

## Sebi suspends trading in Bharat Global Developers over financial misrepresentation

New Delhi: Markets regulator Sebi on Monday suspended trading in Bharat Global Developers Ltd (BGDL) for financial misrepresentation, misleading disclosures, price manipulation, and offloading shares at inflated prices. Additionally, the regulator has barred the company, its managing director Ashok Kumar Sewada, CEO Mohsin Shaikh and directors—Dinesh Kumar Sharma and Nirali Prabhathai Karetha — and several preferential allottees of shares among the 18 entities from the securities market. Also, Sebi, in its interim order, has frozen illegal profits to the tune of Rs 271.6 crore made by preferential allottees through the sale of shares.

This came after the Securities and Exchange Board of India (Sebi) initiated an investigation into Bharat Global Developers following social media posts and a complaint on December 16, 2024. The inquiry was triggered by a dramatic 105-fold increase in BGDL's share price, which surged from Rs 16.14 in November 2023 to Rs 1,702.95 in November 2024. The regulator examined the matter to determine whether the company violated securities laws, including the Sebi Act, Prohibition of Fraudulent and Unfair Trade Practices (PFUTP) Regulations, and Listing Obligations and Disclosure Requirements (LODR) Regulations. In its probe, Sebi found that BGDL replaced its management, approved preferential allotments to select individuals, and issued false disclosures

about business expansion and partnerships. These actions were part of a scheme to manipulate share prices and allow insiders to sell shares at artificially high prices. The company portrayed itself as a successful company with large contracts and technological expertise, none of which were true. This misrepresentation attracted unsuspecting investors and inflated the share price. Moreover, the financial statements of the company also appeared to misrepresent the true state of affairs of the company and its business.

The financial statements revealed that till FY23, the company had negligible revenue, expenses, fixed assets and cash flows. Suddenly, however, the financial results from the quarter ended March 2024 showed a steep spike in revenues and expenses. This was accompanied by negligible fixed assets, negative cash flows from operating activities and huge amounts of trade receivables and payables. Further, the regulator noted that the number of shareholders surged from 10,129 in September 2024 to 44,976 in December 2024. However, over 99.9 per cent of shareholders held less than 1 per cent equity, while a few preferential allottees controlled most shares and profited significantly. Moreover, a bonus share issue (8:10) and a share split (10:1), scheduled for December 26, 2024, would have further diluted ownership and increased trading



volumes. "Misstatements regarding its business, financials and prospects as disseminated by BGDL show an effort to drum up the company's share price. "In light of the facts and findings... I find that in the garb of a compliant company, BGDL has created paper wealth now with a market cap of above Rs 12,000 crore, which is not founded on any genuine economic activity or production of any goods or services. In fact, such wealth has arisen from misrepresentation of the company's business and financials to general investors and shareholders," Sebi Whole Time Member Ashwani Bhatia said in his 25-

page order. Accordingly, Sebi in its order said, "trading in the scrip of Bharat Global Developers Ltd is suspended till further orders". Also, the regulator has barred the company, its top management) and preferential allottees "from buying, selling or dealing in securities, or accessing capital market either directly or indirectly, in any manner whatsoever until further orders". Further, the compliance officer has been restrained from associating with any intermediaries registered with Sebi, any listed public company or any company that intends to raise money from the public, until further orders.

## Telangana faces double blow due to Centre's bias, State's apathy



Hyderabad: Telangana's development trajectory faces a major setback due to the Centre's alleged partisan approach in release of grants-in-aid and the State government's apathy in releasing matching grants under Centrally Sponsored Schemes (CSS). The State has received a mere Rs 3,899 crore in grants-in-aid from the Centre until October-end, a stark shortfall against the budgeted Rs 21,636 crore.

This trend of reduced allocations has persisted over the years, with Telangana receiving Rs 9,729 crore in 2023-24 against a budget estimate of Rs 41,259 crore and just Rs 8,619 crore in 2021-22 against Rs 38,669 crore. States governed by BJP or its allies reportedly fare better in allocations, raising concerns about bias in fund disbursement. Compounding the crisis, Telangana's delay in releasing matching

grants of Rs 1,200 crore – Rs 1,600 crore may cause the state to forfeit Rs 4,000-5,000 crore in Central funds under various CSS which are reportedly set to lapse by month-end. The key CSS grants, require the State to contribute 20-50 per cent of the funds for their implementation. The Centre has rejected requests for deadline extensions, leaving Telangana's development projects at risk. Under the CSS, Telangana received only Rs 5,387 crore in 2022-23 and Rs 6,158 crore in 2023-24 under the BRS regime from the Centre. However, the Congress govern-

ment has pegged allocations amounting to Rs 15,168 crore during the current fiscal. Though the Centre released its share, the State government is yet to release matching grants. Sources indicate that the Centre's stance remains firm, requiring the State to contribute its share in matching grants to receive funds.

With dwindling tax revenue and mounting fiscal pressures, Telangana's inability to secure crucial funds could further strain its finances and slow infrastructure and welfare initiatives.

## Overcast and chilly conditions in Hyderabad continue

Hyderabad: People in Hyderabad experienced a second consecutive day of cloudy and chilly weather conditions on Thursday. Light rain, overcast skies and sporadic drizzle continued to affect parts of Hyderabad and districts. Similar weather pattern is expected to continue throughout

Thursday. "Generally cloudy sky. Mist/ Hazy conditions very likely to prevail during morning hours. Light Rain/Drizzle very likely to occur towards evening," the IMD-Hyderabad forecast for Thursday, said. While chilly conditions prevailed across Hyderabad due to cold winds.



# Goodbye, Zakir bhai. You will forever remain our guiding light

The original Shakti group: Zakir, John MacLaughlin, L. Shankar and Vikku Vinayakram. The original Shakti group: Zakir, John MacLaughlin, L. Shankar and Vikku Vinayakram. | Photo Credit: Special Arrangement

