

KERALA CALLING

MAY 01, 2023_VOL_43_No_7

YET ANOTHER KERALA MODEL



*Water Metro, the water way wonder of Kochi
has set yet another Kerala Model to the entire Nation*

WATER EB ISDOM



Kerala steps into a brighter tomorrow with transformative projects like Kochi's Water Metro, the cutting-edge Digital Science Park, and the enlightening Sree Narayana Guru Cultural Complex. A new dawn of innovation, culture, and connectivity is breaking over the State

EDITORIAL



INNOVATION RIPPLES THOROUGH KERALA

In the lush embrace of Kerala, a remarkable story unfolds. As we turn the pages of the May issue of Kerala Calling, these tales of progress and cultural heritage become the vibrant themes that guide our journey. The Kochi Water Metro, a beacon of progress, blends the gentle rhythms of island life with the fast-paced beat of the modern world. This eco-friendly marvel sails through the green waters, a symbol of Kerala's unwavering commitment to a greener future.

Imagine a fleet of electric boats, the first of its kind in the country, parting the tranquil waters. This dance of innovation, set on the serene stage of Kerala's backwaters, pledges to reduce thousands of tons of CO2 emissions each year. It is a beautiful ode to a greener, rejuvenated Kerala, a story we are eager to share with our readers.

Beyond the soothing waters, another transformation is taking place. The Digital Science Park, a modern Eden, is a place where academia, industry, and government join hands, creating a fertile ground for technological growth and entrepreneurship. Its story, rich and full of potential, is another key theme in this month's issue.

At the heart of these changes, Kerala's rich cultural heritage shines through. The Sree Narayana Guru Cultural Complex in Kollam, a tribute to the revered social reformer and philosopher, Sree Narayana Guru, illuminates the way from Kerala's past towards a promising future. It forms a vital part of our exploration of Kerala's cultural landscape.

In Kerala's panorama, the Kochi Water Metro, Digital Science Park, and Sree Narayana Guru Cultural Complex stand as transformative keystones. They symbolise Kerala's harmonious fusion of time-honoured tradition and frontier-pushing innovation. Every Malayali contributes, propelling Kerala towards a future as mesmerising as its backwaters. Go through this vibrant interplay in Kerala Calling's May issue.

T.V. SUBHASH IAS
EDITOR

**06 Kochi Water Metro
Yet Another Kerala Model for India**
Pinarayi Vijayan, Chief Minister

**10 The Aqua
Odyssey Begins**
Shaji Janardhanan, Chief General Manager,
Water Transport, KMRL

**14 Navigating
Kochi's Future**
Amritha Raju, Information Assistant,
I&PRD, Ernakulam

16 Sail in Style

**18 A Pioneering City with
Dual Metro Services**
C.T. John, Assistant Editor , I&Prd

**20 Future Prospects
and Expansion Plans**
Sajan P John, Chief Operating Officer, KWML

22 The Waves Of Change
Glisten Varghese , Assistant Manager, Marine, KMRL

**24 Connecting Miles,
Connecting Lives**

26 An Engineering Elegance
Dijo Micheal, DGM, Marine, KMRL

**28 A Day of Discovery
And Adventure**
Ummer Farooq, Information Assistant,
I&PRD, Ernakulam

30 Say The Commuters

32 The Glory And Beauty Of Kochi

34 Igniting Digital Renaissance
Saji Gopinath, Vice Chancellor,
Digital University Kerala



36 A visage of Kerala culture

Ignatius Pereira, Senior Journalist

38 Charting a Transformative Journey

Dr. Chintha Jerome, Former Chairperson, Kerala State Youth Commission

42 Abhilash Tomy

C. Rajesh

44 Nursing the World to Health

Joby Baby, Nurse

46 Golf's Own Country

Ajai Kumar K. S., Travel Writer
Sridevi Narayanan, Media Analyst

48 JNTBGRI Honoured With GGI-Gardens Award

Dr. B. Sabulal, Director, KSCSTE-JNTBGRI

50 We Too Are Governments Envisioning Progressive Shift

Ajith Venniyoor, Writer

EDITOR

T.V. Subhash IAS

ADDITIONAL EDITOR

K. Abdul Rasheed

DEPUTY EDITOR

V. P. Aswathy

EDITOR IN CHARGE

C. Rajesh

ASSISTANT EDITOR

A. Anchitha

CIRCULATION OFFICER

N. Satheesh Kumar

COVER DESIGN & LAYOUT

Deepak Mouthatil

PRINTING

Orange Press Pvt.Ltd

Thiruvananthapuram

PHOTO CREDITS

**I & PRD Photography Division,
KMRL**

KERALA CALLING

MAY 01, 2023_VOL_43_No. 07

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.

RESPONSES MAY BE SENT TO MAIL :

keralacalling@gmail.com

facebook.com/KeralaCalling

EDITORIAL MATERIALS

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

TOTAL NUMBER OF PAGES:

48 + Cover



Pinarayi Vijayan
Chief Minister



Yet another promise made by the Government to the people of Kerala has been fulfilled. The Kochi Water Metro, one of Kerala's dream projects was dedicated to the nation by the Prime Minister Narendra Modi. It is not only India's first water metro, but also the first ever integrated water transport system of this size in Asia. This is a proud moment not merely for Kerala, but for the entire country.

KOCHI WATER METRO YET ANOTHER KERALA MODEL FOR INDIA





At one point of time water transportation was quite prominently used in Kerala. However later on, its usage dwindled. The Government's vision is to use it effectively and efficiently, by re-inventing its possibilities in tune with the times. The National Waterways are being renovated and the Kochi Water Metro (KWM) is being operationalised so as to fulfil that vision. Through such interventions, modern, affordable and comfortable public transport systems are being made available to ordinary people. This is our policy being put into action, we are walking the talk.

KWM which will reinvigorate transportation and tourism in Kochi has been brought to life at a cost of Rs. 1,136.83 crores. It comprises direct funding from the GoK and loan from KfW. In the first phase services will commence between the High Court - Vypin and Vyttila - Kakkanad stretches. One can travel from the High Court to Vypin in just 20 minutes and from Kakkanad to Vyttila in

just 25 minutes, without being stuck in traffic. The minimum ticket rate is only Rs. 20. Frequent riders can utilise weekly, monthly and quarterly passes. Kochi One cards can be used to travel seamlessly on both Kochi Metro and Kochi Water Metro. Tickets can be obtained digitally through the Kochi One App as well.

Once KWM is fully operational, 78 boats will ply between 38 terminals spread across 10 islands. KWM's boats are being built by the Cochin Shipyard. These innovative, cutting edge designs, light weight boats are made of Aluminium catamaran hull and FRP superstructure. They are equipped with Lithium Titanate Oxide (LTO) batteries which have a long life, can be charged quickly and are the safest batteries available commercially today. These boats have the latest navigation and communication equipment and can be monitored and controlled from the state of the art Operating Control Centre (OCC). KWM's electric-hybrid air conditioned boats which ensure a safe and convenient transportation



Kochi, traditionally known as the Queen of the Arabia Sea, is now often referred to as the commercial capital of Kerala. Ten islands in and around Kochi are well inhabited. The islanders have to commute to mainland Kochi on a regular basis to meet almost all their major needs including education, healthcare and livelihood.



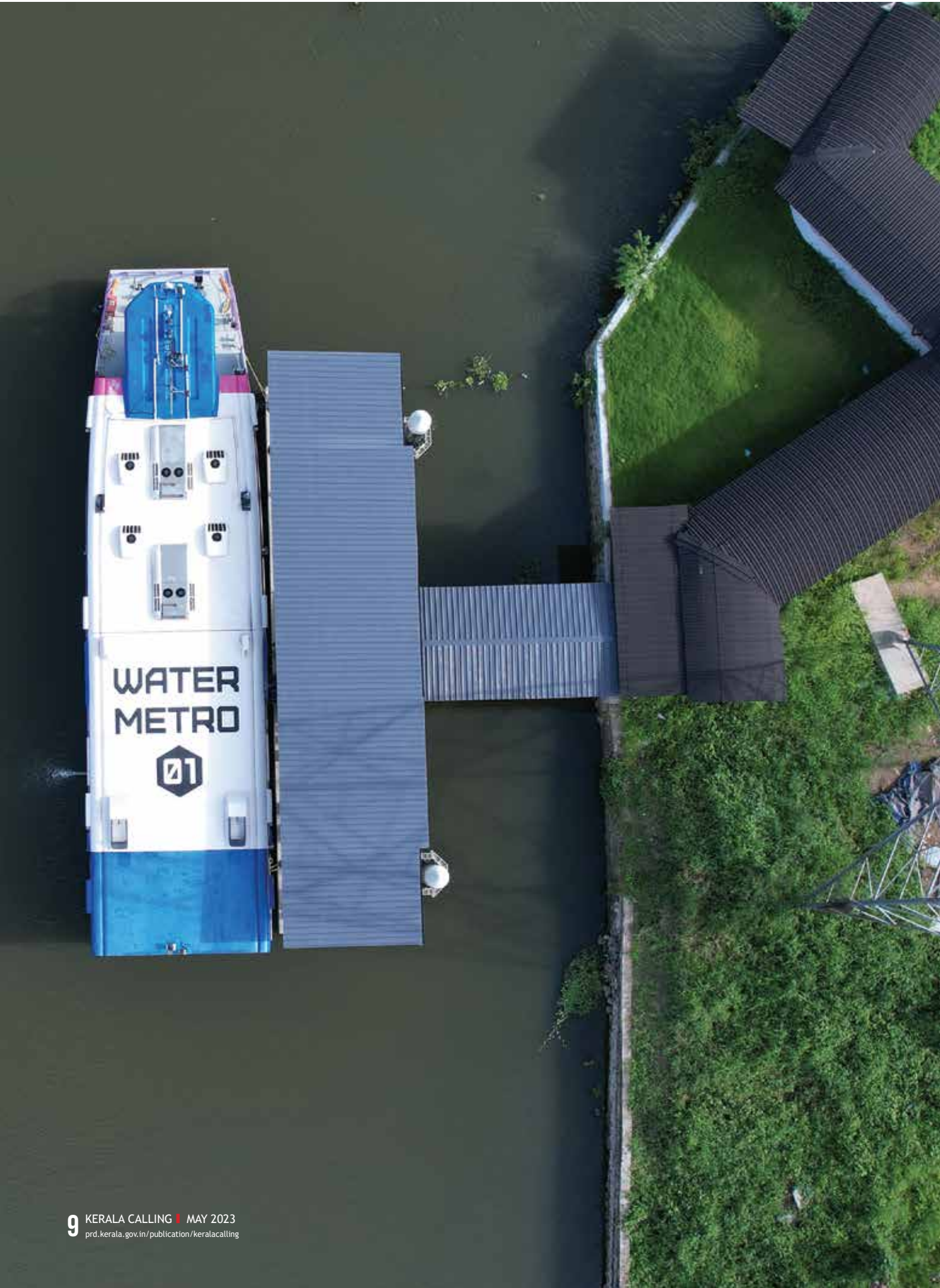
for the public have already received international acclaim. Last year, KWM won the prestigious Gussies Award (France) for best commercial passenger electric boats in the world. The boats and terminals are differently abled friendly. Floating pontoons will ensure that the terminals are at the same level of the boats at all times, including high and low tides.

Kochi, traditionally known as the Queen of the Arabia Sea, is now often referred to as the commercial capital of Kerala. Ten islands in and around Kochi are well inhabited. The islanders have to commute to mainland Kochi on a regular basis to meet almost all their major needs including education, healthcare and livelihood. Though there are boat services that currently connect the city and the islands, quite often they have been pointed out to be inadequate. The State Government is trying to find a permanent solution to this issue through KWM.

