MOBILITY UNCHAINED

Innovative measures by the Government have immensely revolutionised the state’s transport infrastructure.
Documenting the Present the Past and the Future of Kerala

KERALA CALLING

The authentic kerala

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Connectivity Matters

As per Niti Ayog’s health Index report Kerala topped other states in India with an overall score of 74.01. The Niti Aayog’s report has made Malayalis across the world proud of their healthy state.

The Government is marching towards its fourth year with much more confidence by making Kerala more development-friendly in a sustainable manner. The past three years have seen many a development activity from micro to the macro levels. And, for any development activity, the major pillar is infrastructure.

Infrastructure is the nerve centre of a state’s overall development, and needs intense focus from the Government for initiating policies that would ensure time-bound creation of world-class facilities. The Government has initiated and completed a number of infrastructural activities so that it would play a strategic role in faster economic growth and alleviating poverty.

Transport infrastructure plays a significant role in the economic development of a region. A state that lacks sufficient transport infrastructure is in a state of immobility. Movement is a basic sign of life and progress. For making our State more investment-friendly, the Government has focussed on the physical infrastructure development. Roads, highways, bridges, ports, inland navigation and airports play a strategic role in the development of our State and the past three years saw a surge in these key areas.

The July issue of Kerala Calling focuses on the transport infrastructure that gained extraordinary boost under the present Government. Undoubtedly, if it goes like this, Kerala will be the hub of a lot of business activities in the short run.

U.V JOSE I A S
Editor-in-Chief
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Dr. Shashi Tharoor M.P.

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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.

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Editorial : 0471 251 8648
Subscription : 0471 251 7036

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The Director, Information & Public Relations Department,
First Floor, Secretariat Annexe, Thiruvananthapuram - 695001

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EDITORIAL MATERIALS

Articles/features appearing in this magazine are either commissioned or assigned. Nevertheless, other articles are also welcome. A maximum of 750 wordage is appreciated. Such items should be addressed to The Editor, Kerala Calling, First Floor, Secretariat Annexe, Thiruvananthapuram Pin 695001

The subscription amount will also be received at the State Information Centre, Press Club Building, Thiruvananthapuram.
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Total number of pages: 52 + Cover
The successful completion of 100 surgeries in bone marrow transplantation in Malabar Cancer Centre shows that the actions taken by the Government in the cancer treatment field is being effective. Along with RCC, another Government institution achieving progress in the treatment field will help us to beat cancer efficiently. Hi tech facilities to perform four bone marrow transplantation surgeries in a month are equipped at theatres of Malabar Cancer Center. Surgeries like using bone marrow from the patient itself, receiving bone marrow from a donor are successfully performed in the center. Bone marrow transplantation surgeries for the children are carried in the cancer center at competitively lower cost. The activities done by the Malabar cancer centre by starting a comprehensive bone marrow registry will be an asset for the health sector. The Government aims to raise Regional Cancer Centre and Malabar Cancer Center to international standards and also aims to realise Cochin Cancer Center to ensure excellent treatment facilities. The Government is also executing actions to control the cancer by equipping the primary hospitals in the health sector by detecting cancer in the early stages itself.

Bone marrow Transplantation at Malabar Cancer Centre

Those who were praised as ‘Kerala’s Own Army’ became part of ‘Kerala’s Army’ officially.

The Chief Minister received salute from the coastal police ward of 177 members including 5 women at Kerala Police Academy Ramavarmapuram, Thrissur. This is regarded as a honour to the commendable work done by the fishermen community during the time of intense deluge. So much so that fishermen from the fishermen community were selected and appointed as costal police ward. Actions will be taken to replenish lack of 23 members in the team of 200 members of costal wards. Apart from the costal rescue operations, border security will also be considered as responsibility of the costal police.

The army has given special training including the checking of suspicious boats and sea patrolling. Persons from the costal districts of Kerala were selected and given appointment as costal police warden for one year. But the Government has ensured that there is nothing to worry about the one year tenure of the posting. The army has given special training on ball balancing in sea, chest carrying and survival shelters in sea by the coast guard. Along with that, they were given training sessions by fire, naval and police forces.
ELECTRIC VEHICLE

WHAT?

Electric Vehicles (EV) or e-mobility is another step forward. Kerala is known for its environmental sensitiveness, biodiversity and tourist attractions, and the State wishes to maintain its texture and ensure sustainable development for its people. The transition to electric vehicles is a natural choice for the State in line with its development ethos.

WHY?

The number of vehicles on the road is expected to get reduced with the introduction of modern shared transport systems like Electric Buses and e-Autorickshaws. They will provide a comfortable and fatigue-free ride, with no polluting gases, and much reduced vibration and noise. This will attract vehicle owners to move to shared mobility. The State plans a no-subsidy regime for EVs, as articulated by the NITI Aayog.

WHEN?

EV Population targets
2022: 1 million EV's on the road (10 LAKH)
2020: Pilot Fleet of 200,000 two-wheelers, 50,000 three wheelers, 1000 goods carriers, 3000 buses and 100 ferry boats.

WHO?

The State Government plans to ensure a robust infrastructure for electric vehicles that includes adequate power availability, the network of charging points, and favourable power tariff. KSEBL will provide quality power for 24x7 throughout the year for a rate variable based on time of the day and season of the year.

WHERE?

Public Charging Stations and Bulk Charging Stations shall be provided across the State in a phased manner. In the first phase, it will be deployed in Thiruvananthapuram, Kochi and Kozhikode cities and will be subsequently extended to other cities and municipal corporations and major roads connecting them.

HOW?