The master-percussionist made the tabla his own in a way that the modest drum set meticulously followed his instructions and was ever willing to roll out his experiments. But his music was not just about him; he constantly worked to set up a close-knit family of artistes. Over the years, the family just kept growing. Most of its members were promising enthusiasts, who, taking a cue from their Zakir bhai, wanted to engage with a music that shunned labels and despised divides. So, from a prolific and avant-garde performer, Zakir Hussain turned into a compassionate mentor, powerful influencer and a guiding force. His passing is not only being mourned by his family, collaborators and admirers, but also by a huge and formidable line up of young musicians determined to keep alive his creative vision. Kanjira exponent Selva Ganesh Whatever I am today is all because of him. Had he not met my ghatam virtuoso-father Vikku Vinayakaram and decided to make him a part of Shakti, our family of musicians would have never been on the world stage. My father and I are exponents of instruments, which in Carnatic parlance are referred to as upa pakkavadyam (secondary accompanying instruments). Zakir bhai pulled us out of our allotted space behind the main artistes in a kutcheri and placed us alongside international stars in cross-genre ensembles. Since then, we have never looked back. Selva Ganesh, Kanjira Sai Shrivani I was seven when the Taj Mahal tea jingle, which introduced Zakir Hussain to many in the South, aired on television. Despite being in Madras, a city soaked in Carnatic music, the sound of Ustadji's tabla ruled my idea of sound. My self-learning journey started by listening to his recordings on loop, and reproducing them through trial and error. My ears were the only learning tool. I had no way of 'seeing' his playing, except when Doordarshan telecasted his concerts. Two years later, I was part of a children's group performing before Ustadji's concert with Mandolin U Shrinivas at The Music Academy. I saw him pay attention to my playing, while his hands kept the beat. Later, he spotted me in a corner, and lifted me in his arms. "From whom are you learning the tabla?" he asked. I pointed towards him. His eyebrows went up, and he told my mother: "Bring him to Bombay and my father and I will personally teach him." Our family could not take that up, but his words became my inspiration. A decade later, dancer Chitra Visweswaran and her husband took me to Bombay for a concert, and then to his house. I told him why I could not move to Bombay then, and he said: "Sound is the greatest teacher. You don't need to see me. I will always be your guru." Ours was a manaseega (from the heart) guru-sishya bonding. If I knew he was coming to the city, I would wait outside Taj Coromandel, where he always stayed. He'd ask how long I'd been waiting, and tell me to bring my instrument. He appreciated how I maintained its sound, and would mostly use it for his concert. He would teach me a few bols, and mend my self-learning. When I began my

journey in sound, he blessed me and said: "Sound has always guided you. You will serve sound for life." When it was 15 years of my Resound India Studios, he asked me to bring along a paper and pencil, and wrote a note of encouragement. He also left me with a lesson for life: 'Artistes are invisible. Sound is eternal'.

Sai Shrivani, Music producer and sound engineer Flautist Rakesh Chaurasia He deeply impacted my approach, thought process and presentation. He would often guide me on which raga to play or how to play certain notes, drawing examples from legendary artistes such as my guru and uncle Pt. Hari Prasad Chaurasia or Kishori Amonkar. But he would never force his opinion upon you. He would guide you only when he thought you needed it. His life and art was all about sharing and caring. I was extremely touched by the way he made me part of the 2024 Grammy winning ensemble featuring him, American banjo player Bela Fleck and American bassist Edgar Meyer. We won for 'Pashto' and 'As we Speak'. When these works were being conceived, I was in the U.S. performing concerts. He wanted Bela and Edgar to hear my playing and soon we were all performing together. And then, as they say, the rest is history. Zakir bhai spotted my drumming talent and invited me to share the stage with him. Since then, his rhythm masterclass helped me reach heights I had never imagined I could scale. He taught me how to put the self behind in collaborative set-ups. My bond with him was the same that I have with god — of devotion and surrender. Over the past 15 years that I had been performing with Zakirji, I gained precious insights into Indian classical and world music. I was part of several of his international collaborations and toured the world extensively with him. He had the uncanny knack of making every member of his musical team comfortable and happy. He knew that was the only way you could get the best out of anyone. When Shankar Mahadevan, Selva Ganesh and I walked up to receive the Grammy as part of Shakti in February this year, we never knew this would be Zakirji's precious parting gift to us.

Ganesh Rajagopalan, Violin Violinist Kala Ramnath Affectionate, humble and empathetic. For me, these three words define the man behind the maestro. Having lost my father early in life, I always looked up to Zakirji to navigate the labyrinth of life and art. Forever looking to promote new talent, I remember how he made me play at Pt. Ravi Shankar's 75th birthday celebration. I can also never forget what he told me when I began to perform, 'don't try to ape your aunt's (well-known violinist N. Rajam) style, come up with a distinct approach. That pushed me to think and create my own path. I have some wonderful memories of him of the time we spent together on a small island called Batam, Indonesia! Monkey Man had started with a prayer we each said to our own supreme powers in our hearts and lighted diyas at our very first location, which happened to be the temple of Ardhnarishwara, where the sequence between Dev Patel and Zakir bhai was shot. He had come all the way from LA to shoot. He quarantined himself for over a week and joined us for this ritual it was in-



credible to see him play the tabla the entire day for the sequence. He kept us all glued to the rhythms he was creating. Many probably didn't know who he was but they all were mesmerised. I sat right next to him and heard him play almost nonstop. He hardly moved from his place. Whether the camera was on

or not he kept playing. It showed how big a part of his life were the two little drums. Almost an extension of his body. He spoke little. His music did all the talking. I am sure wherever you are Zakir bhai you are creating magic with your hands! Music must go on and it will in your memory forever.

## New anti-drone system shoots down two unauthorised UAVs at Maha Kumbh in Uttar Pradesh

The anti-drone hi-tech system successfully shot down and deactivated two drones flying without permission on the very first day, authorities said. Mahakumbh Nagar: A robust anti-drone system has been deployed here to ensure the safety of devotees who will attend the Maha Kumbh 2025, the Uttar Pradesh government said in a statement on Saturday.

The anti-drone system was activated

on Friday and it successfully intercepted two unmanned aerial vehicles (UAVs), it said. According to the release, experts have been roped in to manage the anti-drone system. These experts are stationed at a central location, continuously monitoring all drones flying in the vicinity.

They have the capability to disable any suspicious drone mid-flight, if necessary, the statement said. "An anti-drone system has been activated in the Maha Kumbh fair area.



# JSW MG Motor India Offers Zero Down Payment on the MG Astor and MG Hector

Hyderabad: JSW MG Motor India has announced a zero down payment scheme\* on its popular SUV models - the MG Astor and the MG Hector. Under this attractive scheme, customers can avail of up to 100% on-road price funding, eliminating the need for any upfront payment. This limited-period offer, valid until December 31, 2024, comes with a comprehensive suite of financing benefits through brand's authorised finance partners. To provide maximum flexibility to its customers, JSW MG Motor India is offering an extended loan tenure of up to 7 years. Additionally, customers can benefit from accessories funding of up to INR 50,000 across all variants on both the models. The scheme also includes financing options for extended warranty and Annual Maintenance Contract (AMC), ensuring complete peace of mind for buyers. Furthermore, the scheme includes a complete processing fee waiver, making the purchase process even more convenient and cost-effective.

The MG Astor comes with a host of exciting features – Ventilated Seats in the front row, Wireless Charger, Wireless Android Auto & Apple Car Play, and Auto-dimming IRVM for additional security and convenience, along with an updated i-SMART 2.0

with Advanced User Interface for a holistic driving experience. The MG Astor 2024 is equipped with i-SMART 2.0 and 80+ connected features for a seamless and convenient driving experience. Among its standout features is the JIO Voice Recognition system, enabling advanced voice commands for Weather, Cricket updates, Calculator, Clock, Date/Day information, Horoscope, Dictionary, News and knowledge. The Anti-Theft feature, coupled with Digital Key functionality, ensures security even without a network connection.