This revolutionary water transport system will invariably improve the socio-economic conditions of the islanders and also help in developing the infrastructure of the islands. However, being a transport system that utilises renewable sources of energy, it is sustainable. The unique design

of the boat creates negligible waves and does not disturb the lake's flora and fauna. It requires only minimal land use and does not require extensive infrastructure development. Therefore, it will go a long way in protecting the fragile ecosystem of the lake. In the first phase itself 34,000 passengers can commute using KWM. This will decongest the roads of Kochi and further reduce the Carbon footprint of the city. Once fully operational, KWM is expected to reduce 44,000 tons of CO2 emission per annum. Thus, it will be a major boost to GoK's efforts to transform Kerala into a Carbon Neutral State.

Once fully operational, KWM would have the largest fleet of electric boats in the world, serving organised urban water transport. Such an environment friendly water transport system can be adapted in at least 40 other cities in the country. Just as Kerala has been a model for India in the fields of education, health and welfare, we are emerging as a model in urban water transport as well. Novel public transport systems are fundamental in our transformation into a Nava Keralam, and the world class Kochi Water Metro is an integral part of it. Now when it sets sail, it is a dream come true for every Keralite! ■



THE AQUA ODYSSEY BEGINS

SHAJI JANARDHANAN,

Chief General Manager,
Water Transport, KMRL

Kochi is embarking on an ambitious journey towards sustainable transportation with the introduction of the Kochi Water Metro Project. This innovative initiative harmoniously merges state-of-the-art technology, environmental responsibility, and community-centered design. Poised to drastically reduce carbon emissions, the project represents a transformative step towards a greener, more inclusive future.

The water transport system envisaged for Kochi focuses not only on the ferry services as the mode for public transportation but also envisions a holistic development of the areas being connected by waterways as well as integrating the waterway system as a part of the entire public transport system of the city. Apart from the ferry service development, the project also looks into developing the existing and new roads providing increased access to the jetties and also within the islands, ensuring safety and security to all its users by way of active and well lit streets, promoting use of small occupancy feeder modes to access the jetties, promoting property development around the jetties and place making. Effective use of inland waterways with the environmentally friendly hybrid boats is offering multi-fold benefits.

The various components involved in the Kochi Water Metro Project are:

- Terminals and Access Infrastructure
- Boats
- Floating pontoons
- Systems - Navigation, AFC, PIS, VCS, CCTV
- Operation & Control Centre (OCC)
- Passenger Control System (PCS)

Boats

There are 78 eco-friendly boats for passenger service, 23 of them are 100 pax and the remaining 55 are meant for 50 passengers. In addition to these passenger boats, there are four numbers of Rescue cum Workshop vessels for supporting the main fleet in case of emergency and for maintenance.

Twin-screw Catamaran hull is chosen for a better stability, safety and to cater the draft restrictions and low wake properties. The objective of the boat design was to develop a boat meeting the following requirements.

Low Draft: The estuarine condition creates a challenge for restricted depth which decreases to less than 1 meters in certain stretches. The silty mud which exists in the channels poses a challenge in terms of dredging. Consider the above it was decided to achieve a draft of 0.9 meters.

Low Wake: The backwaters in Kochi are densely inhabited by fisherman communities and traders. The waterways are used extensively for fish farming and fishing. Hence it was necessary that the boats have low wake characteristics to subdue the wake and wash effects. This will ensure protection of the shores as well

Low Energy and Environmentally Friendly: As a huge leap into the green shipping initiative movement mooted by the International Maritime Organisation (IMO) of United Nations, the boats are electrically propelled and have no outward discharge.

The objective of the concept design led to the conclusion to adopt an Aluminum Catamaran hull, twin screw electrically propelled vessel, which will operate at a draft of 0.9 meters. The vessels are designed to achieve a speed of 8 to 10 knots in different speed regimes with flexibility to operate under different power sources. ■



Floating Pontoons

Floating jetties adopted to facilitate embarkation and disembarkation of physically challenged elderly commuters. Concrete pontoons are being used, Pontoons are installed in the terminal waterfront where the water depths would be about -1.5 m CD to -2.5 m CD. Pontoons are connected to the terminal by means of an Aluminium gangway. The floating pontoons are provided to cater the tidal variation. Since the floating pontoons are designed with a freeboard of 0.8m in line with the freeboard of the boats, the same level will be maintained in case of tidal variations or floods which in turn will facilitate the wheel chair movement.

Features of the Terminals

Kochi Water Metro terminals are designed/planned as a space for public gathering. Terminals are planned based on the Peak Hour Traffic (PHT). Accordingly, terminals having 1000PHT falls under major, less than 300PHT falls under minor, terminals with 300-1000PHT were considered as intermediate terminals.

All boat terminals are divided into paid and non-paid area. Ticketing facility, Ticket vending machine, Station control etc. are in unpaid area.

Waiting area, Toilets etc are provided in paid area. All terminals are facilitated with Automatic fare collection and turnstile system for passenger counting.

Integrated Traffic Management System

The Water Metro has a very good communication system such as digital radio, VHF. Boats can communicate between them and also with the Port, Operation Control Centre etc. 20 CCTV cameras are placed on the boat in various critical locations, which can be seen in the Wheel House and the OCC as well.

The boat is equipped with machineries to know the depth of water, speed, location of the boat (ABLs), obstruction around the boat (RADAR), better night vision(thermal camera etc.

Like in Rail Metro, automatic fare collection systems are employed as well.

Safety

Passenger Control System (PCS) has been set up in the system, which will not permit more than the allowable number of people in the boat at any given point in time. The accidents due to overcrowding is avoided.

The catamaran hull with required breadth is designed to have must better stability for the boat.

Adequate number of Life jackets are provided at accessible locations to cater all types of people including children.

Boats and jetty are always at the same level.

Passengers are not permitted to be outside of the passenger area during the trips.

Services of Workboat cum Ambulance boats will be made available to handle any emergency situation.

Well-equipped, manned Operation control Centre (OCC) has been set up to monitor movement of every boat and to attend to any exigency that may occur and to give directions to the boat.

clean all the time - As part of the operation and maintenance, we will be cleaning the weeds in the route, along with maintenance dredging thereby keeping the water body free of weeds and siltation and hence mosquitos and keep the water more environmentally friendly.

The boats are not equipped with toilets thereby avoiding discharges to water. However, the terminals are provided with toilets, which we thought is essential.

The electric hybrid propulsion system is the key feature of the vessels. The 100pax boats will have service speed of 8 knots and a maximum of 10 knots. The normal operation will be purely on batteries. When need more speed is required, the generators can be used to augment the power, which otherwise is kept as a backup. The batteries



Kochi Water Metro as a sustainable water transport

The water metro is will be made using lightweight materials such as Aluminium and FRP. This light weight will reduce resistance offered there by consume less power

The twin hull design – catamaran are designed in such a way that it will create minimum wake and thereby giving less impact to the shores.

Keep the Vembanad lake and backwaters

used are the latest LTO type – Lithium Titanite Oxide which has a very long life of about 35000 cycles

These batteries are capable of fast charging and we will have fast charging stations for the boats at designated terminals. In addition to this we have incorporated EV charging stations also, for the other feeder service vehicles such as e-rikshaws.

When the Water metro achieve the expected modal shift, Water Metro will reduce considerable reduction of emissions- about 44,000 tonnes of CO2 per year. This will be a huge saving as far as the air pollution and global warming is concerned. ■

NAVIGATING KOCHI'S FUTURE

Water Metro Breathes New Life into Tourism and Commerce

Amritha Raju

Information Assistant, I & PRD

Ernakulam

Kochi's Water Metro redefines the city's landscape, creating a ripple effect of growth in tourism and commerce on the islands. With bustling terminals and thriving businesses, the project has become a beacon of hope for locals and tourists alike. The Water Metro not only connects the city's islands but also the people, opening doors to a world of opportunities.

As the Water Metro boat gracefully glides through Kochi's serene backwaters, it unveils a world of potential, stimulating the business sector and unlocking the tourism treasures of the city's enchanting islands. The High Court Water Metro Terminal is alive with activity, its air thick with anticipation as street vendors, lottery sellers, and game enthusiasts weave through the crowds, offering a slice of daily life in Kochi.

The Water Metro's influence extends beyond the terminal, invigorating nearby shops and businesses as vendors line the walkway to the High Court Water Metro Jetty, offering cold beverages and local delicacies. Grocery stores and stationery shops flourish, reflecting the project's innovative approach to integrate different sectors into the everyday lives of the people, making it a prime model for the Water Metro.

The Water Metro has significantly impacted Kochi's leisure and business sectors by offering an alternative travel route through picturesque waterways. This has eased the burden on congested roads, paving the way for the transformation of the Water Metro Station into a bustling business hub. To achieve this, eight kiosks have been built at the High Court Water Metro Station which will house food stalls, bakeries, and other shops run by Kudumbashree members.

Vypin Island, another destination on the Water Metro route, is equally abuzz with activity. Hotels, bakeries, and shops teem with people, while bus stands are flooded with





In addition to the Metro stations, there are selling opportunities at Vyttila Hub, railway stations, and commercial establishments. The electric feeder autorickshaw service, starting from the K.M.R.L terminal in Kakkanad, and the K.S.R.T.C connectivity further enhance the travel experience

passengers. The Water Metro has infused Vypin's social and leisure sectors with newfound enthusiasm by providing a comfortable and affordable journey, thereby reducing road traffic and saving precious time.

The Water Metro has been a godsend for the people of Vypin, who rely on it for commuting to Ernakulam for work, education, and medical treatment. Since its inauguration, countless tourists have boarded the boats to explore Vypin and Fort Kochi. With the Water Metro, the High Court offers a direct route to Vypin, from where visitors can access the beaches and recreational centers through boats or road transportation. This new route has also spurred business opportunities in other areas of Vypin and the recreational hotspots of Fort Kochi.

The Vyttila-Kakkanad Water Metro service, which has captured the public's attention as much as the High Court-Vypin route, is also making strides. By providing easy access to Kakkanad, Kochi's IT, industrial, and administrative nerve center, the Water Metro has created opportunities for agribusiness in the region. The Vyttila Water Metro station aims to construct kiosks to capitalise on the burgeoning commercial possibilities.

The Water Metro has been a boon for those travelling to Kakkanad for work, agriculture, and commerce. By circumventing traffic-clogged roads, passengers can reach Vyttila by boat and connect to the Metro Rail or train heading south. Employees working in various establishments in Kakkanad are elated with the travel options now available to them.

