakkal Panchayaths (in Thiruvananthapuram district) with the technical support from the Centre for Gerontological Studies Thiruvananthapuram may be extended to other Panchayaths by utilising C.S.R fund or Senior Citizen Fund. Vayomitram project mainly provides free medicines through mobile clinics, palliative care, help desk etc to the old age.

This would help to ensure dignity and human rights of older persons so that they are valued, protected and empowered in the face of natural calamities, pandemics and conflicts.

“Prioritising Mental Health at the Workplace”



Reena Rajan
Freelance Writer



Mental health encompasses being functional on the physical, emotional, and psychological levels and a connection beyond—touching the spiritual aspect of well-being. Staying connected with oneself is crucial for maintaining overall balance.

This year's theme for mental health is 'Prioritising Mental Health at the Workplace'. Most of us spend a significant portion of our day at work. From getting ready and planning personal space around work to performing our daily tasks, our careers are intertwined with our identities.

For many of us, our workplace helps define our sense of self. We often believe that our paycheck, job position, and titles define our worth, and society tends to reinforce this idea by valuing these aspects. But while organizations capitalize on this relationship between career and identity, the conversation around mental health needs to be placed at the forefront.

Prioritizing mental health at the workplace should not be

an afterthought. Ensuring that employees are supported, empowered, and able to perform at their best is crucial.

We are increasingly hearing alarming stories: young professionals experiencing sudden cardiac arrests, burnout among teachers, or high stress levels among chartered accountants, bank employees, and IT professionals. These are signs of a deeper issue that needs to be addressed. How can individuals and organizations overcome these challenges and stay functional in the long run?

Strategies for individuals

Keeping calm might be the mantra, but it is often easier said than done. So, how do we achieve this calm?

Organize your day: A simple to-do checklist that marks what's been done and prioritizes



important tasks can significantly reduce stress.

Social connections: Meet with people who care about you or who you believe matter in the long run—once every two weeks, or more if possible. Build a support system of meaningful relationships.

'Prioritising Mental Health at the Workplace' is this year's theme for mental health.

Engage in light-hearted conversations: Not

everything needs to be problem-solving. Sweet, light, and non-goal-oriented conversations with loved ones can be a mental reset.

Daily reflection: End each day by reflecting on your feelings. Add a few minutes of simple exercise and practice the art of letting go.

Gratitude: Practicing gratitude offers solace in difficult times and nurtures emotional resilience.

Organizations must take proactive steps to create a mentally healthy workplace:

Policies on mental health: Establish clear policies prioritizing mental well-being,

ensuring employees know their mental health is valued as much as their productivity.

Professional support: Hire or outsource mental health professionals to conduct regular check-ins, offer counseling, or guide employees through stress management.

Training and team building: Implement training programs and activities focusing on team cohesion, stress management, and productivity. These efforts contribute to a 360-degree shift in employee performance and overall workplace morale.

Mental health is not the responsibility of one individual—it is a collective effort. It requires commitment from all of us—employees, employers, and society—to create environments where people can thrive. When prioritizing mental health, we contribute to healthier families, stronger communities, and an improved quality of life. Let us work together to make mental health at the workplace not just a necessity but a priority.

For many, workplace defines a sense of self. While organizations capitalize on this relationship between career and identity, the conversation around mental health needs to be placed at the forefront.

Step into the Future

AI-Enhanced New Media Skills for a Thriving Career



Jayakumar K.
IT Expert



Emerging trends such as AI-generated content, SEO optimization through AI algorithms, and immersive storytelling are reshaping industries. Those equipped with AI-driven tools and techniques will be at the forefront of this growth. In the fast-evolving landscape of digital media, professionals with advanced skills in AI-enhanced marketing and content creation are increasingly sought after. With global digital marketing investments projected to reach new heights, the demand for individuals who can leverage AI tools to optimize content strategies and drive online visibility is at an all-time high.

Emerging trends like AI-generated content, advanced SEO through AI algorithms, and immersive storytelling are redefining industries, creating an edge for those equipped with AI-driven tools and techniques. As businesses rapidly adopt these innovations, they are seeking professionals capable of seamlessly blending creativity with technology. Fields such as AI-powered journalism, digital marketing management, and performance analytics are generating dynamic new roles, positioning experts with AI-enhanced skills at the forefront of this expansion.