The MG Hector, India's first Internet SUV, was introduced in 2019 and has since set a new bar for SUVs. With some best-in-class offerings like India's largest 35.56 cm (14-inch) HD Portrait infotainment screen, dual pane panoramic sunroof, the MG Hector is an exceptional package for SUV enthusiasts who are looking for superior driving experience, with a touch of technology and top-notch performance. The SUV boasts a host of ADAS (Level 2) features, complemented by innovative features like a Digital Bluetooth key with sharing function, wireless charging, and ventilated front seats. Safety and intelligence merge with Traffic Jam Assist, while the i-SMART technology offers



## Customers can avail of up to 100% on-road price funding

over 75 connected car features. Adding to its premium appeal, the Hector is available in 5, 6 and 7 seating options with the starting

price of 13.99 Lakhs and delivers exceptional value as the best-priced SUV with a panoramic sunroof in India.

# Wooden string puppeteer Mothe Jagannatham passes away in Jangaon



Hyderabad: Eminent wooden string puppeteer Mothe Jagannatham, affectionately called 'Bommalollu', passed away in Ammapuram of Jangaon district. Jagannatham led a troupe of performers dedicated to preserving a centuries old tradition of storytelling through wooden string puppetry.

Their performances brought to life epics like the Ramayana, Mahabharata, and stories of Prahlada and Ramadasu. The

troupe's artistry represents the rich cultural heritage of Telangana region and presently, only two such troupes remain from same Mothe family in Warangal. Jagannatham's life and contributions were further celebrated in the film Bommalollu, a documentary film depicting their unique cultural value to wooden string puppetry by well known film maker Ajit Nag. Vedakumar Manikonda, Chairman of the Deccan Heritage Academy Trust, recalled his long association with

Jagannatham and said together, they toured 3 regions of 11 districts of combined Andhra Pradesh. National Manuscript mission Awareness campaign Jagannatham's troupe puppetry performances contributed to preservation and the importance of cultural

heritage among educational institutions and the public, he said. Vedakumar urged the State government to provide financial support to Jagannatham's family and recognise his traditional cultural form contribution to Telangana.

## Why pineapple makes your mouth tingle?

Hyderabad: The tingling or burning sensation in your mouth after eating fresh pineapple is primarily caused by the action of bromelain, a group of enzymes found in the fruit. Bromelain is a protease, meaning it breaks down proteins into smaller fragments. When you consume fresh pineapple, these enzymes begin to break down the proteins in the delicate tissues inside your mouth, particularly in the soft lining of the tongue, cheeks, and gums. This process leads to mild irritation, resulting in the tingling or burning sensation.

In addition to bromelain, the natural acidity of pineapple plays a role in the discomfort. Pineapple contains citric acid and ascorbic acid (vitamin C), both of which can contribute to a sensation of irritation or burning, especially if your mouth is already sensitive. The combination of the acidic nature of the fruit and the enzymatic activity of bromelain intensifies the feeling.

Another factor is that bromelain can also have a mild exfoliating effect, which removes dead skin cells from the surface of



your mouth's soft tissues. This is why you may feel a tingling or discomfort immediately after eating fresh pineapple, especially if you eat a large amount.

It's important to note that this sensation is temporary, and it typically fades once the pineapple is no longer in your mouth. Cooking, canning, or juicing the pineapple neutralises bromelain, so these forms of pineapple don't have the same effect on your mouth. This is why canned or cooked pineapple doesn't cause the tingling sensation, as the enzymes have been deactivated through heat.



# SPIT & Alumni Association Hosts 1999 Batch's 25-Year Reunion Celebration

Hyderabad: Sardar Patel Institute of Technology (SPIT), one of Mumbai's premier engineering institutions, hosted its Annual Alumni Reunion on December 21, 2024, at the SP Jain Auditorium, Bhavan's Campus, Andheri West. This special event marked the 25th anniversary of the 1999 graduating cohort, celebrating their professional milestones and welcoming about 300 alumni, including leaders from the technology and business sectors. Alumni of the 1999 batch, Sameer Nigam, CEO and founder of PhonePe, and Rahul Chari, CTO and founder of PhonePe, announced a \$1M grant at the event. The grant will enhance infrastructure, foster innovation, and cultivate an entrepreneurial mindset among students, empowering them to develop cutting-edge solutions and drive impactful ventures.

They were both awarded the distinguished alumni award for their exemplary contributions to business and society. PhonePe has revolutionized India's digital payments ecosystem with their seamless, user-centric platform. Their visionary leadership has made PhonePe a trusted name, driving financial inclusion for millions across the country. Speaking at the reunion Rahul Chari, Co-Founder and CTO PhonePe said, "As I reflect on my time at SPIT, being part of the first graduating batch of Computer Engineering holds a special place in my heart. It was here that my co-founder Sameer and I truly began our entrepreneurial journey with the office for our first venture located within the institute itself. The strong fundamentals I built at SPIT and the invaluable lessons from the exceptional faculty and the peers I studied alongside have been instrumental in shaping my ability to build PhonePe. I hope other alumni will also con-



tribute in their way to help build SPIT into a truly great institute that continues to inspire and empower the next generation of innovators and leaders."

The event honored alumni for their outstanding achievements with the SP-Changemakers Awards. These included: Outstanding alumni - Saurabh Netravalkar, Cricketer-turned-software engineer, he excelled in India's U-19 team be-

fore moving to the U.S. in 2015, where he earned ODI status for the U.S. and led a historic win against Pakistan in the 2024 T20 World Cup. Balancing cricket with his role at Oracle, he has become a key figure in U.S. cricket's rise. Innovation & Entrepreneurship - Vikrant Potnis, Vikrant Potnis, founder of FundEnable, has trained over 2,000 startup founders and 500 angel investors, transforming India's fundraising ecosystem through innovative programs like VC Bootcamps and

Angel School. Honored with the Times Business Award. Leadership & influence - Swagat Bhandari, IAS officer with 14 years of experience, including as MD of Kerala Water Authority and District Collector Kasaragod, led transformative projects worth ₹50,000+ crore and key COVID-19 initiatives. A 2023 Chevening Gurukul Fellow at Oxford, she has driven impactful reforms in water management, tribal welfare, and industrial policy.

## Government Employees Are the Cause of Corruption

This was revealed in the survey conducted by Youth for Anti-Corruption. The report was released by former CBI Joint Director Lakshminarayana.

Hyderabad: Former CBI Joint Director Lakshminarayana revealed that corruption is rampant in government offices in Telangana, with most people believing that no work gets done without offering a bribe. This was highlighted in a survey conducted by the NGO Youth for Anti-Corruption, led by Palnati Rajender. He mentioned that many people felt corruption could be reduced if tasks were completed online without visiting offices.