In addition to the Metro stations, there are selling opportunities at Vyttila Hub, railway stations, and commercial establishments. The electric feeder autorickshaw service, starting from the K.M.R.L terminal in Kakkanad, and the K.S.R.T.C connectivity further enhance the travel experience

When the Water Metro services fully connect the 10 islands in Kochi, it will open up numerous business opportunities and tourism prospects on the islands. The Water Metro will serve as a catalyst for the social and economic development of the people. As a result, trade, industry, tourism, finance, and social life in various sectors will experience significant progress. This will also contribute to the growth of Kochi, a major port city, in the fields of tourism and commerce, and improve the quality of life for the people through Water Metro services. ■

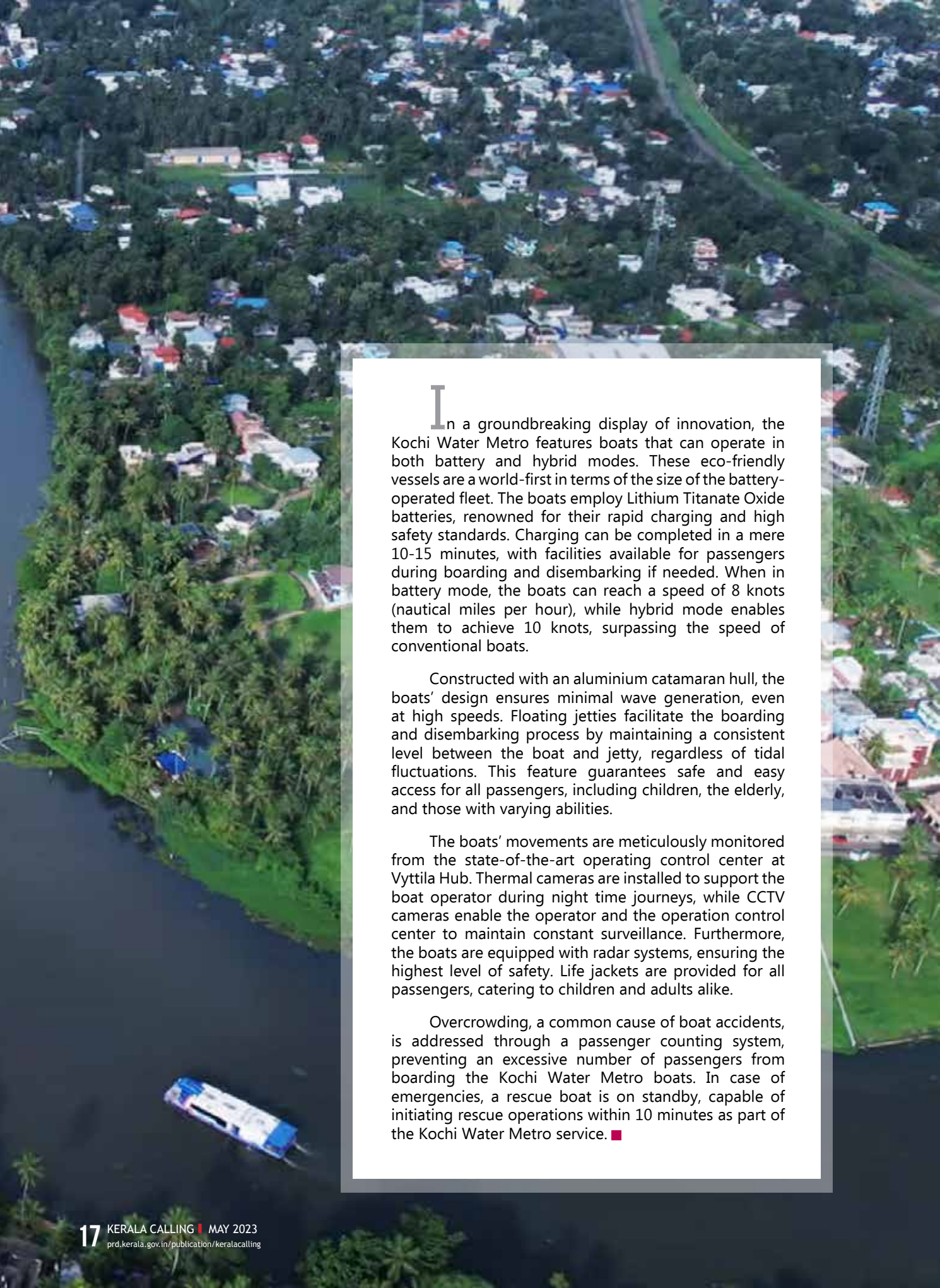


SAIL IN STYLE

Kochi Water Metro boats are made entirely in Kerala



The Kochi Water Metro service boasts an entirely Kerala-built fleet of cutting-edge boats. Offering two distinct types of vessels - those that accommodate 100 passengers and those with a 50-passenger capacity - the service commenced with the 100-passenger boats. These state-of-the-art boats are expertly constructed by the Kochi Shipyard and have already garnered international acclaim, winning the prestigious "Gussies Electric Boat Award" for electric boats.



In a groundbreaking display of innovation, the Kochi Water Metro features boats that can operate in both battery and hybrid modes. These eco-friendly vessels are a world-first in terms of the size of the battery-operated fleet. The boats employ Lithium Titanate Oxide batteries, renowned for their rapid charging and high safety standards. Charging can be completed in a mere 10-15 minutes, with facilities available for passengers during boarding and disembarking if needed. When in battery mode, the boats can reach a speed of 8 knots (nautical miles per hour), while hybrid mode enables them to achieve 10 knots, surpassing the speed of conventional boats.

Constructed with an aluminium catamaran hull, the boats' design ensures minimal wave generation, even at high speeds. Floating jetties facilitate the boarding and disembarking process by maintaining a consistent level between the boat and jetty, regardless of tidal fluctuations. This feature guarantees safe and easy access for all passengers, including children, the elderly, and those with varying abilities.

The boats' movements are meticulously monitored from the state-of-the-art operating control center at Vyttila Hub. Thermal cameras are installed to support the boat operator during night time journeys, while CCTV cameras enable the operator and the operation control center to maintain constant surveillance. Furthermore, the boats are equipped with radar systems, ensuring the highest level of safety. Life jackets are provided for all passengers, catering to children and adults alike.

Overcrowding, a common cause of boat accidents, is addressed through a passenger counting system, preventing an excessive number of passengers from boarding the Kochi Water Metro boats. In case of emergencies, a rescue boat is on standby, capable of initiating rescue operations within 10 minutes as part of the Kochi Water Metro service. ■

A Pioneering City with Dual Metro Services



Kochi emerges as India's trailblazer in urban transportation by launching the nation's first-ever water metro service. This pioneering city now boasts both metro rail and water metro systems, offering residents and visitors an affordable, luxurious, and eco-friendly travel experience. Kochi sets a new benchmark for urban connectivity, as it continues to innovate and lead the way in sustainable transportation solutions.

C.T. JOHN
ASSISTANT EDITOR, I&PRD

Kochi made history on April 25, 2023, as the first city in India to boast both metro rail and water metro services. The innovative water metro provides an affordable yet luxurious experience, with fares starting at just 20 rupees.

Crafted with the same design aesthetic as Kochi metro coaches, the fully air-conditioned water metro boats offer passengers an enchanting view of the serene backwaters.





The journey promises a tranquil escape from the hustle and bustle of city life, without the challenges of traffic, exposure to the elements, or the incessant honking of horns.

Presently, water metro services operate on the High Court-Vyttila and Vyttila-Kakkanad routes. The High Court-Vyttila route runs from 7 am to 8 pm, with a frequency of every 15 minutes, while the Vyttila-Kakkanad route offers three daily services during the initial phase, operating between 8 am-11 am and 4 pm-7 pm.

Connectivity remains a cornerstone of the water metro. The strategically located Kakkanad terminal sits near Chittethukara, adjacent to the Infopark Expressway and just below the Chitrapuzha Bridge. Ample parking facilities cater to the needs of passengers, who can also take advantage of KSRTC feeder services. KMRL's five electric autos and bicycles further enhance accessibility. Travellers from Thrippunithura, Aluva, and Angamaly can reach

Kakkanad swiftly via KSRTC and private buses that ply the Seaport-Airport road.

The Water Metro's fare structure is both attractive and budget-friendly. Prices range from 20 rupees for the Highcourt-Vypin route to 30 rupees for the Vyttila-Kakkanad route. Affordable weekly, monthly, and three-month passes are also available, priced at 180, 600, and 1500 rupees respectively. For added convenience, passengers can use the Kochi 1 Card, which is also valid on the Kochi Metro Rail.

Spanning an impressive 76 kilometers, the Kochi Water Metro connects 10 islands through a network of 38 terminals. The ambitious project, with an investment of 1136.83 crore rupees, is supported by direct contributions from the state government and funding from the German agency, KfW.

Kochi's dual metro services are a testament to the city's progressive approach to urban transportation, setting a benchmark for other cities to follow. ■



Future Prospects and Expansion Plans



Kochi Water Metro is setting the global benchmark for eco-friendly public transportation. As the largest fleet of electric boats in the world, it's transforming the urban water transport paradigm, integrating renewable energy, and prioritizing inclusivity. The innovative system challenges traditional limitations with cutting-edge designs, swift charging technologies, and seamless intermodal connectivity.

SAJAN P. JOHN

Chief Operating Officer, KWML

With the demand from the public piling up for connecting more of the islands in Kochi, which are not included in the present plan, there is ample scope for Phase 2 of the Water Metro Project, to expand further. This is also reflected in the DPR, where about 145 Boats were projected for the needs in the year 2035 catering to a daily ridership figure of over a lakh people.

The State of Kerala having traditional navigable canals and waterways stretching across the state with more than 1680 kms, has abundant scope for expansion. Southern cities Kollam and Alleppey had a similar tradition of Water transport in the past and even the state capital Trivandrum was not far behind. The West Coast canal with a length of about 558 Kms is the main arterial waterway route and has connections up to interior towns like Kottayam. Kuttanad, on the banks of Vembanadu, has traditionally been dependent on water transport and continues to be so.

The West Coast Canal has a prospect of using water transport for cargo movement, decongesting the National Highways, and taking out some strain. Ro-Ro vessels are best suited for cargo movement in this stretch, which can ideally change to Hydrogen fuel-based electric vessels. Water Metro has proposed to partner with IMO on a pilot project to move into the hydrogen-powered water metro, as part of their Green Voyage 2050 initiative.

Ro-Ro vessels are complementary to the Water Metro system and at least three routes are identified for future prospects in Kochi itself.

Tourism Sector

Over a thousand traditional houseboats are engaged in the tourism sector in the backwaters of Kerala, the majority of which are in the Kumarakom, Alleppey backwaters are a major tourist attraction, but prone to create pollution due to the large use of diesel-powered boats. Modified versions of the Water Metro Electric Boats can very well cater to the needs of

Integration with other transport modes



Integration with the Metro, Buses, Taxis, Trains, and other public transportation systems is one of the key elements for the vision of the city. Common ticketing systems for Metro Water Metro, Buses, and feeder services are already in place through Travel cards, Mobile ticketing, Common passes, etc. This has made the entire ecosystem adaptable and convenient to commuters. Last-mile connectivity is offered through feeder services, electric auto-rickshaws, rented bicycles, etc. Mobile apps developed for the services would be very convenient to get information at the fingertips.

a climate-friendly tourist ecosystem saving our lakes. Different PPP models can be explored for catering to the needs of the sector.

Consultancy Services

Water Metro, with the right innovations and solutions, became the pioneering effort in the country in a modern integrated water transport system. Water Metro learned the hard way but matured with abundant knowledge and, naturally, this knowledge base can be better utilized by offering consultancy services for other cities and projects in the entire country and outside. Business development will follow in this arena.

Close to a lakh and a quarter of people traveled in the first 14 days since the beginning of its revenue operation in a small stretch and long queues were visible at terminals. Almost all trips sailed at full capacity indicating a wholehearted acceptance by the locals of the Green initiative as a major public transport system. Water Metro systems can be replicated and adapted in about 40 cities in the country with navigable water bodies. The Water Metro Project is one of the pioneering efforts under the Prime Minister's vision of Atmanirbhar Bharat, proving to the world that India can lead the world with Technological solutions and innovations. ■

THE WAVES OF CHANGE

The City Water metro can have a significant impact on Kochi's urban landscape. Here are some of the potential effects

GLISTEN VARGHESE

Assistant Manager, Marine, KMRL



Aesthetic Enhancement

Watermetro can add to the aesthetic appeal of Kochi's urban landscape. The presence of boats and water transport infrastructure can enhance the visual appeal of waterfront areas, making them more vibrant and attractive. This can also contribute to tourism and recreational activities centered around the water bodies.