Rising Demand for New Media Professionals

With India witnessing a significant rise in internet penetration, the demand for professionals who can harness AI for content creation, marketing, and web solutions is skyrocketing. The Internet and Mobile Association of India (IAMAI) and Kantar report revealed that India's internet penetration has surpassed 820 million users, with rural India contributing significantly to this growth. According to recent market reports, India's digital marketing sector is set to generate over 200,000 jobs in the coming year. This increase is fuelled by the surge in digital ad spending, forecasted to hit \$526 billion globally by 2024. Such trends highlight the increasing reliance on digital platforms, driving the need for professionals well-versed in AI-enhanced marketing strategies and content optimization.

The field of New Media marketing is rapidly expanding, with online public relations, reputation management, and branding witnessing exponential growth. With these market dynamics in mind, KELTRON has introduced an innovative course called GAINNEWS—Generative AI-enhanced New Media and Web Solutions. Keltron's GAINNEWS diploma equips students with the most up-to-date skills and knowledge required to thrive in the



booming field of new media marketing and data analytics.

Advanced Curriculum for a New Era in Digital Marketing

As the digital economy surges, so do the opportunities for skilled professionals in new media and artificial intelligence (AI). The professional diploma in Generative AI-Enhanced New Media and Web Solutions (GAINNEWS), introduced by Keltron Knowledge Services Group (KSG), is a comprehensive programme that arms participants with cutting-edge skills to thrive in the modern digital workplace. This course is not just about learning; it's about gaining the practical expertise needed to stand out in today's competitive job market.

This programme has been meticulously designed to fill the existing gap in the job market by equipping students with advanced techniques in Generative AI Engine Optimization (GEO), AI-driven content strategy, and digital accessibility.

This transformative diploma opens doors for a wide range of career opportunities in SEO, SMO, performance marketing, AI-powered journalism, and psychometric marketing—fields that are rapidly evolving and in high demand. Graduates will find themselves ideally suited for roles in digital marketing management, AI marketing analytics, content strategy, and web auditing.

Keltron's GAINNEWS programme stands apart from traditional digital marketing courses by incorporating state-of-the-art AI technologies and focusing on user-centric, accessible web solutions. The curriculum spans diverse areas, including AI-driven blog architecture, immersive storytelling, and community management, offering a comprehensive skill set that goes beyond the basics. Designed by industry experts, the programme provides practical training that ensures graduates are ready for the workforce from day one.

Convenient Training Locations Across Kerala

Understanding the logistical challenges many students face, Keltron is offering the GAINNEWS programme in seven districts across Kerala. This allows participants to enrol at a location most convenient for them, ensuring broad access to quality education without the hassle of long-distance travel.

A Launchpad to a Lucrative Career

The AI-driven digital marketing landscape is constantly evolving, and professionals who possess the right skills will lead the charge. Keltron's GAINNEWS programme ensures that its graduates are among the best-prepared candidates in the market, ready to secure jobs that command higher salaries and offer strong career growth potential.

If you're looking to start or switch to a career in digital marketing, Keltron's GAINNEWS diploma could be the key to your future success.

Sources:

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- IAMA and Kantar: *Internet in India 2023 Report*

Powering the Future with Thorium

Thorium nuclear reactors promise a cleaner, safer, and more sustainable path to energy independence and environmental preservation



M. Muhammed Haris
Freelance Writer

We are progressing toward the vision of Dr. Homi Jahangir Bhabha, the Father of India's nuclear programme.

The generation of electricity from thorium nuclear plants and its escalation to a sustainable stage of power generation is not a distant dream. The United States, United Kingdom, Germany, China,

Indonesia, Israel, Japan, Norway, and India are at the forefront of research in this field. Thorium-based nuclear power generation relies on the nuclear fission of uranium-233, produced from the fertile element thorium. A thorium fuel cycle offers several potential advantages over the uranium fuel cycle, including thorium's greater abundance on Earth, superior physical and nuclear fuel properties, and reduced nuclear waste production. One of the notable advantages of thorium fuel is its low weaponisation potential, making it challenging to weaponise uranium-233 bred in reactors, while plutonium-239 is also produced in thorium reactors. Thorium is key to developing a new generation of cleaner, safer nuclear power. In 2011, scientists at the Georgia Institute of Technology assessed thorium-based power as a solution lasting over 1000 years or as a quality low-carbon bridge to sustainable energy, addressing a significant portion

of humanity's environmental impact. However, developing thorium power entails significant startup costs.