Through Electric Vehicles Expo, Creation of E Mobility Zones, Support schemes for early adoption and Electricity Tariff.
Kerala: The Trailblazer in India’s Own Development Story

Kerala has topped the Niti Aayog’s Health Index Report once again. The State is uncompromising in ensuring proper healthcare to its people.

By Dr. Shashi Tharoor M.P.

The news that Kerala has topped the Niti Aayog’s recent Health Index Report (officially called “Healthy States, Progressive India”) is a welcome development, though not totally surprising. After all, the combined influence of our heritage of progressive Maharajahs, groundbreaking contributions by social reformers and successive state governments that have seriously prioritised equitable social development, has meant that Kerala has systematically ensured that its society has produced human development results comparable to a first world country. In other words, the Niti Aayog’s report reaffirms a reality that is well known — that Kerala is a trailblazer in India’s own development story – and it has also confirmed the lived experience of Malayalees in their state.

With an overall score of 74.01, Kerala does significantly better than its contemporaries including larger (and richer) states such as Andhra Pradesh (65.13) and Maharashtra (63.99), which
occupy the 2nd and 3rd place respectively on the index. This is despite actually dropping points (-2.55) between the Base Year (2015-16) and the Reference Year (2017-18) used to formulate the composite index on health-care.

It is a matter of pride that the state has already achieved targets set under the 2030 Sustainable Development Goals for Neonatal Mortality Rate (12 neonatal deaths per 1000 births) and Under 5 Mortality Rate (25 deaths per 1000 live births); it also reflects the commendable performance of the state public health infrastructure that caters to over 40% of the population as of today. There are other positives as well, including the 2nd best sex birth ratio (SBR—the number of girls born for every 1000 boys) of 967, a testament to the premium on gender equality in the state, a perfect record of full immunisation of infants in the 9-11 month age group, that 90% of our deliveries are taking place in a proper healthcare facility and that we have the least number of vacancies of specialists in district hospital (less than 20%).

As one of the handful of states with a doctor to patient ratio that is better than the WHO prescribed norm of 1:1000 (a common metric used to judge healthcare), Kerala has largely been a lodestar of healthcare in the country (where the national average is currently well over double this prescription, and in many states much worse). And yet, persisting circumstances continue to dictate that the state must reject complacency that comes from such success and continue to build further on the promising and robust healthcare system it has established.

For one, the recurring outbreak of viruses like swine flu, a second outbreak of the zoonotic Nipah virus as well as the almost seasonal rain-fed arrivals of items like chikungunya, encephalitis, dengue, malaria and a whole gamut of other infectious and non-infectious diseases, make a striking case for a vigilant, prepared and dynamic healthcare infrastructure. In fact, a common comparison that is doing the rounds recently is the contrast between the impact of the second Nipah outbreak in Kerala earlier this month and that of acute encephalitis in Bihar these last few weeks. While in the former, thanks to a vigilant healthcare infrastructure (including officials who worked under the assumption that the virus would resurface in the future) the causalities were minimized. In the latter, however, the outbreak tragically robbed more than 150 children of their lives. Only a proper inquiry will reveal what parts of the healthcare system failed in the latter case, but it is clear that by historically prioritising healthcare in the state, Kerala managed to get on top of its own crisis before it spread.

So while we rightly take pride in the success that has been confirmed by the Niti Aayog’s Health Index, rather than sitting back, let us use this as a source of encouragement to continue to further refine our healthcare system, so that one day, we are seen as a role model not just for the country, but to the world that is indeed watching Kerala’s progress with admiration.
In terms of geographical space, especially in comparison with her neighbouring states, she may not look very grand at first appearance. But, she more than makes up for it with the sheer scale of transport infrastructural facilities she has rigged up over the years, and the consequent advantages she offers the natives, the visitors, the entrepreneurs and the tourists. Kerala, a sliver of land in the south-western edge of India, has a well-connected road network, a rail line connecting all but two districts of the state, four international airports (at Thiruvananthapuram, Kochi and Kozhikode and Kannur), National Waterway III consisting of the vast stretches of backwaters, 17 non major ports, Vallarpadam Trans-shipment Container Terminal at Kochi and the upcoming Vizhinjam International Sea Port Project. It is only a matter of time before Kerala becomes the commercial and travel hub not only of the country but the world at large.
The major transport infrastructure of the state consists of 2.29 lakh kms of road, 1588 kms of railways (Economic review, Govt. of Kerala 2018), 1687 kms of inland waterways and 17 non major ports and a major port at Kochi (Under Cochin Port Trust) with 655.6-km coastal route and 4 international airports. Roads play a prominent role in public transportation vis-à-vis other modes of transportation, owing to the geographic peculiarities of Kerala and the limited geographical area of 38,863 sq. kms. The state’s rail network operates under the control of Palakkad and Thiruvananthapuram Railway Divisions.

Kerala boasts of many water bodies like rivers, lakes, estuaries, backwaters, etc., and has established an elaborate Inland Water Transport (IWT) system. The IWT not only offers an efficient, economic and environment-friendly means of transportation, but also boosts the Tourism Industry of the state in a substantial way. Coastal shipping takes care of transportation of bulk commodities and long hauling traffic along the coast line, with multi-modal trans-shipment points established at strategic spots. Out of the 17 non major ports in Kerala, four are intermediate ports viz., Vizhinjam, Beypore, Azhikkal and Kollam, based on the berthing, cargo handling and storage facilities they provide.

All the four civilian airports functioning in the state are international airports, a feature it shares with a much larger state as Tamil Nadu. While all these infrastructural facilities are magnificent, there is a need to address the growing needs of a very vibrant population of employees, entrepreneurs and tourists in the state. This has led to the conceptualization of a mass transport system that will take care of the intra-city commuter needs of major cities. As the first step in this direction, the Government of Kerala has started the Metro Rail facility at Kochi. With the commissioning of Mass Rapid Transit System (MRTS), major urban corridors are expected to be decongested in these cities.
“Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference”.