Environmental Benefits

Water-based transportation systems are generally considered more environmentally friendly compared to road-based transportation. Watermetro produce fewer greenhouse gas emissions, reduce air pollution, and have a lower carbon footprint. They can contribute to Kochi's efforts in promoting sustainable urban development and mitigating climate change.



Reduced Traffic Congestion

By providing an alternative transportation option, water metro can help alleviate traffic congestion on the city's roads. This can lead to smoother traffic flow, reduced travel times, and improved overall mobility for residents and visitors.



Economic Opportunities

The introduction of water metro can create economic opportunities, particularly for local businesses and tourism-related industries. Improved connectivity and accessibility can attract more visitors to Kochi, leading to increased tourism revenue and potential investments in waterfront development projects.



Water Metro can improve connectivity within the city by providing an alternative mode of transportation. They can connect different parts of Kochi that are located along water bodies like rivers, lakes. This connectivity can reduce travel time and congestion on roads.

Urban Planning and Development

Water metro can influence urban planning and development in Kochi. The presence of water-based transportation systems may drive the development of supporting infrastructure, such as passenger terminals, docking facilities, and waterfront amenities. This can lead to the revitalization and redevelopment of waterfront areas, transforming them into vibrant urban spaces.



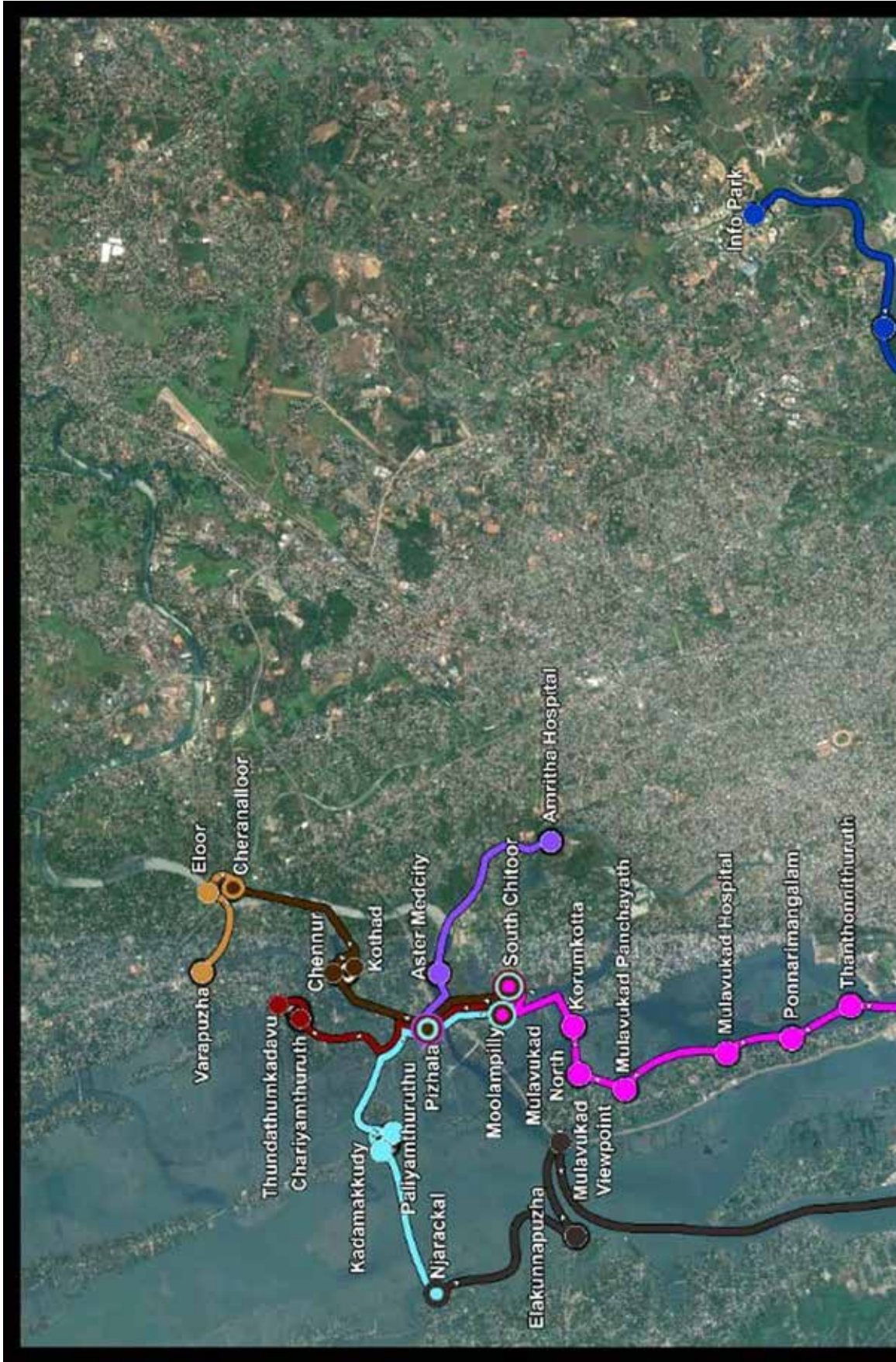
Challenges and Considerations

Implementing Water Metro also comes with some challenges. It requires careful planning and coordination between various stakeholders, including transportation authorities, urban planners, and local communities. Considerations such as safety measures, navigation regulations, and maintenance of the water transport infrastructure need to be addressed.



It's important to note that the impact of Water Metros on Kochi's urban landscape would depend on various factors, including the extent of the water transport network, the integration with existing transportation systems, and the level of public acceptance and usage.

CONNECTING MILES, CONNECTING LIVES





RATIONALIZED ROUTES BY GC.



An Engineering Elegance

The Water Way wonder of Kochi is an engineering marvel



With cutting-edge technology and a commitment to sustainability, the Kochi Water Metro is poised to become the world's largest fleet of electric boats, setting a new standard for organized urban water transport.

DIJO MICHEAL

DGM, Marine, KMRL

Kochi Water Metro, an ambitious and environmentally conscious integrated water transport system, is set to revolutionize urban connectivity in the picturesque city of Kochi. This visionary project aims to connect the island communities to the mainland, fostering socio-economic growth, improving livelihoods, and enhancing tourism prospects.

Enhancing Livelihoods and Accessibility

The transformative potential of the Kochi Water Metro cannot be overstated. By bridging the gap between the islands and the mainland, the project is expected to uplift the island dwellers through improved job opportunities, trade facilitation, and enhanced accessibility. This integrated water transport system offers seamless intermodal connectivity, linking water metro terminals, bus terminals, and metro networks, providing commuters with a comprehensive public transportation experience.

State-of-the-Art Boats and Terminals

At the heart of the Kochi Water Metro are its state-of-the-art boats and specially designed terminals. The system consists

of 78 boats, including 100-passenger and 50-passenger capacity vessels, constructed by the M/s Cochin Shipyard Ltd. These boats feature cutting-edge design, employing advanced technologies such as Aluminium catamaran twin hulls and FRP superstructures. Equipped with Lithium titanate oxide (LTO) batteries, renowned for their safety and high charging capabilities, these boats offer passengers a comfortable, reliable, and eco-friendly journey.

The meticulously designed water metro terminals, known as "Water Metro Terminals," provide a disabled-friendly infrastructure, ensuring inclusivity and equal transportation opportunities. Concrete floating pontoons serve as the foundation for these terminals, while advanced systems such as the Passenger Counting System (PCS) prevent overcrowding, prioritizing passenger safety and comfort.

Environmental Stewardship

The Kochi Water Metro project sets a new standard for sustainable transportation systems. By employing innovative boat design, the system minimizes wave generation, preserving the delicate aquatic flora and fauna. The efficient hull design reduces energy consumption, further minimizing the environmental footprint. The project's commitment to environmental stewardship is evident in its comprehensive Environment

Management Plan, which ensures that any adverse impacts are minimized or eliminated.

German Collaboration and Funding

The Kochi Water Metro project is a testament to international collaboration, with significant support from the German funding agency kfw under the Indo-German financial cooperation. With a total project cost of Rs 747 crores, this partnership showcases the commitment to sustainable development and showcases the potential for replicating and adapting similar systems in other cities across India, where navigable water bodies exist.

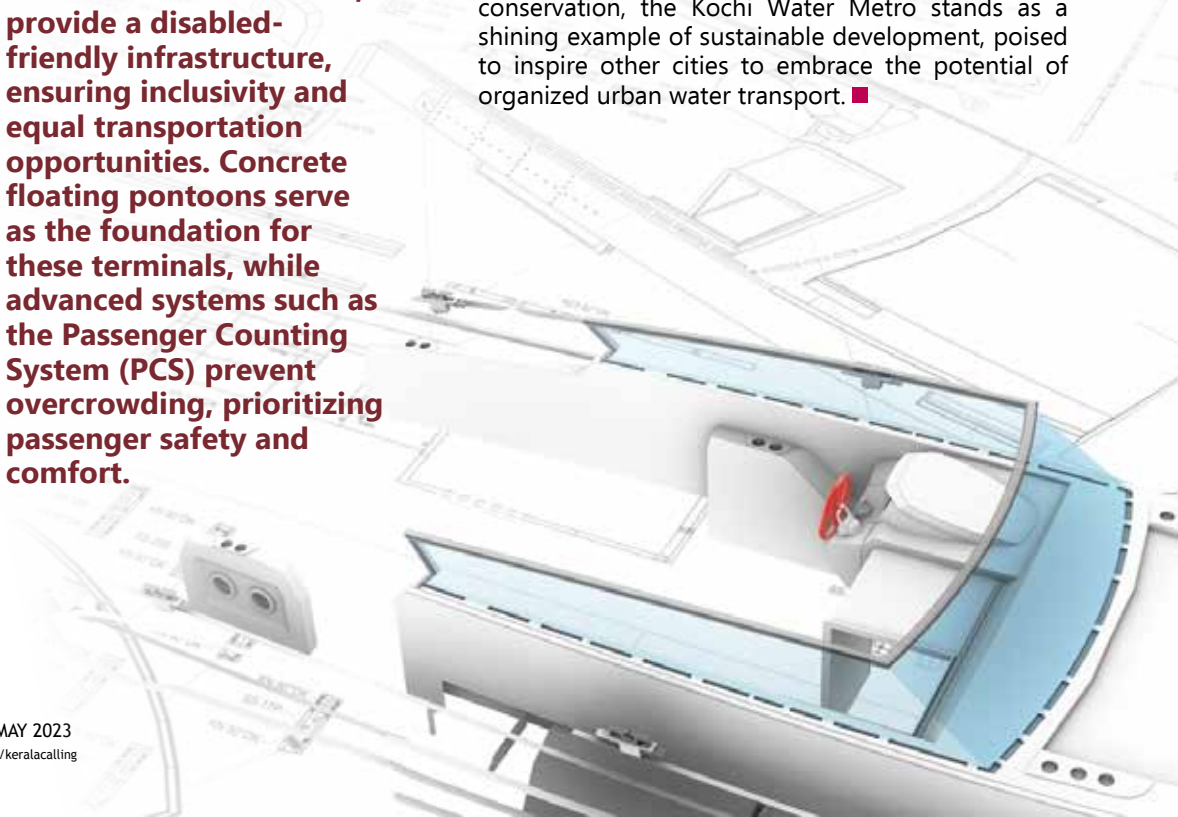
A Glimpse into the Future

When fully operational, the Kochi Water Metro will stand as a testament to India's commitment to sustainable urban transport. As the world's largest fleet of electric boats serving an organized urban water transport system, it will set new benchmarks for efficient, eco-friendly commuting. The success of the Kochi Water Metro serves as an inspiration for other cities grappling with transportation challenges, providing a blueprint for replicating and adapting this innovative solution.