A total of 14,345 people shared their opinions for the survey. The report was released by Lakshminarayana on Wednesday at the Erramanzil office. He also referred to Transparency International, an organization that ranks countries based on corruption levels. Lakshminarayana stated that India is ranked 83rd in the world in terms of corruption. According to the survey, 76% of respondents felt that corruption is prevalent in Telangana's government offices. About 14% of participants described corruption as

moderate. Nearly 47.90% of people said no work gets done without offering bribes, while 28.40% said officials harass them. About 63.70% reported that officials demand bribes in cash, and 34.20% said bribes are taken in the form of goods. Additionally, 63% of respondents said there are no honest officials in their areas, while 20% believed some honest officials exist.

When asked about tackling corruption, 48.60% believed that agencies like ACB and CBI could reduce corruption, whereas 26% felt these agencies are ineffective. Furthermore, 43% admitted to offering bribes to get their work done, while 41% said they fought legally to achieve the same. The survey identified revenue, electricity, registration, police, and municipal departments as the top five most corrupt sectors. Youth for Anti-Corruption founder Rajender stated that the survey report would be shared with the Telangana government and opposition parties. He emphasized the need for collective efforts from



all political parties to create a corruption-free Telangana. Key members of Youth for Anti-Corruption, including Konne Devender,

Komati Ramesh Babu, Geetanand, Battini Rajesh, Kokkula Prashanth, Nagendra, and Naresh, participated in the event.



# Nagapattinam's journey of resilience, lessons for the future

Disasters have always served as harsh reminders of nature's overwhelming power and humanity's vulnerability. On December 26, 2004, the Indian Ocean tsunami delivered an unparalleled wave of destruction. Among the hardest-hit areas was Nagapattinam, Tamil Nadu, yet the disaster also marked a turning point, becoming a case study in how tragedy can inspire systemic reforms and lay the groundwork for more resilient societies. Two decades later, India has made substantial strides in disaster preparedness, response, mitigation. However, evolving risks, fuelled by urbanisation, climate change, and the growing complexity of disasters and increasing frequency of extreme weather events, require continuous innovation and vigilance. Revisiting Nagapattinam's experience offers valuable lessons for shaping future strategies. A watershed moment when the tsunami struck the Indian coast, Nagapattinam's 187.9-kilometre-long coastline, dotted with 73 habitations, bore the brunt. Early warning systems for a tsunami were non-existent in the Indian Ocean region, and infrastructure was ill-equipped to withstand such a calamity. After overcoming the initial chaos, rescue operations were spearheaded by self-contained area-specific teams, led by experienced officers drawn from unaffected districts and supported by personnel from critical departments such as revenue, local bodies, health, police, public works, and fisheries. Further additional resources, including the Indian Army, Indian Navy, police and fire services were mobilised. Local volunteers also played a critical role.

The quick and dignified disposal of bodies was prioritised to prevent disease outbreaks, with coastal areas disinfected using microbial inoculants and chemicals. Infrastructure restoration efforts focused on re-establishing electricity, water supply, and road connectivity. Over 13,000 temporary shelters were constructed across 50 locations to house displaced families, providing essential shelter and safety. Additionally, the government issued dynamic, field-based orders that went beyond standard permissible categories to address the diverse needs of all affected sectors. The rehabilitation and recovery efforts provided a holistic and scalable model for disaster recovery by incorporating Disaster Risk Reduction (DRR) measures applicable to various disasters. These efforts emphasised building resilient communities through the construction of over 55,000 multi-hazard-resistant homes, supported by integrated risk transfer via comprehensive insurance. Disaster-ready health-care facilities were established, and anganwadi centres, schools, and community halls were transformed into multi-hazard shelters. Livelihoods were revived and economic growth propelled by empowering coastal communities with strengthened infrastructure, including modern ports, fishing harbours, and improved agricultural practices. Alternative livelihoods were fostered by supporting women's self-help groups and improving market access, while educational facilities were upgraded to serve as disaster-safe environments. Enhanced mobility and safety were ensured through the rebuilding of roads, bridges, and critical escape routes. Coastal defences were fortified with seawalls, shel-

ter belt plantations, and multi-hazard shelters, complemented by collaborative DRR initiatives such as vulnerability reduction projects supported by World Bank assistance. Additionally, comprehensive psychosocial support was provided through counselling services.

In Nagapattinam, over 400 non-governmental organisations (NGOs) provided essential services such as medical aid, trauma counselling, sanitation, and livelihood restoration. By involving local communities in these efforts, they empowered individuals to take ownership of their recovery. The government maintained oversight, ensuring that resources were allocated efficiently and aligned with the district's needs. Institutionalising such frameworks for NGO-government collaboration can serve as a force multiplier, enabling swift and effective responses to future disasters. Disasters disproportionately affect the most vulnerable — children, women, the elderly, differently-abled individuals, and marginalised communities. For children, facilities such as Annai Sathya Home provided essential education, counselling, and emotional support to those orphaned. Women, particularly widows and single mothers, were empowered through vocational training programmes. Differently-abled individuals benefited from special medical camps and skill development initiatives aimed at fostering economic independence. Building long-term resilience

The Nagapattinam experience underscored the critical importance of planning for long-term resilience beyond immediate recovery. Infrastructure upgrades, such as strengthened health-care facilities, schools, and transportation networks, enhanced the region's preparedness for future disasters. Coastal defence measures, including sea walls, shelter belt plantations, and multi-hazard shelters, provided vital protection for vulnerable coastal areas. Additionally, the growing relevance of risk insurance, extending beyond crops to assets such as housing, marked a step toward comprehensive disaster risk management, though much progress remains to be made.

The 2004 tsunami exposed critical gaps in India's disaster management framework, catalysing the enactment of the Disaster Management Act, 2005. Key institutional developments included setting up of the National Disaster Management Authority (NDMA). State and district authorities were empowered to implement disaster management plans tailored to local needs and covering all phases of the disaster management cycle. Resilience measures were embedded in urban planning, infrastructure projects, and development policies. Since the tsunami, advancements in technology have revolutionised disaster management in India. The establishment of the Indian Tsunami Early Warning Centre (ITEWC) in 2007 ensures real-time monitoring and alerts. GIS mapping, AI-driven risk assessments, and mobile applications have enhanced preparedness, also proving their worth during recent cyclones. Moreover, post-disaster focus has shifted from mere damage assessment to Post-Disaster Needs Assessment (PDNA), ensuring more targeted recovery efforts. Contrasting global experiences