Robert Frost

**Roads to Development**

Without any political bias, the PWD has put in place an agenda for the progress of all 140 constituencies in the state. The Department is eyeing construction activities to the tune of Rs 1 lakh crore which would be a boost to the basic infrastructure development in the state.

By G. Sudhakaran (Minister for PWD)

The functioning of the Public Works Department in the past two-and-a-half years reflects the bold steps taken by the Pinarayi Vijayan Government towards building Nava Kerala. The common man had nothing but scorn for the PWD that was infested with graft in the past, but now the public has great expectations from the department which has a clear-cut, transparent and corruption-free development agenda.

The Department, which is marching forward with the motto ‘Puthiya Kalam Puthiya Nirmam’ (New Times, New Construction), has witnessed some path-breaking changes in the past two-and-a-half years. The Department in a short span of time made giant strides by incorporating environment-friendly modern construction techniques and doing away with traditional procedures. Without any political bias, the PWD has put in place an agenda for the progress of all 140 constituencies in the state. The Department is eyeing construction activities to the tune of Rs 1 lakh crore which would be a boost to the basic infrastructure development in the state.

The PWD has given the requisite impetus to the Pinarayi Vijayan Government that is surging ahead with a development outlook that matches the expectations of the people. A feather in PWD’s cap is the timely completion of road repair works.
before the start of Sabarimala pilgrimage season in the past two years. The Kerala High Court also lauded the efforts of the PWD for completing the road repair works as the Sabarimala pilgrimage season started after the August floods last year.

Throwing open the Enathu Bridge in Pathanamthitta to traffic in record time, which was a remarkable achievement, shows that the department has changed for the better in a short time. The Department took great strides when it put into practice the cold recycling technology, which is used only in 3 other states, with the help of German-made machinery to lay the Purakadu-Pathirappally road in Alappuzha district. Another noteworthy accomplishment is the construction of the model Ambalapuzha-Thiruvalla road using coir geotextiles and natural rubber mix bitumen. During the first two-and-a-half years, the Department tasted success while experimenting with the use of plastic waste in the construction of road. The Peringadavila-Marayimuttom-Paliyodu road was laid using plastic waste in Thiruvananthapuram district.

The Department had been instrumental in redefining the construction of buildings in the state in the past couple of years. The PWD’s expertise is amply reflected in the new Public Library building, which was built by keeping intact the essence of heritage, in Thiruvananthapuram and the High Court auditorium, which was constructed using cutting edge technology. The Regional Design and Quality Control labs set up in Ernakulam and Kozhikode are ground-breaking initiatives to gauge the quality of the buildings and avoid inordinate delay in the construction of structures.

The Engineers’ Congress, the first such meet in the country, was organised to augment the capability of the PWD engineers and expose them to the latest trends in construction industry. The engineers’ exhibition that was held in connection with the 3rd Engineers’ Congress introduced the latest technological advancements to the engineering students, engineers and public. A magazine, Engineer, was launched to feature the functioning of the Public Works Department and spread information relating to modern technology.

The ‘Kanthal’ patching mix, developed by the Kerala Highway Research Institute to fill potholes during the monsoon season, is a perfect example of the department’s modernization.

Effectively implementing the price software, streamlining the e-tender facility and constituting social audit committees, comprising people’s representatives and technical experts, had been helpful in curbing corruption in the Public Works Department.

The Government decided to construct the Kollam and Alappuzha bypasses to ease traffic on the national highway. The Government constructed a two-lane Kollam bypass as the National Highways Authority of India was dragging its feet over the land acquisition process. The total outlay was split between the Central Government and Kerala Government and a decision to this effect was taken in 2013.

The former government completed 30% work and had disbursed Rs 36.8 crore to the contractor. The remaining 70% work was completed under the present Pinarayi Vijayan government.

The 7-km Alappuzha bypass will have 2 lanes, and the major part of the bypass passes over the Alappuzha beach. As per the law, the rail overbridge should be constructed by the Railways. The opening of the bypass is put on hold due to the delay in building the rail overbridge though the remaining work is over. The project should have been completed on September 14, 2017. Only 15% work was completed by the previous government and not even a single span was put in place. The Pinarayi Vijayan government took the lead in completing the remaining 85% work. The project outlay is Rs 348.43 crore and is shared between the central government and Kerala government. The government is hoping to complete the project in 3 months’ time.
FIGHT AGAINST GRAFT

The officials who had corruption taint on them were removed from important positions. The officers who completed 3 years’ service in the department were transferred.

The officers with integrity and calibre were given positions of authority.

The appointments were made to send out a message that only hard working officials will be eligible for transfer and further appointments.

The PWD vigilance wing was expanded and strengthened.

The vigilance wing looked into the complaints lodged directly by the public and grievances aired over phone to the minister.

The officials found at fault had to face punitive measures or were suspended.

Apart from making PWD corruption free, the government has given ample stress to make the department competitive. Now, anyone can call the minister to air their views.

THE POLICY OF PWD

The government has announced a new public works policy with the tagline – ‘pūthiya kalam – pūthiya nirmanam’.