The Kochi Water Metro project represents a paradigm shift in urban transportation, providing a sustainable, efficient, and inclusive mode of travel. By connecting the island communities to the mainland, the project promises improved socio-economic conditions, enhanced accessibility, and a boost to the tourism sector. With its cutting-edge boats, disabled-friendly terminals, and commitment to environmental conservation, the Kochi Water Metro stands as a shining example of sustainable development, poised to inspire other cities to embrace the potential of organized urban water transport. ■



The meticulously designed water metro terminals, known as "Water Metro Terminals," provide a disabled-friendly infrastructure, ensuring inclusivity and equal transportation opportunities. Concrete floating pontoons serve as the foundation for these terminals, while advanced systems such as the Passenger Counting System (PCS) prevent overcrowding, prioritizing passenger safety and comfort.



A DAY OF DISCOVERY AND ADVENTURE

A Mesmerizing Journey in the Water Metro

UMMER FAROOQ

Information Assistant, I&PRD
Ernakulam

Embarking on a journey through Kochi's enchanting water metro, we immersed ourselves in a day of discovery and adventure. With each route unveiling unique vistas, the water metro's stylish and soothing atmosphere transformed travel. This mesmerizing experience showcased the potential of public transport in Kerala.

The sun was beaming down on Ernakulam as I received a message from my old friend Arun Chetan, inviting me on an adventure: "Hey, I'm in Ernakulam to meet someone special. Catch me at Kalur Metro Station and give me a ring when you get here!" Excited and with no other plans, I set off for Kalur, eager to discover what he had in store.

As we zipped through the city on the metro, I couldn't help but think, "Once the Kakkanadu metro

expansion is complete, perhaps the chaos on these roads will subside." Little did I know, Arun had an entirely different plan. At Kalur, he greeted me with two tickets and a shoulder bag, urging me not to disembark. With a twinkle in his eye, he revealed our destination: "We're heading to Kakkanad to experience the water metro, a state-of-the-art marvel unique to Kochi!"

Intrigued, we continued our journey to the Vytilla Hub metro station and then on to the nearby Watermetro terminal. I was amazed to find the terminal a sleek, modern marvel, floating above the water and boasting cutting-edge amenities. With easy accessibility, it was clear that these terminals were designed for everyone.

As we waited to board, I marveled at the eco-friendly, recyclable smart tickets with NFC tags, a brilliant innovation that I couldn't resist pocketing as a memento. The terminal was bustling with a diverse array of passengers, illustrating the water metro's necessity in connecting the people of Kochi.

Our 25-minute voyage from Vyttila's Water



Metro Terminal to Kakkanad's Terminal was a revelation. Cutting through Ernakulam's notorious traffic, the water metro offered a swift alternative, allowing passengers to escape the sweltering heat and dusty air. Cocooned in cool comfort, we were free to drink in the lush scenery outside.

As we disembarked in Kakkanad, it was clear that this mode of transportation was vital for the area, connecting hubs like Infopark, CES, and the Collectorate. Currently, KSRTC buses bridge the gap, but with the introduction of feeder auto-rickshaws and KSBL-style bus services, navigating the area will become seamless.

Our journey was marked by comfort and convenience, with fully air-conditioned boats and phone charging amenities. The mesmerizing sights and experiences washed away the day's tensions, and every staff member exuded friendliness and helpfulness.

Eager for more, Arun and I decided to explore the Kochikayal, venturing from the High Court to Vypin. Sipping the famous Kulukki Sarbath at High Court

Junction, we joined the bustling terminal, teeming with eager passengers – from children to seniors in wheelchairs. The ticket, priced at just Rs. 20, promised an experience worth every penny.

The High Court-Vypin route offered a stark contrast to our previous journey, treating us to an entirely different panorama. The Shipyard, Vallarpadam Container Terminal, and Port Trust, along with a scattering of boats and ships, created an impressive maritime scene. Amid the sweltering heat, the air-conditioned boat emerged as a true blessing, transforming travel into a stylish and soothing affair.

As we stepped off at Vypin, I couldn't help but notice the queue of eager travelers forming at the opposite Jangar station, all bound for Fort Kochi. Their reliance on boat travel to escape the road traffic highlighted the necessity of amenities like the water metro. With nearby traders echoing this sentiment, it was clear that despite the increase in bridges and roads, navigating Kochi's islands remains most convenient by boat.

To our surprise, only a handful of disembarking passengers queued for the next boat. The majority ventured towards the inviting Fort Kochi, Puduvi beaches, and beyond. Local traders shared their observations of a significant increase in business since the water metro's inception, as it promises to create a lasting impact on West Kochi's development by connecting the islands and establishing an expansive network.

Reluctantly, I bid farewell to Arun Chetan at the High Court Terminal. As I prepared to leave, I spotted the MyBike cycles, an initiative launched by Kochi Metro to strengthen public transport systems. Feeling inspired by our day on the metro, I decided to give the cycle a whirl, pedaling my way back to Edapally.

Our day of exploration served as a reminder that Kerala, one of India's most densely populated regions, grapples with accommodating the sheer volume of vehicles on its roads. The importance of bolstering public transport systems could not be understated. As integrated travel options – including cycling, autorickshaws, buses, boats, and trains – continue to expand, more people will undoubtedly embrace these alternatives, heralding a new era of mobility in Kerala.

As I reflect on our journey, I'm grateful for the kaleidoscope of experiences the water metro offered. From the lush urban vistas of the Vyatila-Kakkanad route to the captivating maritime scene of the Ernakulam-to-Vypin journey, each moment was a testament to the beauty and diversity of Kochi's waterways. With its stylish and soothing atmosphere, the water metro truly transformed travel into a mesmerizing adventure. ■

“If you can get an international level boat ride at a lower cost and completely safely, why would you endure the intense heat of this summer, consume more than necessary diesel, and wait in traffic?”

Say the Commuters



The Water Metro has been making waves in Kochi since its launch on April 25, 2023, providing a much-needed transportation alternative for the city’s residents and visitors. With over 6,559 passengers on its inaugural day and a record-breaking 11,556 passengers on April 30, it’s clear that the Water Metro is a game-changer for the city. The government is dedicated to extending the service to even more routes, hoping to cater to an ever-growing number of commuters, especially those residing in Vypin and working in InfoPark.



T.G. Rajesh
(Lottery seller in Vypin)

I am a lottery seller. I run my business near the Vypin bus stand. After the initiation of the water metro, many more people have been arriving in Vypin than usual. My business has also grown



P.J. Ajith
(Quality Controller at a firm in Bangalore, originally from Vypin)

Even though there are bridges and roads, the main problem faced by the islands of Kochi today is transportation. The water metro can play a significant role in solving the travel difficulties. For this, water metro services need to be expanded to other islands. If this happens, we can reach another island from one place by road in half the time.



P.K. Rahim
(Runs a small business near the Vypin bus stand)

The arrival of the water metro has sparked a significant rise in Vypin’s hustle and bustle. There has been a substantial change in the small-scale business due to an increase in the number of recreational travellers. It is beneficial for those coming from Ernakulam to the island due to the reduction of buses to the Vypin side. The number of visitors to the islands of Vypin, including Puthuvype, has also increased. The water metro could be the cornerstone of Vypin’s development.



P.K. Nisha
(Bakery Worker)

There has been a significant increase in the number of travellers to Vypin after the inauguration of the Water Metro. There is a rise in business at the bus station shops because those who arrive by jetty to travel to other places come here to drink water and buy other necessities.



M.P. Paul (Retd. Government Servant)

My unexpected journey on the Water Metro came during a short break with my wife and children. Though I have travelled on various waterways in Kochi, this was a unique experience. As more islands are included, it will be a great benefit for workers.



Arjun Chandran
(Techie)

The government's decision to operate a water metro service to Kakkanad is highly commendable. The fact that one can travel to and from Vyttila to Kakkanad without the congestion, dust, noise, and pollution is a big deal.



Rohit Batt
(Mumbai Native Tourist)

The Water Metro provided a wonderful experience. My trip to Ernakulam was part of a work-related journey. Even though we have boats in Mumbai, the journey on the Water Metro was different. This kind of experience is a first for me. Kerala is truly amazing.



Amal J. Nellikkan
(Techie)

I work in an establishment that functions in a hybrid mode combining work from home and onsite. Being a native of Kottayam, it's enough for me to come to Infopark occasionally. If I could use the water metro during these times, it would alleviate the stress of travel. Plus, one can enjoy the views.



Aleeta Maria Tom (Techie)

I was about to book a cab to South Railway Station, Ernakulam, to go home in Kottayam when my friends told me about the water metro. I decided to give it a try and it worked out. From Kakkanad, one can get to Vyttila and then take the metro to the railway station. It's a good connectivity. Since it saves both time and money, I cancelled the cab and took the water metro instead.



Akshay Raj (Techie)

The water metro provides a great travel experience. I went to Vyttila with friends over the weekend. If you can get an international level boat ride at a lower cost and completely safely, why would you endure the intense heat of this summer, consume more than necessary diesel, and wait in traffic?

THE GLORY AND BEAUTY OF KOCHI

Kochi, known to be the commercial capital of Kerala, is the first destination for the tourists and center of trade and business. Kochi is blessed with Kochi Kayal, part of Vembanadu Lake, which encompasses several islands spread across the Greater Kochi region and is part of the City of Kochi. Kochi houses one of the busiest major ports in western India, which is close to international shipping channels due to its geographical location on the Indian peninsula and frequently called upon by major cruise ships. The container transshipment terminal, Vallarpadom is strategically located in Kochi, near to the international shipping channel. Rich in its maritime history, Kochi region had a special place in history with maritime trade for many centuries with its spice trade and had trade relations with the Arabs, Chinese, and Europe from ancient port of Muziris, kodungalloor. With the devastating floods in the fourteenth century, when the Port of Kodungalloor was destroyed and the creek of Kochi was opened, which developed as a Port. In the early twentieth century, the British wanted to develop it and the Port of Kochi was developed as a major Port by extensive dredging and the formation of the man-made island Willingdon island by legendary British engineer Robert Bristow.

The Islands of Kochi are thickly populated and culturally inclusive and the islanders depend on the City of Kochi not only for earning their livelihood but also for trade, business, health care, education, etc. The primary means of their transport were

Kerala, known in the world tourism map as God's own Country, is among the list of top 50 destinations across the globe by Time Magazine and others. The Kerala backwaters are a unique experience and beautiful ecosystem that supports a rich diversity of flora and fauna. Vembanadu Lake, one of the largest lakes in India, stretches across many districts of Kerala, forming the largest brackish lagoon. It is thriving in tourism activities, which is one of the major economic activities of the state and a major income source for a vast population.



traditionally waterborne, with a range of vessels from local canoes known as “vanchy”, to diesel-powered Boats till the end of the last century. Traditional boats “Kettuvallom” were used to transport goods by the local traders to far away interiors and distant towns.