The contrasting experiences of Haiti and Chile in disaster recovery underline the critical importance of comprehensive disaster management systems. In Haiti, the lack of insurance and an underdeveloped disaster response framework led to a prolonged recovery process following the 2010 earthquake. Conversely, Chile's effective national and local disaster management plans, coupled with robust insurance coverage, enabled faster recovery. Japan further demonstrates the value of preemptive measures, including investments in risk reduction, enforcement of building codes, and robust early warning systems. For India, these examples underline the need for proactive investments in risk reduction, stricter building codes, and comprehensive insurance mechanisms. Despite progress, millions in India, in coastal villages, floodplains, and urban slums remain particularly vulnerable. Empowering at-risk communities through education and guidance is essential to prepare them for potential disasters. Embedding risk reduction into development plans is cru-

cial for creating resilient communities with shared ownership. Repetition builds readiness, and workshops, training, and consultative sessions focused on generational recall, such as those conducted post-tsunami, can ensure sustained preparedness. Leveraging local knowledge and sharing regional expertise on disaster risk reduction can enhance community-level resilience. Ultimately, disaster management is no longer just about survival. It is about ensuring that tragedies lead to learning and transformation. By honouring the memory of those lost, we can build a future where resilience and preparedness are the cornerstones of every community. J. Radhakrishnan, a 1992 IAS officer — Tamil Nadu cadre, played pivotal roles during the Nagapattinam tsunami, the Kumbakonam school fire, the Chennai floods, and COVID-19 pandemic. He has served as Health Secretary, the Commissioner of Chennai, and the Collector of four districts. He is posted now as Additional Chief Secretary, Cooperation, Food and Consumer Protection Department

## Is Alkaline water worth the hype? Find out here

Hyderabad: Alkaline water is water that has a higher pH level than regular tap water, typically ranging from 8 to 9.5 (with 7 being neutral). The pH scale measures how acidic or alkaline a substance is, with values below 7 being acidic and values above 7 being alkaline. Alkaline water usually gets its higher pH from dissolved minerals like calcium, magnesium, and potassium, which are naturally present in some water sources. It can also be produced through electrolysis, a process that uses an electrical charge to separate water into acidic and alkaline components, often resulting in water with a higher mineral content. History of Alkaline water

For centuries, people have been interested in drinking water that has a higher pH. Throughout history, many have turned to natural sources like springs, believing they offered health benefits. In fact, ancient Greeks and Romans often drank from min-

eral springs, which typically had a higher pH than ordinary tap water. However, the modern interest in alkaline water really picked up in the 20th century when scientists began to take a closer look at the pH levels in drinking water. The wellness community became particularly enthusiastic about alkaline water, with many suggesting that water with a higher pH could help balance acidity in the body and support overall health. In the 1960s, a Japanese researcher, Dr. Hayashi, started examining the health benefits of alkaline water. He discovered that water with a higher pH, when filtered through a unique electrolysis process, might offer various health improvements. This discovery fueled more curiosity about alkaline water, especially in Asia. The popularity of alkaline water grew even more in the 1990s and 2000s, thanks to better access to water filtration technology and an increasing focus on health and alternative medicine.



# Ravichandran Ashwin: The spinner who shattered status-quo

To bowl spin is to pause, reflect, tease and torment. It is much akin to making a move in chess, but in cricket with its adrenaline streaks, the big moments are often vested with batters and fast bowlers. A massive six or cartwheeling stumps makes a striking impact and lends an impetus to commentators to raise their voice and heighten the hype. But there is beauty in spin too, a seductive one that strangles batters. It is in this realm that Ravichandran Ashwin, ever the contrarian and one who is forever questioning the status-quo, made a mark as a great off-spinner. While his deliveries seemingly hung in the air for eternity and drew perplexed batters to their doom, time did fly and twilight wrapped his storied career. After 537 Test wickets, a statistic that places him currently seventh in the all-time list, besides 3,503 runs and an ODI yield of 156 scalps, the 38-year-old called time on his international career.

He made a quick announcement to the media at Brisbane's Gabba on Wednesday. "I didn't want to make this about myself," was his preamble before he said: "Today will be the last day for me as an international cricketer." Vacating the stage when he still had the spark would not have been easy but ageing limbs and a few young spinners snapping at his heels may have pushed him towards the exit door. Additionally, he was not an instant selection overseas when the team-management went for the extra seamer and preferred a lone spinner.

But like M.S. Dhoni, Ashwin is hoping to be a regular in the Indian Premier League (IPL) and fans will get to see him in action for a while, even if it will be in the yellow jersey of Chennai Super Kings, and not in Indian whites or the blue shade. When Ashwin emerged through the ranks, fine-tuning his craft in the tough TNCA league while also coping with excess analysis from a knowledgeable Tamil Nadu cricketing fraternity, India still had Harbhajan Singh doing his bit in the slow art. Ashwin, however, caught the eye through the IPL. Soon, he was part of the Indian ODI squad and was a member of Dhoni's team, which claimed the 2011 World Cup at home.

Origin story The origin story would not have been easy. For a State that is high on cricket, Tamil Nadu doesn't have as many Ranji Trophy titles as neighbouring Karnataka or more pedigreed players turning out for the national unit. If a historical ambiguity in making the final decisive step could be a bane, another hurdle was the constant desire to compare across eras. At one point, the regular cliché about Indian cricketers was that they either could be wristy batters or beguiling spinners. When Ashwin surfaced at the highest level, he was stepping into a series of massive shoes. There was the famous spin-quartet of Bishan Singh Bedi, B.S. Chandrasekhar, Erapalli Prasanna and S. Venkataraghavan, the last named also hailing from Chennai, Ashwin's home-town. And then there were his immediate predecessors: Anil Kumble and Harbhajan. These were legends with stirring achievements adorning their resumes. Comparisons were bound to occur and during a 2011 tour of England, a correspondent asked Ashwin if he felt he was ready to replace Harbhajan,

who was in the concluding phase of his career. On that distant cold day at the Old Blighty, Ashwin handled a potential landmine with deft hands, doused the fires, mentioned that he was just beginning but had confidence in his skills and also reiterated his respect for Harbhajan. The gist Ashwin constantly reinvented himself, adding new deliveries and also gifted a cult status to the carrom ball from Chennai's streets. During his more than a decade-long stint with the national team, only twice did India falter at home, once against the visiting Englishmen in 2012 and more recently against New Zealand. Ashwin the spinner always overpowered the batter in terms of the perception sweepstakes. But he was a fine batter, and six Test hundreds is a testimony to his ability.