The new policy has envisaged roads and buildings of international standard and green laws.
KIIFB PROJECTS

The projects which were approved by KIIFB so far:

<table>
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<tr>
<th>Category</th>
<th>No. of Projects</th>
<th>Total Amount (Crores)</th>
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<tr>
<td>ROADS</td>
<td>134</td>
<td>5755.51</td>
</tr>
<tr>
<td>HILL HIGHWAY</td>
<td>17</td>
<td>1506.25</td>
</tr>
<tr>
<td>BRIDGES</td>
<td>56</td>
<td>1566.52</td>
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<tr>
<td>FLYOVERS</td>
<td>6</td>
<td>362.85</td>
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<tr>
<td>LIGHT METRO OVERBRIDGES</td>
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<tr>
<td>UNDERPASS</td>
<td>1</td>
<td>27.59</td>
</tr>
<tr>
<td>RAILWAY OVERBRIDGE</td>
<td>17</td>
<td>523.79</td>
</tr>
</tbody>
</table>

**TOTAL**

- No. of Projects: 234
- Total Amount: 10015.17 Crores
INFRASTRUCTURE - HILL HIGHWAY

No More Bumpy Roads To High Ranges
The fascinating project of
Hill Highway
By Darlene Camelia D’cruz (Chief Engineer Kerala State Transport Project)
A bumpy ride through the high range roads in the state will soon be a past affair. The major roads that lead to the mountain areas will be as smooth as the National Highway and that too within a few years. Thanks to the state government which decided to speed up the 1251 km long hill highway project with an effort to end the travel woes of the farmers and the residents living in the high ranges of the state.

In the latest development, the Pinarayi Vijayan led government has completed the tender proceedings for another three reaches in the districts such as Kasargod, Thiruvananthapuram and Wayanad district as a part of the project. Earlier, the works began at four reaches, one each in Thiruvananthapuram and Kollam districts and 2 in Kasaragod district, for laying 111 km of road worth Rs 402 crore.

The 1,251-km-long hill highway with an outlay of Rs 3,500 crore will be put in place after laying necessary connectivity roads and developing the existing roads from Nandarappadavu in Kasaragod district to Parassala in Thiruvananthapuram district.

“Twenty-four detailed project reports (DPRs) for 656 km costing Rs 2,205.50 crore had been presented to KIIFB. Out of this, KIIFB has given the financial nod to the laying of 460.60 km of roads at 17 reaches at a cost of Rs 1,506.24 crore. Already the work has started at four reaches one each in Thiruvananthapuram and Kollam districts and two in Kasaragod district, for laying 111 km of road worth Rs 402 crore. The tender has been floated for another three stretches and the work will be started within days. The project is going at a rapid pace. The proposed hill highway envisages the development of the much needed North-South corridor through the hilly regions by upgrading/improving the existing network optimally,” said Chief Engineer, (PWD Roads).

There has been a long-standing demand for connecting Thiruvananthapuram District in the South and Kasargode District in the North through the hilly regions of the state. Once the project got commissioned, roads will help to improve existing connectivity to many tribal settlements.

Interestingly, the hill highway was initially conceived by farmers themselves who perceived the lack of transportation facility as a root cause for the underdevelopment of the region. At present, those who reside in such regions have to bear a higher cost for transporting the goods and services. But with the development of the proposed hill highway, farmers in the hilly regions will get a due price for their products. The proposed highway not only a boost for the farmers, but also to the tourism sector.

Hence, the government is planning to implement the project with the

(KThe alignment of Hill Highway in Kozhikkod District is revised vide GO (Rt)No.39/2018/PWD, Thiruvananthapuram dated, 16/10/2018).
support of the public. The required land for the development of hill Highway has to be made available from the adjacent landowners free of cost with the assistance of concerned MLAs, and other people representatives of the localities.

“Our aim to commence hill Highway project in 2018-19 in areas where 12 metres has been obtained as per Right to Way and complete it in 2019-20 fiscal. All PWD roads will be made motorable by 2020-21 fiscal,” said PWD Minister G Sudhakaran. He said the functioning of the Public Works Department (PWD) in the past two-and-a-half years reflects the bold steps being taken by the Pinarayi Vijayan Government towards building ‘Nava Kerala’. “PWD department in a short span of time made giant strides by incorporating environment-friendly modern construction techniques and doing away with traditional procedures. Without any political bias, the PWD has put in place an agenda for the progress of all 140 constituencies in the state. The department is eyeing construction activities to the tune of Rs.1 lakh crore which would be a boost to the basic infrastructure development in the state,” minister added.
The Beach is Nearby

The construction of the world-class coastal highway from Thiruvananthapuram to Kasaragod, which is bound to change the contours of road connectivity in Kerala, is progressing at a fast pace.

The construction of the world-class coastal highway from Thiruvananthapuram to Kasaragod, which is bound to change the contours of road connectivity in Kerala, is progressing at a fast pace. The 14-meter highway, with 2-meter cycle track, passes through the coastal belts to ease traffic on main roads, including the national highway. The 655.6-km coastal highway starts from Poovar in Thiruvananthapuram district and ends at Kunjathoor in Kasaragod. The highway traverses through nine districts in the state and the total project outlay is Rs 6,500 crore.

The Government of Kerala under the dynamic leadership of Chief Minister Pinarayi Vijayan and Public Works Minister G. Sudhakaran gave a new lease of life to the coastal highway project, conceptualized by National Transportation Planning and Research Centre (Natpac) in 1993, which was on the back burner for close to 25 years. The highway is becoming a reality after Finance Minister Thomas Isaac gave the nod to release requisite funds from KIIFB. Now, coastal highway is not a dream but a project that is moving towards reality. The KIIFB governing body gave the green signal for the first stretch of the coastal highway, which includes 2-meter cy-
cle track, on October 24, 2018. It was possible to complete the tender process in a jiffy and start the construction work. The construction of 15 kms of coastal highway in Malappuram district has already commenced. The coastal highway, which is expected to be thrown open shortly, will give a financial impetus to the coastal regions of the state.