With the development of connecting bridges and roads in the early nineties, especially through the newly built Goshree bridges, transport largely shifted to motor vehicles, and with economic advancement, the tendency was shifted to the use of private vehicles for their transportation needs. The water transport slowly started deteriorating and most of the privately run Boats disappeared from the routes and only vintage type government supported initiatives survived, that too in a dilapidated state. Few of the islands, which are not yet connected by any bridges and roads, remained as islands of limited reach and correspondingly under-reached and under-developed, however continuing to amaze with their serene beauty.

The ever-increasing private vehicles at a fast pace, along with the weakening of one of the most efficient public transport modes, among similar trends in the mainland posed fresh challenges to the city of augmenting the rush in city roads, ever-increasing traffic jams, slow pace of movement, accidents, higher

pollution levels and chaos in parking spaces. As of today, there's one vehicle for every two persons in the state as a whole and when it is on city skirts this is an even higher figure. The need for a sustainable system of transportation was the need of the hour for the city dwellers, who traditionally used public transport for more than 50% of their transport needs. Kochi Metro Rail was one of the first steps towards a mass transport system in the city that started its operation in 2017, credited as one of the fastest-built metros in India and the most modern. Today, more than a lakh commuters use the Metro daily, probably lifting out a very large number of private vehicles from the road and reducing the sizeable quantity of Greenhouse gas emissions saving the planet.

Along with the conceptualization of Kochi Metro in the main arterial road, the need for an integrated transport system with all modes of public transport has been identified as important as a comprehensive solution for the city and improving the living standards of the people of Kochi. The use of abundant water bodies, by rejuvenating the water transport system was one of the best solutions, towards a socially inclusive development of the islanders and city dwellers. The idea of Kochi Water Metro was born as a natural outcome of inclusive thinking. ■



IGNITING DIGITAL RENAISSANCE

SAJI GOPINATH,

Vice Chancellor, Digital University Kerala

Kerala which took many pioneering steps in the modern education sector, kept its promise intact of becoming a knowledge economy when Prime Minister Narendra Modi laid the foundation stone for the country's first digital science park on April 25.

Giving impetus to scientific discoveries, and applied research while bridging the gap between the industry and various government initiatives, the Digital Science Park coming up close to Digital University Kerala at Technopark Phase IV will further strengthen Kerala's commitment towards making India a Knowledge hub.

Triple Helix Model of Convergence

Proximity many often means success. If once internet-connected people and smartphones made communication easier, now in the age of Artificial Intelligence when industry 4.0 is bringing in unforeseen changes, the new philosophy is deep connect.

Coming up adjacent to a University like DUK, which focuses mainly on niche areas of emerging technologies, the Digital Science Park will create a new ecosystem. It will ensure that academia -research -industry can make seamless convergence possible with government support to create the much-needed futuristic development model instead of relying on just the conventional pattern of the hub and spoke model.



Digital Industry, Digital Applications, Digital DeepTech, and Digital Entrepreneurship - the four thematic pillars of Digital Science Park will act as a catalyst of growth to meet the ever-growing demands of the tech industry.



Rather than companies coming in and just investing in a space allotted by the government, the new development model will ensure industry needs are met by academia like Kerala Digital University which is already equipping students with the right skilling to be industry ready. At the same time, industries can collaborate with the upcoming Digital Science Park for research and innovation needs. They can meet global compliance and industry standards through a variety of international academic collaborations.

Not only nurturing talents in high-tech innovations and commercialization for making Indian products with global

market acceptance, the convergence of research, innovation, industry and education will play a pivotal role in shaping the future of India where currently Digital transformation is being given a big push by both state and central governments.

Four thematic pillars of the Digital Science Park

Digital Industry with a focus on industry 4.0, electronics, semiconductors and VLSI, and 5G communications, smart materials, medical materials etc

Digital Applications with a focus on e-mobility and digital health.

Digital DeepTech with a focus on AI, Block chain and security, Geo-and sustainable informatics.

Digital Entrepreneurship with a focus on creating new products, capacity and jobs.

These thematic pillars will translate to high-end research labs and facilities which will include, clean rooms, material characterisation facilities, integrated sensor labs, energy labs, motor and drives labs, RF and wireless testing labs, unconventional computing centres, high-end data centres, robotics labs, electronic design centre, software development labs, informatics and computing labs, and block chain and cyber security labs.



The digital science park will become operational with its first centre on electronics system design focusing on analogue and mixed-signal systems, VLSI, AI processors etc. ARM has signed an agreement with Digital University Kerala on the academic, research and start up-related activities as part of this upcoming centre. Similarly, the center for AI will focus on both the hardware and software aspects of responsible AI, where NVIDIA will join as a partner to the centre.

Among international engagements, the University of Manchester, the University of Oxford and the University of Edinburgh have signed MoUs with Digital University Kerala to officially engage in the development of the Digital Science Park.

The proposed Digital Science Park is adjacent to Digital University Kerala in the Technocity campus, Pallippuram, Thiruvananthapuram. As a third generation Science Park, the Digital Science Park is designed with an innovation philosophy of cluster based interactive - innovation and is to be developed on a network overlay of communications built over a triple helix involving Universities, Industry and Government. The proposed park will initially have two buildings with a total of 2,00,000 sq. ft (One Lakh Fifty Thousand square feet). The first building with 1,50,000 sq. ft. (One Lakh square feet) 5 floors will house the Centre of Excellences (CoEs) including research labs and a Digital incubator, while the second building of 50,000 sq.ft (Fifty Thousand square feet) will house administrative as well as Digital Experience centre. The total project outlay has been estimated at Rs.1515 Crore, out of which Rs. 200 Crore is allotted by the Government of Kerala as a first installation and the remaining fund is to be generated from other sources including industry partners. 13.65 acres of land have been allocated in the Technocity campus, Pallippuram. The Digital Science Park will start its initial operations from the 10,000 sq.ft space in the Kabani building.

Located adjacent to the Kerala University of Digital Sciences Innovation and Technology, (Digital University of Kerala- DUK) on around 14 acres of land, the Rs 1,500+ crore Digital Science Park project has been conceived as a multidisciplinary cluster-based interactive – innovation zone focused on digital technologies. The project is to be completed in two years.

In the 2022-23 budget, the state government announced the establishment of a Digital Science Park adjacent to DUK at an area of 10 lakh sq. ft. in two blocks. Out of the total project outlay, Rs 200 Crore has been already allotted by the Government of Kerala and the remaining amount will be generated from other sources including industry partners. ■



A dream project by the state government, which intends to pass on the cultural heritage of Malayalam to the generations to come, has got off to a flying start.

A visage of Kerala culture

IGNATIUS PEREIRA

Senior Journalist

The project, initiated by the Department of Culture, envisages establishing 14 cultural complexes —one each in every district. Each of these complexes will be named after a leader, who played a vital role in the renaissance movement of Kerala.

The first among these complexes, named after eminent social reformer Sree Narayana Guru, has now come up in Kollam. The facility, according to the authorities, will serve as a platform for promoting historical and regional literature and other art forms.

The project marks a step towards ensuring the timeless existence of true history and unique literature and arts.

To quote the Kollam MLA M.Mukesh, "It's a cluster of multiple stages under one umbrella to promote and present diverse cultural events. That's the Sree Narayana Cultural Complex in Kollam."

The complex boasts an array of facilities including cinema halls, drama stage, rehearsal halls, solo theatre, seminar hall, black box theatre, open-air and AV theatres, art gallery memorial hall, library, exhibition venue, classrooms, workshop halls, cafeteria, shops and resting space.

Sree Narayana Guru Cultural Complex, Kollam





The Sree Narayana Guru Cultural Complex, Kollam is dedicated to the public by Chief Minister Pinarayi Vijayan.

The complex is expected to emerge as a major platform for showcasing the unique heritage and artistic traditions of Kollam. It will be hosting various cultural programmes, exhibitions, seminars, music festivals and workshops etc.

The student community too will be benefited from the complex as a learning platform. The archive in the complex will offer details on the cultural, political, literary, commercial, and industrial traditions of the region as well as the indigenous handicraft. The place will also draw attention as a tourist attraction. Programmes will be staged here throughout the year.

The complex comprises four portions; entrance, exhibition, cafeteria and performance area. Its air-conditioned auditorium can accommodate 247 spectators while the AV theatre has the capacity to hold 203 people at a given point in time.

The black box theatre, meanwhile, can accommodate 54 persons where as the open-air theatre is wide enough to house 600 people. The seating capacity of the seminar hall is 108. The library and the art gallery extend over an area of 5600 square feet and 5000 square feet respectively.

The classrooms will largely turn into a stage for conducting research on the folk arts of the Malabar region. Training sessions on art and culture will be held in the workshop rooms on a regular basis.

The black box theatre, which is completely air-conditioned, will provide the ideal venue for street theatre performances, rehearsals and mimes. The theatre AV theatre, at the same time, can be used for the screening of short films and documentaries.

The complex also comprises a craft museum to showcase handicrafts. Meetings can be organised at the Memorial Hall with a maximum attendance of 100 people. The auditorium features the facilities for staging both small-scale and big programmes and is equipped with state-of-the-art sound and lighting systems. International conferences and meetings can be held using the facilities in the seminar hall. The open-air theatre also comprises green room facilities.

The spacious parking facility in the middle of lush greenery is one of the main attractions of the complex here. Plans are also afoot to prepare a list of programmes to be staged at the complex under the leadership of a curator.

The Kerala State Film Development Corporation (KSFDC) has been tasked with the operation of all 14 cultural complexes. The construction is being carried out at a cost of Rs 56 crore from the KIIFB fund.

The complex at Kollam has been established on 3.5 acres of property at Ashramam. The built-up area is approximately one lakh square feet. ■



The black box theatre, which is completely air-conditioned, will provide the ideal venue for street theatre performances, rehearsals and mimes. The theatre AV theatre, at the same time, can be used for the screening of short films and documentaries.

Charting a Transformative Journey

The former Chairperson writes about the Kerala State Youth Commission's Role in Shaping the Future

Dr. CHINTHA JEROME,

Former Chairperson,
Kerala State Youth Commission

The Kerala State Youth Commission has emerged as a proactive champion in scenarios where youth have been eclipsed by the shadow of social injustice. The Commission has consistently advocated for the attainment of social and personal justice, with special emphasis on the causes of women, transgender individuals, the differently-abled, and the SC-ST youth. In a pioneering initiative, the Commission organized the nation's first Grievance-Redressal Adalat exclusively for the transgender community, a move that garnered widespread acclaim.

The Commission has set in motion an array of initiatives aimed at



propelling the social mobility of marginalized groups. For instance, it campaigned rigorously for the expunction of discriminatory language, such as heterosexual/third gender, from identification documents. It has also advocated for the installation of ramps in government offices to amplify accessibility for individuals with disabilities. The Commission has additionally proposed the inclusion of an option for the transgender community in the PSC application form. Its endeavours are directed towards the democratic realisation of social justice, as evidenced by our organization of regular health camps in the tribal colonies of Kerala, striving ceaselessly to uplift their societal conditions. Its interventions have expedited job placements for candidates on the PSC rank list and ensured timely grants for deserving students. The Commission has worked tirelessly to foster safer work environments and forestall exploitation. Through such efforts, the Youth Commission has safeguarded the human rights of young individuals and championed the cause of social justice.

The Commission has confronted issues such as the extension of college hostel hours and enhancement of hostel food quality. We have rallied for the right of textile workers to sit during their shifts. The Youth Commission has actively contested social injustices like violence against women, dowry, and relationship disputes, thereby being a bulwark for young individuals when they have been denied justice.