There is much less nuclear waste when thorium is used as fuel in a liquid fluoride thorium reactor. The thorium fuel cycle is a potential means to produce

The success of research and development activities using molten salt of thorium to produce electricity in the Kalpakkam reactor in Tamil Nadu marks a breakthrough in the nation's power generation. These R&D activities, conducted since India's independence, have achieved fruitful results, inspiring scientists to advance nuclear energy through thorium reactors.



long-term nuclear energy with low radio-toxicity waste. Additionally, the transition to thorium could be facilitated through the incineration of weapons-grade plutonium (WPU) or civilian plutonium. Since natural thorium can be used as fuel, costly fuel enrichment is unnecessary. It is estimated that one ton of thorium can produce as much energy as 200 tons of uranium or 3,500,000 tons of coal. Mining thorium is safer and more efficient than uranium, as thorium's ore, monazite, generally contains higher concentrations of thorium than the uranium percentage found in its respective ore. This makes thorium a more cost-effective and environmentally friendly fuel source, with mining being easier and less hazardous than uranium mining.

Thorium is three times more abundant than uranium and nearly as abundant as lead and gallium in the Earth's crust. India has the largest supply of thorium in the world, with comparatively lower quantities of uranium. Monazite, an ore of thorium, is abundant in the beach sands of Kollam, presenting vast economic potential for Kerala.

India has projected to meet as much as 30% of its electricity demand through thorium by 2050. In February 2014, the Bhabha Atomic Research Centre (BARC) in Mumbai presented its latest design for

a next-generation nuclear reactor that uses thorium as fuel, called the Advanced Heavy Water Reactor (AHWR). This will reduce dependence on fossil fuels, mostly imported, and significantly contribute to global climate change mitigation efforts.

The Indian government is also developing up to 62 reactors, primarily thorium-based, expected to be operational by 2025. India is the only country with a detailed, funded, government-approved plan focussed on thorium-based nuclear power. The country currently derives less than 2% of its electricity from nuclear power, with the remainder coming from coal (60%), hydroelectricity (16%), other renewable sources (12%), and natural gas (9%). India expects to produce around 25% of its electricity from nuclear power. In 2009, the chairman of the Indian Atomic Energy Commission stated that India has a long-term objective to achieve energy independence based on its vast thorium resources to meet its economic ambitions.

KAMINI (Kalpakkam Mini Reactor) is the world's only thorium-based experimental reactor, producing 40MW of thermal energy at full power. KAMINI is cooled and moderated by light water and fuelled with uranium-233 metal produced by the thorium fuel cycle harnessed by the neighbouring FBTR reactor.

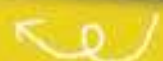
Electricity generation in thorium plants will position India as a world superpower in both economic and technological terms, making the country energy self-sufficient. We can hope that nuclear energy will be used solely for peaceful purposes and that the world will increasingly rely on environmentally friendly energy sources.