A meeting of the people’s representatives had been convened under the aegis of MLAs of the coastal constituencies to remove bottlenecks in the construction of the coastal highway. In the first phase, 15-km stretch from Padjeekara Bridge to Unyal junction, costing Rs 52.78 crore, is being built after PWD Minister G Sudhakaran launched the construction work in February. The first stretch, which passes through the coastal belt of Malappuram district, also connects with the historic Tipu Sultan Road.

The highway is being laid after splitting the project into 4 phases. In the first phase construction will start in those regions, where 14m width is available. The areas where only 8m to 12m width available are included in the second phase. Efforts will be initiated to acquire requisite land without any hassles and start the construction process. The third phase consists of areas where there is difficulty in acquiring land. Under the fourth phase, construction of elevated roads will be considered where land acquisition is impossible. In such cases present national highway and state highways will also become part of the coastal highway.
INFRASTRUCTURE - BRIDGES

Bridges to Get a Fresh Lease of Life

The design and construction of bridges in Kerala is in a new era under the logo “Puthiya Kalam Puthiya Nirmanam” implemented by the Government. The Government demanded for a level of construction that cope up with that of international standards.

By Mano Mohan (Chief Engineer Roads and Bridges)

The dilapidated and dangerous bridges in the state will get a fresh lease of life as the Public Works Department is all set to start a ‘mission’ to repair the bridges which are posing threat to the commuters. Though the state is blessed with over 3000 bridges which are a vital part of infrastructure elements of roads and Highway network, 430 bridges need to be rehabilitated or reconstructed.

The department identified these 430 bridges after Minister for public work Department G Sudhakaran in the wake of Ennathu bridge issue directed to conduct a detailed inspection of existing bridges maintained by PWD.

In this view, the Government decided to set up a new wing for the up keeping, maintenance and construction of bridges.
bridges. Besides this, the Department had to maintain 2500 existing bridges aged from one year to more than a hundred years. The Government also took steps to strengthen the design wing by sanctioning a new chief engineer post. New regional design offices were set up at Ernakulam and Kozhikode which helps the design wing to complete more than 400 bridge design within short tenure of three years.

New Chief Engineer post was sanctioned along with various technical posts for the smooth function of this wing since our state has got numerous water bodies aesthetic bridges can play a vital role in the development of tourism. The new design wing of PWD aids the bridges section in constructing environmental friendly innovative structures. One of the major challenges of this Government was the construction of more than 350 new bridges and reconstruction of more than 160 dilapidated bridges. The state is blessed with over 3000 bridges which are a vital part of infrastructure elements of roads and Highway network.

Ranni valya bridge in Pathanamthitta district

Malampuzha ring road bridge in Palakkad district

Perumon bridge in Kollam district

Kandashankadavu bridge in Thrissur district

Kootamvathukkal bridge in Alappuzha district

Pallathuruthi outpost bridge in Alappuzha district
Development of navigable canal from Kovalam to Bekal is one of the dream projects initiated by the Government. KWIL- Kerala Waterways Infrastructure Limited was formed in 2017 as a special purpose vehicle for this dream project.

Chief Minister Pinarayi Vijayan has earmarked the dream project as one of the path breaking endeavours which will give fillip to the state’s tourism and economy. As the Chief Minister noted at a public function, it was the efficiency of the CIAL in project implementation had prompted him to float a joint venture with the company for the development of the canal. KWIL-Kerala Waterways Infrastructure Limited was formed in 2017 as a special purpose vehicle.

The first phase of Kovalam-Bakel waterway is expected to be completed by May 2020. KWIL is coordinating the renovation activities with the help of Irrigation department, Kerala State Inland Navigation Corporation, District administrations and Local Self Governments. The first phase aims at establishing connectivity from Kovalam to Mahe. 26 km long three artificial cuts from Mahe to Valapattanam is crucial to establish the connectivity of the waterway from Kovalam to Bekal. The survey activity for this stretch is completed and the land acquisition is in progress.
KWIL started the cleaning of Parvathy Puthanar in Trivandrum in June 2018. The preliminary cleaning of Parvathy Puthanar was completed in October 2018. The rejuvenation works in Canoli canal in Kozhikode city was started in May 2019. The work is progressing and is expected to be completed by August 2019. The 85 KM long Kottappuram-Ponnani stretch which comes under Kottappuram-Kozhikode national waterway-3 is undergoing rejuvenation.

Varkala Tunnel

The backwaters of Kerala once formed the backbone for an intricate canal system that is regularly listed as one among the finest transportation systems that pre-date the modern era. Varkala formed the southernmost edge of this system, where people had to disembark before continuing to Thiruvananthapuram. This break in transportation led to the construction of the Varkala Tunnel by the British in the 19th century. It began in 1867, during the reign of Travancore Diwan Sir T. Mahadeva Rao, and 14 years later, Diwan Sheshaya Sasthri saw it to completion.

Kerala had not seen such an elaborate architectural endeavour at the time. It had two tunnels, each being completed 3 years apart. Both are 2370 ft. and 1140 ft. respectively, and made the dream of a direct passageway between Malabar to Thiruvananthapuram. It facilitated trade and commerce in a huge way, before the advent of railways, air and road transport. Today it is a great reminder of an architectural marvel that is an integral part of our history.
Shipping The Future

KSINC (Kerala Shipping & Inland Navigation Corporation Ltd) is towards a cleaner and greener energy and sustainable business model. Apart from its key role in the marine construction and marine transport services, it has also adventurously entered the field of water sports.

By PRASANTH NAIR IAS
(M.D Kerala Shipping & Inland Navigation Corp. Ltd)

Kerala Shipping & Inland Navigation Corporation Ltd (KSINC) deals in transportation of cargo through inland waterways, docking and repairs of marine vessels and construction of boats, conducting tourist cruises in backwaters, providing and maintaining navigational aids in National Waterways and oil bunkering.