In the face of adverse circumstances, the Youth Commission has served as an invaluable bulwark, preparing Kerala's youth to contend with crises such as the rampant floods and the COVID-19 pandemic. Throughout the tempestuous periods of COVID-19, the Commission has been instrumental in dispatching life-saving medication overseas and in orchestrating the safe return of Malayali students marooned in other states. With the invaluable aid of the then minister E. P. Jayarajan, we commandeered a chartered flight to transport medicine at a time when regular flights were grounded due to the lockdown. When the Karnataka state border was sealed, the Commission stepped in to ensure the



The Commission has worked tirelessly to foster safer work environments and forestall exploitation. Through such efforts, the Youth Commission has safeguarded the human rights of young individuals and championed the cause of social justice.



timely delivery of essential medication to those in need. Our indefatigable efforts secured life-saving drugs for numerous patients at RCC during the lockdown, a feat that continues to inspire our future endeavours. Under the Commission's guidance, thousands of spirited youth rallied to aid those affected by COVID-19. The Commission's efforts and the volunteer force we led were honoured with a special mention during the Chief Minister's press conference.

Global Recognition and Accolades from the United Nations

The Kerala State Youth Commission and the Malayali youth's global recognition serve as a source of immense pride for the Commission. The United Nations Youth Envoy has acknowledged our significant contributions during the floods and COVID-19 crises. We were also invited to present a paper at an international workshop helmed by UNESCO and the United Nations Environment Organization, focusing on 'youth involvement during the floods in Kerala'. Our youth had the honour of speaking at a United Nations workshop in Berne, Germany, addressing issues related to the environment, climate change, and disaster mitigation. These experiences have been instrumental in shaping the Commission's global perspective and ethos.



Standing Shoulder to Shoulder with the Youth; In Tune with the Times

Throughout this period, the Commission has spearheaded a series of comprehensive campaigns addressing pressing concerns such as drug abuse, cybercrime, and women's rights, while simultaneously fostering democratic public awareness. These campaigns have benefited over 100,000 young individuals across colleges, libraries, clubs, colonies, and camps. Our awareness magic show, 'Mentoring Young Kerala', held under

the motto 'Navakerala Nirmithi Yuvathayiloode', has been a resounding success on various campuses across Kerala. Magician Gopinath Muthukad hosted this engaging programme for the Commission. We have also successfully spearheaded campaigns against a myriad of superstitions and societal ills.

The Commission has coordinated 'Job Fests' throughout the state, providing job-seeking youth with myriad opportunities. It's noteworthy that this initiative has helped over a thousand young individuals secure employment. Over the years, the Commission has awarded the Youth Icon Award in various fields including arts, culture, sports, literature, agriculture, entrepreneurship, and social service to honour exceptional young individuals, thereby fostering a renewed sense of motivation among the youth.

The recipients of the Youth Icon award include luminaries such as Prithviraj Sukumaran, C. K. Vineeth, Rajesh Krishnan, Varun Chandran, Ashla Rani, Tovino Thomas, Manu S. Pillai, Chitra P.U., Johnson, Krishnakumar, Arun A. Unnithan, and others.

Annually, the Commission orchestrates National Seminars and Youth Day celebrations for a select cadre of young individuals, with participation from a constellation of luminaries from diverse fields. The Commission has conducted thought-provoking national seminars on



The seminars have been enriched by the presence of distinguished participants including Teesta Setalvad, Shabnam Hashmi, Dr Estefania Guevara, former Cuban civil court judge and cultural activist Liliyam Botty, theatre activist Pralayan S., various state ministers, academic savants, authors, filmmakers, and other notable figures who have moderated these sessions.

current topics such as 'Rereading the Nation: Past and Present', 'Agree to Disagree', 'Rebuilding Youth Kerala; Towards a Knowledge Society', 'Alternative...Resistance...Youth...' among others. The seminars have been enriched by the presence of distinguished participants including Teesta Setalvad, Shabnam Hashmi, Dr Estefania Guevara, former Cuban civil court judge and cultural activist Liliyam Botty, theatre activist Pralayan S., various state ministers, academic savants, authors, filmmakers, and other notable figures who have moderated these sessions.

The Emergence of Green Politics

The Commission has meticulously crafted several initiatives aimed at kindling the interest of the youth in agriculture and advocating for organic farming. We have championed a plethora of green politics initiatives such as the Green Zone Scheme, the Youth Farmers' Congress, and the promotion of wasteland cultivation at the grassroots level. We have also addressed various environmental issues by appointing Green Youth Coordinators at the district level. Building upon these efforts, the Youth Commission, in synergistic collaboration with the state government, aspires to develop a unique youth policy tailor-made for Kerala. ■





It is not difficult to stay mentally and physically fit when there are no people around you.

Abhilash Tomy



Abhilash Tomy, the first Indian and second Asian to win the prestigious Golden Globe Race, shared his journey and experiences of the historic event with C. Rajesh for Kerala Calling. From his passion for single-handed sailing to his rigorous preparation for the race, Abhilash described the challenges he faced and overcame during the arduous, solo, non-stop circumnavigation of the globe. He also discussed the personal significance of his victory and his hopes for inspiring the next generation of sailors in India, particularly from Kerala.

Congratulations Abhilash. Can you share with us the journey that led you to participate in this historic event and how you prepared for it?

Thank you! I was interested in single handed sailing since 1999 and I got a chance to do a nonstop circumnavigation in 2012-13 thanks to the navy. The next challenge naturally would be to do single handed races. GGR was such an opportunity.

To participate in the Golden Globe Race, sailors must have experience in offshore sailing and complete qualifying races. In addition, they must have a seaworthy boat that meets the race's specifications and safety requirements.

Preparing for the race requires extensive training, both physical and mental, including navigation and survival training. I



The sea is very predictable. And it is not difficult to stay mentally and physically fit when there are no people around you.

would need to ensure that my boat had all the necessary safety gear, communication equipment, and provisions to sustain me during the race.

During the race, participants face various challenges, including harsh weather conditions, technical problems with their boats, and the mental and physical strain of being alone at sea for extended periods. I would need to have a high level of skill, determination, and bravery to complete the race.

Overall, the Golden Globe Race is considered one of the most challenging sailing events in the world, and completing it would be an incredible accomplishment.

Throughout the race, you must have faced numerous challenges and experienced some unforgettable moments. Can you share with us some of the most difficult situations you encountered and how you overcame them

There were many problems with the boat and I found solutions to them using spares on board.

As a proud representative of Kerala and India, what significance does this victory hold for you on a personal level, and how do you think it will inspire the next generation of sailors from the region

It means a lot to me. I hope this serves as an inspiration for the next generation of sailors.



The Golden Globe Race is known for its arduous, solo, non-stop circumnavigation of the globe. How did you maintain your physical and mental well-being during this long and demanding journey, especially when facing the unpredictability of the seas?

The sea is very predictable. And it is not difficult to stay mentally and physically fit when there are no people around you. ■

“Nursing the World to Health”

JOBY BABY

Nurse

There are more than 20 million nurses across the world and each one of them has a story. They know about hope and courage, joy and despair, pain and suffering, and life and death. As an ever-present force for good, nurses hear the first cries of newborn babies and witness the last breaths of the dying. They are present at some of life’s most precious moments and some of its most tragic. Nurses serve humanity and, by their actions, they protect the health and well-being of individuals, communities and nations. Around the world, people routinely recognise nursing as the most honest and ethical of the professions. People instinctively trust and respect nurses and the work that they do.

The International Council of Nurses (ICN) believes that it is vitally important to show the world who nurses are and what they do, especially this year. The theme for the 2023 resource is “Our Nurses. Our Future”. ICN wants the voice of nursing to be heard around the globe, to spread the word about great professions and how it contributes to the well-being of the world. As carers, healers, educators, leaders and advocates, nurses are fundamental in the provision of safe, accessible and affordable care (Health for All). 2023 is an important time for nursing. It provides the opportunity to demonstrate to policymakers, health professionals and the public the enormous contribution of nurses to health and wellbeing. This is our moment. Let us seize this time not just for the sake of nursing, but for the benefit of the health of our world.

**200 years later, Florence Nightingale
speaks to us today.**

Florence Nightingale’s nursing intersected with a broader set of interests in public health, advancement of medicine, hygiene, epidemiology, statistics and military health. In that sense, her vision was thoroughly modern: intersectional, interdisciplinary and global. Her understanding of the physical and psychological environment of the hospital and home reveals not only a deep scientific understanding of hygiene, but health and healing, details of care that added to comfort as well as nourishment of the human spirit. Nightingale’s statistical and analytical skills formed the bedrock of



her international and comparative statistics, anticipating the development of International Classification of Disease (ICD) codes today. She would call on all nurses to take leadership of hygiene and antibiotic stewardship. Finally, she would urge an intergenerational approach, with young and older leaders trained together in organizing methods and political influencing skills. Together, they would act as the new generation of Nightingales who would lead the charge and create nursing as a global social movement for social good.

Nurses: The Brand Ambassadors of Kerala

As per the World Health Organisation (WHO), two fifth of India's medically qualified nurses are from Kerala. A state that accounts for only 3 % of the country's population, has 39 % of the country's nurses. As per the Indian Nurses Association, more than 9000 nurses graduate in Kerala every year. The Keralite nurses not only

provide care to the patients abroad but also build a better life for themselves and their kin back home. A phenomenon is seen across the country.

The Overseas Development and Employment Promotion Consultants (ODEPC) will enhance the recruitment of doctors, nurses and other professionals to work establishments in European countries as well as Gulf countries. Countries such as Kuwait, Qatar, Germany and Japan had also evinced interest in directly recruiting nurses, paramedical staff, drivers and other skilled workers in different sectors. More than two thousand nurses have been recruited to various foreign countries through ODEPC in the last three years. ■

GOLF'S OWN COUNTRY



Golf Tourism, a lesser-known tourism segment in South India, has the potential to attract high-spending international tourists.

AJAI KUMAR K. S.

Travel Writer

SRIDEVI NARAYANAN

Media Analyst

Rene and Magdalena Rinderknecht from Switzerland are ardent golf lovers who chanced upon Kerala as a part of their Indian trip. Their off-the-beaten-track visits are the perfect blend of holidays with golf plays. During their twelve-day-long North Indian trip, they visited major destinations along with finding ample time to experience playing golf at the various golf courses of New Delhi, Agra and Rambhargh. On their 14-day-long -South Indian Trip, they found enough time to play golf in Bangalore, Ooty and Cochin. In Kerala, they played at CIAL Golf Course, the tropical destination of their itinerary.

Rinderknecht Family has played golf for more than twenty years. "Playing golf is our passionate entertainment, and we are not practising it as a sport. Hence, we have not yet participated in any competitions," said Rene about their experiments with golfing in different countries. Rene's enduring passion for golf made him the custodian of a golf course that stretches about 40 hectares with 580 active members in Switzerland. According to the Family, Cochin CIAL

Golf Course is the best-organised and well-maintained golf course compared to the other places they have played golf in India.

Magdalena observes "There are two different kinds of international golf players. The first kind visits various destinations only to play golf. The latter category mixes their holidays with golf destinations. Though in our list of South Indian destinations, there are only three places with golf playing facilities - Bangalore, Ooty and Cochin - other destinations like Kabani, Thekkady, Kerala Backwaters, and Marari Beach add additional charm to our vacations".

"The CIAL Golf Course in Cochin meets the highest international standards. We expect such industry experiences to open up new arenas to fit the new tourism world," opines Mathan Paramanandam, Business Manager of a prominent tour company. "South India can rise as an Exotic Golf destination", Mathan adds.