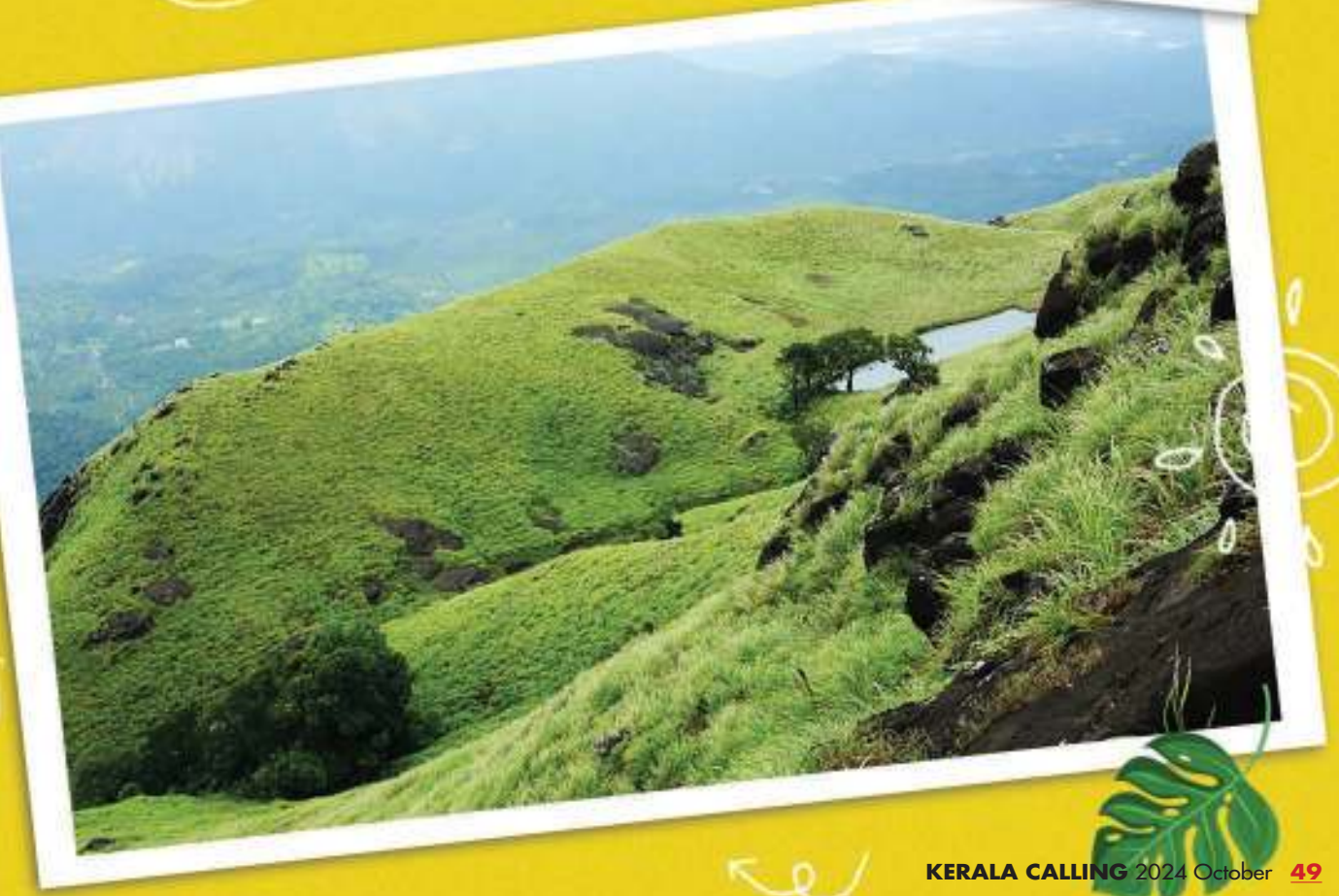
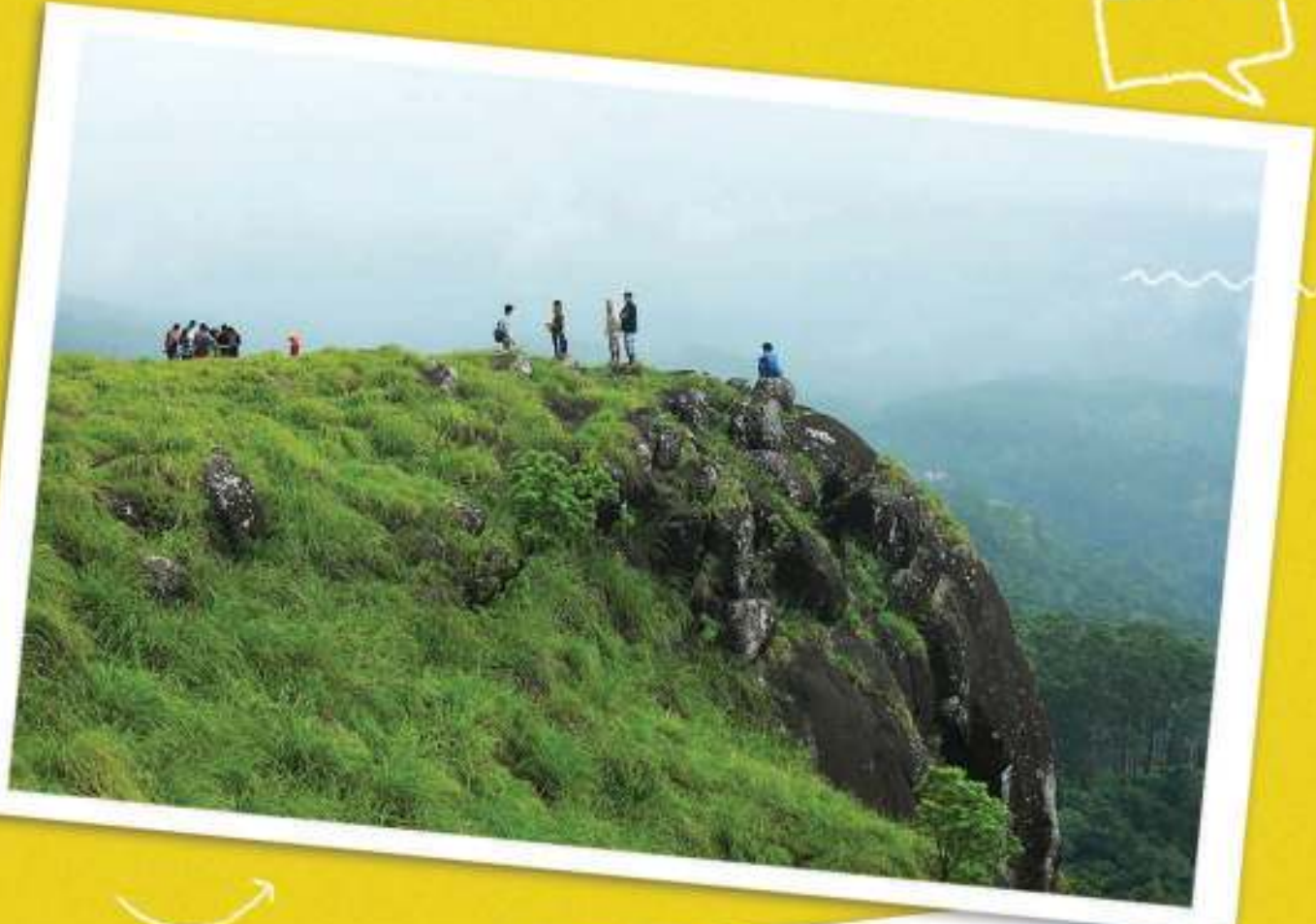
Into the Green...