KSINC at present has a fleet strength of 3 Bulk Carriers, 4 petroleum tanker barges, one acid barge and two Jhankars apart from the passenger vessels.

Kerala has 1687 kilometres of water ways. It includes the 590 km of West coast canal from Neeleswaram from the north of the state.
to Kovalam in the south. The unique feature of west coast canal is that it flows parallel to the Arabian Sea with openings to the sea at several places. This ensures connectivity of the canal to minor ports and hinterlands. A 240-tonne barge operated on the 85-km Kottayam-Kochi inland waterway on March 09th Friday, signalling the movement of export-import cargo through National Waterways IX and III and proving its capacity and efficiency.

The vessel, operated by the Kottayam Port, took about seven hours to cover the distance between Kottayam and the Vallarpadam container transshipment terminal. There are plans to transport domestic containers via the corridor, for which bigger barges will be required. Apart from reducing congestion and pollution on roads, the waterway will help save transportation costs by approximately 30%. There is also provision for utilising subsidy from the Inland Waterways Authority. Presently the oil-tanker trucks occupy substantial road space and time which is also detrimental to safety. KSINC through its barges is capable of taking the load of transporting petroleum products through the waterways and thus evacuating the road network of this pressure. KSINC would be initiating this once the Inland waterways are restored to their past glory through the time-bound mission now being undertaken by the Coastal Shipping and Inland Navigation Department in partnership with KWIL. Two bulk barges are already in the final stages of construction which would be put to use to transport material for KMML in the already renovated stretch of canal.

The company has a modern slipway complex with six tracks and all facilities to offer reliable, speedy and efficient service. Construction and repair of passenger boats, speed boats, house boats, tourist boats, small seagoing vessels, barges and marine vessels of the company as well as customers in public and private sectors are undertaken in this slipway. The company has attained proficiency in the construction and repair of wooden and steel vessels. KSINC also has expertise in repairing (both hull and machinery) large vessels.

**Major player in Waterway Tourism**

The company is a major player in the waterway tourism sector. KSINC owns deluxe mini-cruise vessel Sagararani and the seagoing luxury vessel, the Nefertiti, registered under Merchant Shipping Act. Nefertiti paved the way for KSINC to be the trailblazer of Kerala’s cruise tourism initiative. With opportunities for canoeing, kayaking, sailing, waterskiing, white water rafting, and wind surfing, with a 900km backwater stretch, 44 rivers originating from the Sahyadri hills and several beaches, Kerala is a dream destination for water sport enthusiasts. While canoeing and kayaking can be enjoyed along the serene backwaters- which is also the venue for the spectacular snake boat races- catamaran sailing is possible at the beaches of Alappuzha, Varkala and Kovalam. Parasailing is gaining popularity with the Varkala and Alappuzha beaches offering platforms for beach and winch boat parasailing.
KSINC has entered into adventure water sport activities in a big way. The vast and varied water bodies of Kerala have a huge potential that has not been harnessed even minutely. The target market for this are the domestic and foreign adventure tourists, specially the youth. The local/weekend tourists can also generate substantial demand. Opportunities to monetize water sports activities are now better than ever. With the phenomenal growth in the number of internet users in India, the online space and social media are becoming key avenues to promote and monetize water sports. The younger population provide a significantly large target market for water sports in Kerala. Promotions and monetization methods may include offering water sports as weekend getaway packages, partnering with online travel and coupon portals to offer deals on water sport activities, striking corporate tie-ups, as well as partnering with foreign tourism boards.

There is significant potential to drive growth and cater to the growing demand for water transport, waterway tourism & water sports in Kerala. KSINC has come up with various projects to encourage all these activities in partnership with the Tourism Department. Water scooters, Banana rides, and other floating adventures are being procured, installed, curated and hand held for the various District Tourism Councils. KSINC is also moving towards cleaner and greener energy and sustainable business models. More solar and electric boats are being built. Technology based initiatives and tie-ups with R&D linked start-ups are being explored for cutting-edge interventions in water body rejuvenation waste management. Procurement of latest technology and equipment to facilitate time bound dredging and cleaning along with nature friendly technologies to sustain it is the goal of these activities. KSINC is essentially positioning itself as a one-stop solution for water body rejuvenation with minimum time for mobilisation and turn around.

The Inland Canals play an important role in the economy of the state as they interconnect the rivers, on the banks on which are situated places of commercial and industrial importance and also give a connection from interior places to the West Coast Canal System.

The Government of Kerala has projected tourism as an engine of economic growth and an instrument for eliminating poverty, solving unemployment, opening up new fields of activity and providing livelihood to of the people. An optimal mix of road, rail and Inland Water Transport will provide an efficient transport infrastructure for tourism to boom. With the Government’s increased focus on development of waterways, KSINC anticipates increased business opportunities and greater prosperity for the State at large.
NEFERTITI

The Nefertiti is known for its sophisticated elegance, unparalleled comfort and exclusive presence. It offers exquisite amenities like a 200 pax air-conditioned conference hall, restaurant, bar lounge, 3D theatre and sun deck. It is an ideal venue for hosting events like conferences, product launches, board meetings, parties, and numerous other business and social gatherings. Those who initially doubted the viability of Nefertiti are now making a beeline to book their tickets. A 24/7 call centre handling customers along with a fully automated online booking facility hosted on the dynamic website (www.nefertiticruise.com) has shown how efficiently and effectively a new tourism product could be made viable in the market in the shortest span of time. Focused B2B marketing and GSA engagement has made this possible.
Be Faster in The Waters
State Water Transport Department

On the backdrop of the Government Policy to replace old and wooden vessels in service with highly technical and modern boats, the Department mulls in building modern vessels and the built is in progressive stage.