While El- Dorado is the "Gold-land", Switzerland is a "Golf-land" having 96 golf courses and 80 thousand serious Golf players to its credit.

Through golf promotion for international players, Switzerland earns more than 05 million US Dollar per annum.

Golf tours can attract the high spending international tourists by turning this green state into a golf destination. Golf-playing facilities can add one more attraction to all the already existing Unique Selling Products (USP) of Kerala as a tourist destination. Through well-managed implementation and serious marketing, Green Kerala has all the possibilities. At present, our international airports and its state-of-the-art amenities are welcoming tourists warmly, bringing an immense amount of Foreign Exchange to the nation.

Presently, the existing Golf Courses in Bolgatty Island, founded in 1922, and the Trivandrum Golf Courses, having many tales to tell, can also be promoted along with the CIAL Golf Course. Over time, many other golf courses can be introduced in the public or private sectors along the suitable spots of the state. Shortly Kerala can be a "Golf's Own Country". ■

According to the Family, Cochin CIAL Golf Course is the best-organised and well-maintained golf course compared to other places they have played golf in India.



JNTBGRI Honoured

With GGI-Gardens Award



JNTBGRI is one of the ten botanic gardens and arboreta in the world to receive the GGI-Gardens Award. JNTBGRI is now part of the Global Genome Biodiversity Network (GGBN), a network of biological repositories and their representatives worldwide.

Dr. B. SABULAL

Director, KSCSTE-JNTBGRI

Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) has been recognized with the prestigious 2023 Global Genome Initiative for Gardens (GGI-Gardens) Award Program. This program, funded by the United States Botanic Garden and administered through Botanic Gardens Conservation International (BGCI), is a science-based effort to collect genomic biodiversity from around the world, preserve it in biorepositories, and makes it available for researchers worldwide.

JNTBGRI is one of the ten botanic gardens and arboreta in the world to receive this award. This is the second



JNTBGRI holds the largest living collection of plant species in India with over 50,000 accessions of about 4,800 species in its conservatories such as arboretum, field gene bank, medicinal, aromatic plants & spices, ornamentals, ret species park, systematic garden, Andaman flora, bamboos, bromeliads, gymnosperms, insectivorous plants, lesser-known fruits, orchids, palms, pteridophytes, succulents & cacti, aquatic plants, holding. The Institute also discovered over 800 new species of angiosperms, mushrooms and fungi. Institute conservatories, species-mushroom herbaria and seed banks are very useful repositories for students, academicians, foresters and policymakers on our plant wealth. At Palode, 40 kilometres from Thiruvananthapuram, JNTBGRI is en route to the tourist locations Ponnudi, Palaruvi waterfalls and Thenmala.

Under the GGI-Gardens program, JNTBGRI will have initial priority for plant families and genus not yet represented in GGBN biorepositories. The focus of the present program will be on the medicinal and aromatic plants of the Western Ghats. JNTBGRI holds around 1500 accessions of 1100 species of medicinal, aromatic and spice plants.

time the institute has been honoured with the GGI-Gardens Award.

GGI-Gardens aim to capture half of the world's genome diversity through this program. JNTBGRI is now part of the Global Genome Biodiversity Network (GGBN), a network of biological repositories and their representatives worldwide. This initiative involves several institutions with biological repositories organized to form an international network.

Under the GGI-Gardens program, JNTBGRI will have initial priority for plant families and genus not yet represented in GGBN biorepositories. The focus of the present program will be on the medicinal and aromatic plants of the Western Ghats.

Legend: Four representative medicinal plants chosen for genome diversity conservation under the GGI-Gardens program, (i) *Coscinium fenestratum* ("Maramanjala"), (ii) *Piper barberi* ("Kattu mulaku"), (iii) *Aporosa cardiosperma* ("Vetti"), (iv) *Monochoria vaginalis* ("Karimkoovalam"). (Common names in brackets). ■

We Too Are Governments

Envisioning Progressive Shift



The book at hand, **We Too Are Governments** by J.B. Rajan and T.P. Haribabu, deals with all such intricacies and many more. Suitably subtitled **Decentralization, Pandemic and Climate Change Challenges**, the book goes beyond the narrow margins of understanding local governance as only a process of decentralization.



AJITH VENNIYOOR

Writer

Democratic Decentralisation is one of the most important subjects which have been debated over the years. The basic reason is that the local governments could not function as democratic self-governments, due to lack of power and resources. Strengthening local governments, using devolving functions, functionaries and finance is an effective way of democratic decentralisation. Kerala initiated a revolutionary process on it through people's planning, since 1996. Since the last three decades, many milestones have been crossed in the process and models are being emerged. Kerala has set a trend of indemocratic decentralisation by experimenting with people's planning.

The book *We Too Are Governments* by J.B. Rajan and T.P. Haribabu, argues that a "better understanding of the intergovernmental aspects of climate change mitigation and adaptation contributes to overall efforts to adapt the public finances to the challenge of climate change". What makes this book special is its ability to trace the issue of decentralization in the larger framework of Mahatma Gandhi's dream of Gram Swaraj.

This book discusses two distinct aspects of Local Governments; an assessment of the current status and the future possibilities. The current capabilities include their involvement and initiatives during the pandemic. Also, the

evolution and successive institutional reforms since the 73rd and 74th Constitutional Amendments in 1992. The second aspect is an attempt to review the existing limitations and future possibilities. The authors maintain that the country, the people and the development priorities have changed considerably since the constitutional amendments 30 years ago.

The themes discussed include the role of local governments in the context of the pandemic and climate change, the process of decentralisation in India, the global phenomenon, institutional synergy in pandemic mitigation, reforms on decentralisation, the role of community leadership, importance of capacity building, the value of best practice, intergovernmental relations, strengthening of institutional mechanism and local management, and the need for an inclusive approach in legislations. This book also explores and observes the diverse experiences, issues, challenges and responses of decentralisation along with some most relevant case studies and critical analyses.

In the foreword, S.M. Vijayanand, Chairman, of the Sixth State Finance Commission and former Chief Secretary of, the Government of Kerala agrees with the concluding remarks of the authors about the "need for a Version 2 recognizing the core strengths of Local Governments as also the new challenges". He adds: "...Local Governments have to be given specific roles in disaster management and public health. Going beyond, they argue convincingly that there is a strong need for local action to address climate change which only Local Governments can perform. Therefore, the time is right for revisiting India's decentralization and even amending the Constitution, to realize Gandhiji's dream of Gram Swaraj which sees Grama Panchayat not as the lowest tier of governance, but as the central point. As India completes its 75th year of Independence, probably this thought needs to be uppermost in the minds of everyone interested in a happy and prosperous future of the country".

Dr P.P.Balan, former Director, of KILA and Senior Consultant, Ministry of Panchayati Raj, government of India reiterates the authors' argument for a second phase of constitutional amendment to strengthen democratic decentralisation in the county. According to him, "the book throws light on the fact that over three decades of decentralisation more and more local governments are coming forward for the best utilisation of the various opportunities available for development intervention, instead of being passive listeners of power already devolved to them. In conjunction with this, the authors argue for a second phase of the constitutional amendment to strengthen democratic decentralisation in the county. This is very much relevant in the context of emerging climate change challenges".

This book is not priced as the authors have "decided to not commercialise but to make it available on open access". ■



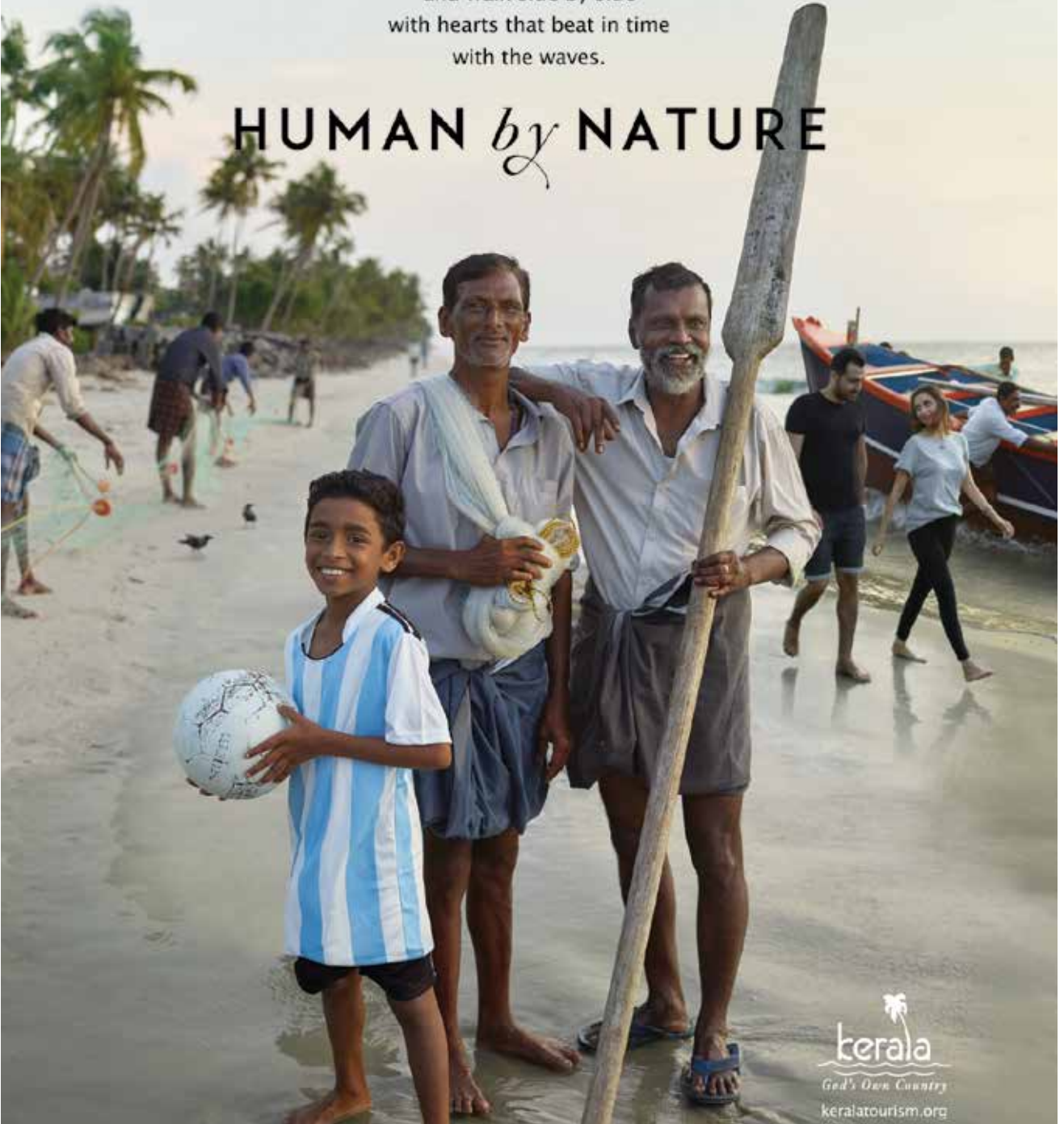
This book discusses two distinct aspects of Local Governments; an assessment of the current status and the future possibilities. The current capabilities include their involvement and initiatives during the pandemic.



This book also explores and observes the diverse experiences, issues, challenges and responses of decentralisation along with some most relevant case studies and critical analyses.

To believe in fearless minds
and tireless feet,
to brave the raging seas every day
and walk side by side
with hearts that beat in time
with the waves.

HUMAN *by* NATURE




kerala
God's Own Country
keralatourism.org