It was just a matter of time before Ashwin became India's number one spinner. The signs of his talent and resilience was evident in the IPL when he would gladly bowl the opening over to the likes of Chris Gayle. This was a player who refused to take a step back. Most cricketers make a splash in their debut year before losing their way as rival teams discover vulnerabilities and keep twisting their knives into these raw spots. Ashwin, though, was made of steel. He constantly reinvented himself, adding new deliveries and also gifted a cult status to the sodukku ball from Chennai's streets. Rechristened the carrom ball which involved the last-minute flick of the fingers at the time of release, the ace spinner befuddled his rivals. At one point he was accused of doing too many experiments while not using his stock off-break often; he took this criticism on the chin and strove for balance. A restless and eager presence in Indian team nets, Ashwin was never averse to experiment. You could catch him bowling some leg-spin and all this came in handy when he mimicked the bowling action of others at times. Climbing through Chennai's club cricket with its undercurrent of corporate rivalries, Ashwin leant on the skills he had and the new ones he acquired. It was a philosophy that held him in good stead, be it playing in his school — St. Bede's, or as a boy in the bylanes of Mambalam. During his more than a decade-long stint with the national team, only twice did India falter at home, once against the visiting Englishmen in 2012 and more recently against New Zealand. Else, India remained a fortress and one primary reason for this was the genius of Ashwin. Even on spin-friendly surfaces, control and guile are important and he had these in ample measure. With his engineering background, it was no surprise that Ashwin was deeply analytical. He knew the rules of the game and if a non-striker stepped out prematurely, Ashwin had no qualms in whipping off the bails. Even as the world lapsed into the 'spirit of the game' debate, the spinner was clear in his mind: if it is a legitimate dismissal then why are we even discussing this? Ashwin the spinner always overpowered the batter in terms of the perception sweepstakes. But he was a fine batter and at times had the languid charms of a V.V.S. Laxman, and six Test hundreds is a testimony to his ability. Having started as an opener before turning to spin, that old talent remained intact within his tall frame. Always curious, it



seemed organic for Ashwin to step into the YouTube space. His videos ranging from cricket to movies, have struck a chord. One of cricket's greats is bound to have a sec-

ond wind, be it as a commentator or coach. "To strive to be the best I can," has always been Ashwin's motto, and the coming years might reflect that all over again.

## Security vulnerabilities hinder AI adoption in India, reveals Deloitte report

New Delhi: As many as 92 per cent of Indian executives view security vulnerabilities as the foremost challenge to responsible AI adoption, highlighting a pressing need for robust governance frameworks to foster trust and mitigate risks in an increasingly AI-driven landscape, according to a recent report by Deloitte.

The 'AI at a crossroads: Building trust as the path to scale' report by Deloitte Asia Pacific, which surveyed 900 senior leaders across 13 markets revealed that while enthusiasm for AI is high, significant barriers remain. "...about 92 per cent of Indian executives identify security vulnerabilities, including hacking and cyber threats, as a primary concern in AI adoption, while 91 per cent express significant concern about the privacy risks related to sensitive data in AI usage.

"Additionally, 89 per cent highlight complexities resulting from regulatory uncertainties, citing evolving compliance requirements as a challenge towards AI integration,"

it said.

The urgency for effective AI governance is further underscored by the alarming statistic that over half of technology workers do not believe their workplaces are equipped to address AI-related risks. "For Indian organisations, the imperative must be to integrate AI seamlessly into existing systems, addressing both technical and knowledge gaps to ensure sustainable adoption...the journey requires continuous upskilling and cross-functional collaboration."

"By fostering trust through robust frameworks and ethical practices, businesses can mitigate risks and unlock AI's potential to drive innovation, enhance reputation and deliver value with confidence in an increasingly AI-driven landscape," Jayant Saran, Partner, Deloitte India, said.

Despite these challenges, there is a silver lining: approximately 60 per cent of the workforce in surveyed organisations reportedly possesses the skills required for ethical and legal AI usage.



# 'Today, mathematics is not only necessary in daily life but pervasive'

Apoorva Khare is an associate professor of mathematics at the Indian Institute of Science, Bengaluru. He is one of the winners of the recently announced 2022 Shanti Swarup Bhatnagar Prizes (now remodelled as the Vigyan Yuva-Shanti Swarup Bhatnagar Award). He spoke to Mohan R., a mathematician at Azim Premji University, Bengaluru, for The Hindu. The questions are in bold. Post-interview additions are in square brackets. The transcript has been edited for style. What was your immediate reaction upon learning that you had won a Shanti Swarup Bhatnagar prize, which is currently the highest national science award? I was caught by surprise. The CSIR Director General usually announces the Bhatnagar prizes on the 26th of September, but this time it happened 15 days early. Also, the prizes were not announced at all last year, so I was very pleasantly surprised to find that I had got the prize. It was my student who first told me that I had received a Bhatnagar prize. Within a few minutes of appearing on the official website, it was already reported on various news websites. It was quite surreal.

What was your childhood like? Was maths a big part of it?

I grew up in Bhubaneswar [Odisha]. My parents Pushpa and Avinash Khare are both physics professors and researchers and so all my life I've grown up in a science environment, hearing about Einstein or Edison, atoms and galaxies, and so on. But otherwise I would go to school, come home, play table tennis, and read lots of storybooks – Enid Blyton, Sherlock Holmes, Agatha Christie, the usual. I listened to lots of music – both Indian and Western classical, and old Hindi film songs. I also learned Hindustani vocal for seven years, completing my Sangeet Visharad while in school. My sister Anupama and I grew up solving problems for fun. My parents would get maths books from book fairs. I remember that the old Soviet publishing house called Mir would publish these small and wonderful books under the title 'Little Mathematics Library'. These books asked lots of interesting questions and whether or not I could solve them all, I was very intrigued by the questions. I also used to try solving the logical puzzles that appeared in some newspapers. I enjoyed reading Shakuntala Devi's books. On a lighter note, I started to read science fiction in high school, and came across Isaac Asimov's Foundation Series in class IX. There is a fictional mathematician who develops the field of psychohistory, where the future of human civilization as a whole can be mathematically predicted with very high probability. I thought then that maybe someday I will do this [laughs]. Of course, I am not doing anything close to this today, but it was certainly inspirational.

When did you realise that you want to pursue mathematics?

I think the first time I realised that I might want to pursue maths as a career came during the Maths Olympiads. It was the Regional Maths Olympiads in Odisha and my mother had got me some question books. I read through them and learned about AM-GM inequality, the Pigeonhole principle, and some geometry. I didn't have much intuition for geometry, though. I was as surprised as anybody that I stood first in that exam. I think

I knew then that I wanted to be more serious about maths. I took the exam again in class XI, stood first again and this time I was able to clear the national exam. At the training camp for the International Maths Olympiad, I came across these incredibly clever people with really sharp minds. It really inspired me to see people think so fast. That summer [in 1996], I wrote my first paper on divisibility tests. I had seen a note in one of Shakuntala Devi's books where she had described the divisibility test for the number 19. I knew the tests for 3, 9 and 11, as we study them in school. I wondered, "What about a test for 23 or 37, or any number? And why just for decimal base? Why not for every base?" So I came up with a test for any number written in any base and I wrote that up. It's very simple "congruence modulo" arithmetic, but then I could get it published in an undergraduate journal. Having done this, and having seen my parents lead an academic life, I decided that I definitely wanted to pursue mathematics research as a career.

Would you call the publication of that paper when you were still in Class XI the turning point for you?