By Shaji V Nair
(MD SWTD)

State Water Transport Department (SWTD) was organized in 1968 with an ultimate objective of providing meritorious service to the commuters especially in water logged areas by ferrying passenger vessels in Inland Water routes comprising in 6 districts namely Alappuzha, Ernakulam, Kannur, Kasaragod, Kollam and Kottayam extending in the jurisdictions of 14 Station Offices.

On the backdrop of the Government Policy to replace old and wooden vessels in service with highly technical and modern boats, the Department mulls in building modern vessels and the built is in progressive stage. Presently, there has been operating 748 trips daily through 52 schedules and handling around 80,000 commuters on a daily basis.
ADITYA: INDIA’S FIRST SOLAR FERRY

ADITYA, India’s first solar ferry has been in operation for the past one and half year from 13th January 2017. The last one year operation has came up with very positive result. The boat is a great savings for the Department.

VEGA: FASTER THAN BUSES

Kerala State Water Transport Department has launched Vega 120, Kerala’s first partly airconditioned fastest ferry (speed of 14 kilometers) connecting Kochi and Vaikom on November 4, 2018. It is aimed at both tourists and daily commuters. The journey time between Ernakulam and Vaikom through, Vega 120 is estimated to be 90 minutes, as compared to 2 hours taken by buses. Presently, the services are scheduled according to the normal office timing. This is a two cabin boat, with toilet and cafeteria. AC cabin can accommodate 40 passengers and ordinary cabin can accommodate 80 passengers.
CIAL, India’s first airport built under PPP mode is celebrating its two decades of operation this year with verve. With the increase of traffic, revenue and profit, CIAL, the company that owns and operates the airport is adding new developmental projects for ensuring the airport’s future operational crusade hassle free. The company which was incorporated in 1994 is in its silver jubilee year always tries to introduce new ideas in all verticals.

CIAL is fortunate to get relentless support from the State Government. Last three year have been witnessed a major developmental dynamism. The aircraft operation at the new swanky international terminal (T3) has begun in April 2017 with a grandiose ceremony which was inaugurated by the Chief Minister Pinarayi Vijayan. The company lost no time to commence the renovation works of the domestic terminal building; T1. The inauguration of the renovated terminal was done by the Chief Minister in December 2018. The terminal features

Up Above The World
So High

CIAL, the world’s first airport fully powered with solar power is on the runway of much bigger developments.
6 lakhs square feet of built up area, 56 check-in counters, 11 gates and 7 aerobridges with a peak hour handling capacity of 4000 passengers. The renovation work was completed in just 18 months.

CIAL became world’s first airport fully powered with solar energy in 2015 with the commissioning of its 12 MWp plant constructed at the premises of the cargo complex. The Government has given a green signal for the enhancement of installed capacity of solar plants and at present CIAL stands at one of the largest green energy producers of the state. The total installed capacity has increased from 14 MWp to 40 MWp over the last three years and at present CIAL’s solar plants generate 1.62 lakhs of units of power a day whereas the daily average consumption stands at 1.52 lakhs units. The innovative idea of making a big energy consumer like an airport to be operated fully on green energy won CIAL ‘The Champions of the Earth Award ’ in 2018. This is the highest environmental honour instituted by the United Nations. CIAL’s founder managing director V.J.Kurian has received the award at a gala function held on the side line of UN general assembly meeting in New York. V.J.Kurian dedicated the award to the Chief Minister Pinarayi Vijayan for his efficient leadership during the time of flood. CIAL’s solar plants swank many innovative firsts including a 5.2 MWp carport which is the biggest in the world, housing 2600 vehicles and charging

I was really surprised after entering the Cochin International Airport. I expected that it was a small airport without any facilities. But, when I entered the airport I understood that I had gone wrong. The premises was very beautiful and excellent service was rendered to me. The facilities are amazing. I got my luggage super quickly.

Tatiana Kondruchina
Russia
points for 80 electric cars at a time. CIAL’s solar initiative has been receiving global accolades and many countries have already requested CIAL’s participation in setting up solar plants in their airports. During May 2018, envoys of 40 countries paid visit to CIAL and many of them expressed their interests in getting consultancy services from CIAL.

The traffic and revenue of the airport have been witnessing a steady growth over the years. The annual passenger volume has touched the magical figure of 10 million during 2017-18 which was repeated in 2018-19 too. The turnover has increased from Rs.487.27 Cr. in 2016-17 to Rs.553.41 Cr in 2017-18 and to Rs.650.03 Cr. in 2018-19. CIAL, which pioneered the idea of PPP model in airport infrastructure development enjoys a base of more than 18,000 investors from 30 countries. The company has been paying dividend consistently from 2003-04 and during 2017-18, the total dividend pay-out touched 228 %. The Government of Kerala which has a share of 32.41 % in the company has been given Rs.31 Cr. as dividend during the last fiscal. For the 2018-19 FY, the board has proposed a dividend of 27%.

This is my first journey to India. Cochin International Airport is an excellent airport with state-of-the-art facilities. I got my baggage very quickly. The staff are polite and professional. I feel happy and satisfied with the service rendered to me.

Veronica Smirnova
Belarus

I have travelled in international flights for last three years from Cochin Airport. Customer service has improved a lot. Parking slots and waiting area are excellent. In my opinion, CIAL is much better than any other airport in India. The administration and the developmental activities including the solar panel installation make it praiseworthy.

Mishran E V
Palakkad
The company is generous in corporate social responsibility (CSR) initiatives. It donated RS.4 crores to Swichitwa mission in 2016, Rs. 5 crores to CM’s Okhi relief fund in 2017 and Rs. 10 crore in CM’s flood relief fund in 2018. The company has received many awards and recognitions from various national as well as international forums. The airport was adjudged as the third best airport in 5-15 million passenger categories by Airport Council International in 2017 and 2018.