Chembra Peak, the tallest summit in Wayanad, has reopened to trekkers, drawing adventurers with its lush trails, especially during the monsoon season from September to February. Known as Wayanad's first eco-tourism site, it's managed by the Forest Department, which has limited daily visitors to protect its natural beauty. Trails wind through dense forests, leading to a heart-shaped lake at the summit—a beloved spot among travelers. Originally explored by the British, who set up camps and plantations, Chembra has a rich history and diverse wildlife, including rare species like the Malabar pit viper and wild elephants.

Photo credits: Ramesh Kumar Vellamunda







Kerala has started the countdown towards a litter-free society. The Malinya Muktham Navakeralam campaign was inaugurated by Chief Minister Pinarayi Vijayan on 2 October. The campaign, which aims to make Kerala completely garbage-free, will come to a culmination on 30 March 2025. The government has sought co-operation of people from all walks of life to make the state completely garbage-free by adopting new habits and methods in waste disposal. Extensive cleaning programmes will be implemented with the participation of the public, various organisations, and local self governments. The objectives of the campaign include making a hassle free and viable waste management system, promoting the habit of reusing /recycling, promoting nature-friendly alternatives, initiating legal action against unscientific and unhealthy waste dumping practices and encouraging best waste management practices. This campaign is jointly organised by Haritha Keralam Mission, Suchitwa Mission and Local Self-Government Institutions.

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Chief Minister's Distress Relief Fund Account

No.	Bank	Account Number	IFSC Code
1.	State Bank of India	39251566695	SBIN0070028
2.	South Indian Bank	0721053000003020	SIBL0000721
3.	Federal Bank	10210100422271	FDRL0001021
4.	HDFC Bank Ltd	50100350210557	HDFC0002485
5.	ICICI Bank	626201089884	ICIC0006262
6.	CSB Bank Ltd	00 9603981212190001	CSBK0000096
7.	Axis Bank	920010023834712	UTIB0000784
8.	Dhanalakshmi Bank	003700100156782	DLXB0000037
9.	IDBI Bank Ltd	0889104000111454	IBKL0000889
10.	Indian Overseas Bank	009901000002020	IOBA0000099
11.	Union Bank of India	502902010900782	UBIN0550299
12.	Canara Bank	5842132000007	CNRB0005842
13.	Kotak Mahindra Bank	1815162037	KKBK0009206
14.	Bank Of Baroda	29860100006714	BARB0PEROOR
15.	Standard Chartered Bank	43710072419	SCBL0036099
16.	Kerala Gramin Bank	40341101051311	KLGB0040341
17.	IndusInd Bank	159900002020	INDB0001599
18.	Bank Of India	853810110007599	BKID0008538
19.	Punjab National Bank	3301000104118534	PUNB0330100
20.	Kerala Bank	110110801000339	KSBK0000101
21.	Central Bank of India	5652206185	CBIN0280937
22.	UCO Bank	02880110077641	UCBA0000288
23.	Indian Bank	7839343398	IDIB000P030
24.	Covid-TSB A/c (1475)	799010100191475	
25.	Special Treasury Savings Bank	799010100193172	

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and restore
everything that
has been
shattered.**

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