Not the publication, but the experience! There was no answer that I had seen written down to the question about the divisibility test for any number. There was no internet at that time. So I was just doodling in a notebook, dividing numbers and seeing whether something works. It's like tinkering until something works and the bulb lights up. The process of discovering, formulating a hypothesis, and then actually coming up with a proof felt so exhilarating to the 16-year-old me, that I was sure I wanted to keep doing this as a career. And writing the paper was an experience in itself. Some people have noted that both the mathematicians who won Bhatnagar prizes this year were participants of the Math Olympiad. As one of the regional coordinators, I was very interested in your thoughts on the role of the Olympiads in nurturing a culture of problem solving. The Math Olympiad Camps encourage critical thinking and tackling problems outside the box, meaning outside the regular school curriculum. Even the tools and tricks we learned to solve such questions were not taught in school. They definitely helped me gain more skills to approach problems with confidence. The situation is different in schools, where I have seen students get scared of maths exams. It shouldn't have to be that way. You need to make mathematics, or any subject for that matter, fun. One should be looking forward to questions that challenge them. Since my days as a teaching assistant and then a teacher, I have always tried to involve students in approaching problems independently. They should look at a difficult problem with curiosity, not fear. The general feeling of phobia of maths should be addressed. There are lots of problems that even I don't get anywhere with and that's part of research. It doesn't mean I don't like to try and solve them. Research is about solving problems that nobody has before, right? I've always felt that way and this, I guess, is also reflected in the Olympiad camps. After school, you headed to the Indian Statistical Institute (ISI) for your undergraduate degree. A bachelor's degree at ISI is one of the most popular programmes for anyone who wants to pur-



sue a career in mathematics. What was that experience like? It was fabulous. Back then, there were very few places where one could pursue mathematics. Chennai Mathematical Institute wasn't founded yet, nor did the B.Math. programme at ISI Bangalore or the BSc Mathematics programme at IIT Bombay exist. None of the IISERs existed. So there were very few options for me – either B.Stat. at ISI or the Integrated M.Sc. in an IIT. I had heard about two ISI students who had left for the U.S. for a maths PhD right after their Bachelor's – Siddharth Gadgil who is now my colleague here at IISc, and Amritanshu Prasad who is now at MatScience (IMSc) in Chennai. I wanted to follow their example. And so I came to ISI. They started the very first day at such a high level! We studied groups, rings, fields, vector spaces, and so on. The Olympiads had put me on a mental high so I really loved starting out at that level. I made it through the JEE but I did not attend the counselling at IIT, as by then I was sure I wanted to stay on in ISI.

I heard from one of your seniors at ISI that you used to literally run all the time. What was that about?

[Laughs] ISI at that time was very small. As the B.Stat. curriculum progressively got less mathematical, I wanted to attend advanced maths courses. I requested my classmates and my seniors to adjust their timetables so that I could attend classes with my seniors in parallel to attending my own classes. They agreed, and so did our teachers – an amazing gesture to make just for my request, and one for which I have always remained grateful to the friendly culture of my classmates, seniors, and teachers at ISI Calcutta. Thus, I was able to attend five MSc-level maths courses in my last three semesters at ISI. This really helped me while applying abroad for a mathematics PhD. I remember I would get caught up in something, realise that lunch break is ending and I have to come back to class. So I would run to the hostel campus, which was seven minutes away, quickly eat lunch, and run back. Unfortunately life is still busy, and my running habit has not stopped. Even at IISc, people say I still run, and it's true!

You then moved to the University of Chicago. Could you recall for us how you arrived at this decision?

At that point, the internet had just come to ISI and in our undergraduate hostel, there were four desktop computers that we would

take turns to use. I think I had one Yahoo email and one Mauimail account. Even universities in the U.S. only had rudimentary websites and department websites weren't always the most informative. But what I knew was that there were very few places that admitted students after three years of undergraduate study from India. Now the situation is much better because of places like ISI and CMI, which are well known abroad. This is because good students have been going abroad to pursue their PhDs for decades now. Luckily, ISI was well-known during and even before my undergraduate days because of people like V.S. Varadarajan, S.R.S. Varadhan, C.R. Rao, and so on. I applied to four universities, thinking that if nothing worked, I would do a master's at ISI and then apply again more widely. Luckily I got into two places, and chose Chicago as it was better ranked for algebra, which I thought I wanted to study. In my second year, my advisor Victor A. Ginzburg gave me a book to read on the basics of Lie algebras, by [James E.] Humphreys. I had to read that book inside out and do most of the problems. Now I ask the same of many of my summer internship students. At the end of that year, Ginzburg gave me a research problem and then I wrote my first paper in representation theory. How did you end up co-authoring Beautiful, Simple, Exact, Crazy: Mathematics in the Real World (2015)? It's quite uncommon for a research mathematician to attempt to write such a book before they have a permanent position. While I was in Yale, I met Steven Orszag. We had no research interests in common, but he told me about something he felt passionately about. He said there is a lot of maths phobia in the U.S. Students who enter college are often required to take rigorous calculus courses, but they cannot handle epsilons and deltas. Steve said he wished somebody like me would come up with a course that explained the beauty, power, and applicability of maths. If one tells people that something will help solve money problems, that would make them very happy. The simplest money problem is that of mortgage – this is a big thing even here in India. Whether for a car, a house, or an expensive iPad, what you're doing is adding up a finite geometric series. This does not need knowledge of calculus or trigonometry or linear algebra. At the same time, if you know how to add geometric series, you can also talk about fractals, a theoretical concept that appears in mathematics, but also in art.



# Dhanushkodi: a ghost town awaits revival

On the evening of December 22, 1964, 14-year-old Purushothaman was playing with his friend Muniyasamy at his home at the railway quarters in Dhanushkodi. When he asked his friend to stay the night, a worried Muniyasamy refused, replying that he must go back to his house at the tip of the town to take care of his mother and the goats she was rearing. Both had no inkling of a severe cyclonic storm approaching their area. The deadly storm, while crossing Vavuniya in Northern Province of Sri Lanka [which was called Ceylon then] earlier in the day, had caused devastation in the island-nation. As darkness set in, heavy winds buffeted the area. Mr. Purushothaman went to bed along with his four siblings and mother. His father, who was a cook in one of the two ships that used to ferry passengers to Sri Lanka and back, had gone to Rameswaram as his ship was under repair. At midnight, waking up to the seawater that had entered his home, Mr. Purushothaman and his family were alarmed as the water rose to hip-level.

Today, the septuagenarian is one of the survivors of the cyclonic storm that destroyed the town on the intervening night of December 22 and 23, 1964. The entire railway station was wiped out, leaving behind only a couple of structures made of stone. The fragile man sporting a long beard is now a priest at a modest Shiva temple, which stands at the place where the railway station building once existed. "Fishing was the main occupation here. Besides them, loadmen, who worked at the railway station, formed the bulk of the population," Mr. Purushothaman says recalling his good old days in the railway colony. Only the railway quarters had pucca houses. The fishermen lived in huts. Another survivor of the disaster, V. 'Neechal' Kali, who is no longer alive, was born and raised in the coastal town. He went on to become a skilled swimmer, even crossing the Palk Strait between Dhanushkodi and Talaimannar in the Northern Province. A witness to the tragedy that remains a sad tale, Kali dreamt of his home town regaining its past glory, with bustling ferries, trade, and cultural exchange between India and Sri Lanka. But he breathed his last a few years ago without his dream coming true. Kali's grievance

Kali had a grievance: while representatives of the government, non-governmental organisations, and others pay tributes to victims of many tragedies, including the 2004 Indian Ocean tsunami and the Kumbakonam school fire, seldom have Dhanushkodi cyclone victims received tributes or recognition. He observed a fast on its anniversary yearly as long as he lived. In an interview to *The Hindu* in 2010, Kali, who was 88 then, recalled that Dhanushkodi was a prosperous and flourishing coastal town with brisk business and trade activities till the colossal tragedy, with Southern Railway running Boat Mail (also called the Indo-Ceylon Express) from Madras Egmore (now Chennai Egmore) to Dhanushkodi to connect steamers Irvin and Goschen. Travellers were given tickets from Madras to Colombo and taken by the steamers to Talaimannar for the onward rail journey to Colombo and vice versa. The Boat Mail would bring tourists and pilgrims from Chennai to Dhanushkodi. A water tank rake for steam engines of trains, and two other trains from Madurai and Coimbatore would come to Dhanushkodi every day. Most of the pilgrims would throng Dhanushkodi, where



Lord Ram, according to the legend, worshipped Lord Shiva. "Even the idol of Lord Ramanathaswamy was brought from Rameswaram on amaavasai (new moon) of the Tamil months of Aadi and Thai for Theerthavari (a form of ritual wherein the idol is bathed in the sea)," Mr. Purushothaman recalls. The pilgrims would also visit the Muneeswaran, Santhana Mariamman, and Kooni Mariamman temples. International passengers would arrive by the Boat Mail and would board the steamers to reach Talaimannar and back. The vessels with three decks would carry passengers and foodgrains to Sri Lanka. "Fishermen used to mint money by bringing smuggled goods such as Rani Sandal soap, Nylax sarees, and Romer watches from Ceylon," Mr. Purushothaman says.

Giving his account of events in his memoirs *Service Uninterrupted*, veteran civil servant M.M. Rajendran, who was the then Ramanathapuram Collector and later became Chief Secretary and Governor of Odisha, stated that when he and his colleagues reached Mandapam, the last point on the mainland, they found to their consternation that the entire Pamban railway bridge, connecting the mainland to Rameswaram, had been washed away. "...the train steaming from Pamban to Dhanushkodi in the night was washed away by tidal waves, leaving behind only the engine and the chassis of the bogies [sic], the wooden superstructure of the bogies [they were not integrated coaches in those days] was seen floating around. What happened was that in the long narrow island, the two seas in the north and south joined when the tidal wave struck and the train at that time was in the area of confluence of the seas," Rajendran (who died last year) wrote, adding that the number of casualties in the train could not be estimated as many were "ticketless passengers," even though the rough estimate was put at 500. This was apart from the residents of Dhanushkodi who died. Recounting how the survivors came to terms with the reality, Mr. Purushothaman recalls: "We saw hundreds of flamingos from Australia lying on the land with their wings and legs injured. The survivors broke open the parcel office and brought some wheat. We used the files at the cus-

toms office as fuel to cook." The next day, scores of people started to walk along the coast to reach Mandapam. The then Chief Minister M. Bakthavatsalam along with his predecessor — Congress president K. Kamaraj — flew down and visited the cyclone-hit areas. Merely hours before the cyclone hit the island, veteran film star Gemini Ganesan, who was on a pilgrimage, had left Dhanushkodi, the priest recalls. After Dhanushkodi was devastated, it came to be called a "ghost town". Only fishermen would venture into the sea from there. Pilgrims too would go there to offer oblations to their ancestors. With the only mode of transport no longer available, pilgrims could reach from Mukundarayar Chathiram only on four-wheel drive vehicles. Another consequence of the 1964 disaster was the Union government deciding to slow the execution of the Sethusamudram shipping canal project. Sensing its attitude, the Congress government in Tamil Nadu had even offered to appoint administrative and technical staff for acquisition of lands, construction of buildings, and improvement of communications in the cyclone-hit areas. Sometime later, the Sri Lankan government did not give its assent to carry out certain tests for the project. The project is still in limbo, though a serious bid was made to revive the project nearly 40 years later. Dhanushkodi eventually got a road link in July 2017, when Prime Minister Narendra Modi declared open the 9.5-km road (5 km from Mukuntharayar Chathiram to Dhanushkodi and 4.5 km from Dhanushkodi to Arichal Munai), laid by Central authorities at a cost of about ₹70 crore. Officially called Missing Link Road, the two-lane corridor with paved shoulders on either side has come up on a sandy bed. It has provided a much-needed impetus for the development of tourism, and every day, hundreds of cars and vans ply on the road, with tourists and pilgrims drawn to the scenic land strip flanked by the seas. As the waves from both seas repeatedly hit the road, the Union Ministry of Road Transport and Highways has constructed a gabion wall to protect it from sea erosion. However, engineers are facing a new challenge of clearing the sand dunes which often accumulate on the road due to wind. Kavitha, a fisherwoman who

stays here in the daytime to cook for her husband and children who venture into the sea for fishing, points to the buried structure of the old railway station. Three tall stone pillars and a stone building are all that is left of the railway station, which have now become much sought-after sites for photographs and selfies. Shopkeepers display photographs of the ruins of Dhanushkodi — remnants of a church, dwelling units, and the old post office. As an additional tourist attraction, the Directorate of Lighthouses and Lightships set up a huge lighthouse in 2022 at a site close to the decrepit railway station. A view from the top of the 49m lighthouse tower is a treat. The ever-growing number of tourists has resulted in several small eateries and shops selling goods made of seashells dotting the roadside, especially in Dhanushkodi and Arichal Munai, the tip of Rameswaram island. Dhanushkodi-Arichal Munai Road, which is closed for tourists after 4.30 p.m., has the potential of serving as an air strip to help landing of planes during emergency situations, an engineer says, suggesting further that the road be strengthened. The Union government, keen on reviving the rail link to Dhanushkodi, initiated a project with Mr. Modi laying the foundation stone in March 2019 for the construction of a 17-km-long broad-gauge track. However, the ambitious plan to relay the railway track up to Dhanushkodi has hit a roadblock. During a survey, the railway officials found that a new road laid up to Dhanushkodi had encroached upon railway land. Additionally, the officials were wary about the intrusion of seawater and sand dunes on Missing Link Road, which could pose hurdles to rail movement. A study suggested constructing an elevated structure to protect the tracks from sea water and sand. However, the project cost saw a manifold increase, from ₹208.3 crore to ₹733.91 crore due to this. Even as railway officials were confident of acquiring land, Railway Minister Ashwini Vaishnaw announced in Parliament in July 2023 that the Tamil Nadu government had requested the Centre to give up the project as the alignment was going through an "ecologically-sensitive zone". A concrete structure erected in 1999 in memory of those who had lost their lives in 1964 is in ruins due to sheer neglect.