The years ahead will also be eventful for CIAL. A number of decisive projects are in the pipeline. The major activity of runway resurfacing will begin in November 2019.

Chief Minister Pinarayi Vijayan with CIAL Managing Director V J Kurian

Facilities and services in the airport have improved much better for the last three years.

Ali Ebrahim
Malappuram

Chief Minister Pinarayi Vijayan with CIAL Managing Director V J Kurian

I didn’t expect Cochin Airport was also as good as Delhi and Mumbai airports. But, I went wrong. The service is good. I got my luggage very fast and got my currency changed instantaneously. I am very much satisfied with Cochin International Airport.

Vladim Pavlov
Russia
Charting a New Course in Development

Nearly seven months after the inauguration of Kerala’s fourth international airport, KIAL, the development of the North Malabar region is on track.

By Jeeja TV (Information Assistant, District Information Office, Kannur)
early seven months after the inauguration of Kerala’s fourth international airport, the development of the North Malabar region is on track. Built on an expansive land area of 2300 acres, Kannur International Airport is designed to handle large volumes of passenger traffic. Starting with a total pax of 31,269 and 227 flight movements in the inaugural month, the numbers surged to 51,191 pax and 401 movements in just the next month. The month of April saw 1,41,426 pax and 1250 flight movements. On an average, 1.5 lakh flyers are now using the services of the airport every month.

Going by these impressive numbers, Kannur International Airport looks well positioned to surpass

**He has been to many airports in India. But for Shivang Yamdagni from Noida, stepping into Kannur International Airport has been an unforgettable one. The well-maintained and serene ambience of the airport rewrote all his concepts about other airports. For him, it was a love at first sight. The first thing he did when he landed there was calling his mother and eagerly explaining everything about the airport in detail.**

“**The Airport is well maintained and very clean. It is so beautiful being here. I have been to many airports but Kannur is an awesome experience. The airport is so clean, so silent just lovely and everything is on time.**” Mr Yamdagni went on.

**Shivang Yamdagni**

**Noida**
the target of 1.8 million travellers in the first year. The large catchment area covers parts of Kozhikode, the whole of Kannur, Kasaragod, Wayanad, Mahe, Kodagu and Mysuru.

Being a tourism hub that is well connected to major hotspots in the region, Kannur International Airport is beginning to see much traction on inbound tourist arrivals. There are domestic flights to Bengaluru, Chennai, Hyderabad, Mumbai, Delhi, Thiruvananthapuram, Kochi, Kozhikode, Goa and Hubli. Flights to Ahmedabad and Kolkata will also be introduced in the coming days. The recent trend shows a steep rise in domestic traffic from Kannur, with the airport becoming one of the major hubs of GoAir, apart from the metro cities.

On the international front, there are flight services to Abu Dhabi, Sharjah, Muscat, Doha, Riyadh,
Kuwait, and Bahrain, with flights to Dubai, Dammam and Jeddah commencing soon. Kannur is being extensively used as a corridor for connection to Gulf countries due to attractive timings and fare. Airlines in South East Asian countries have evinced interest to begin operations from Kannur, and these are expected to commence soon.

Connecting flights are also popular, with bookings done via Bengaluru to China, Thailand, Kashmir, Sikkim and Darjeeling, and via Chennai to Andaman and Puducherry. Group bookings are seen by Kudumbashree, clubs and public libraries.

Future developments at Kannur Airport have been planned on a modular basis to enable easy scale-up as per requirement. Expansion plans are already underway, with the runway being extended to 4000m, making it comparable to runways in Delhi, Bengaluru and Hyderabad airports. There are also plans to expand the apron, taking the number of aircraft that can be accommodated from 20 to 42 and eventually 80. The expansion of the passenger terminal building is also on the cards.

A host of upcoming facilities are in the works, including an airport village, star hotels, Day Hotel within the terminal, convention centre, park, Ayurvedic wellness centre, movie theatre, and an international air cargo complex. Within this short period of time since its opening, Kannur International Airport has created significant brand equity, having received accolades such as “Brand of the Year” Award instituted by Future Kerala. The airport has set in motion developmental initiatives that will take Kerala to never-before heights.
INFRASTRUCTURE - SEA PORT

Anchoring a New Era

Maritime transport has an important role to play in the Industrial development of the country. It supports manufacture growth, brings together consumers and intermediates and capital goods industries.

By RAMACHANDRAN KADANNAPPALLI (Minister for Ports)

Maritime transport supports manufacture growth, brings together consumers and intermediates and capital goods industries. It promotes regional economical trade integration. A long term maritime trade strategy is aimed behind the development of Ports. Our country has a long coastline of 7,500 kms. We have 12 major Ports and 200 Non Major ports. Kerala, our state has a coastal length of 585km and also have 60km width.

In our State, there are 17 non major ports. Out of these four are considered as intermediate ports based on berthing, cargo handling, and storage facilities. They are Vizhinjam, Beyapore Azheekal and Kollam Ports (Thankassery). 13 minor Ports are Neendakara, Alappuzha, Valiyathura, Kayamkulam, Manakkodam, Munambam/Kodungallur, Ponnani, Vadakara, Thalassery, Manjeswaram, Neelleswaram, Kannur and Kasaragod. Govt of Kerala has decided to develop five Non Major parts through P.P.P mode. Azheekal,
Bypore, Ponnani, Alappuzha and Kollam.

The Kerala Maritime Board Act. (Act No 16 of 2017) was passed by the Legislative Assembly on 16th September 2017, aiming at all sided development of Non-Major Ports in Kerala. Senior Adv: V.J. Mathew is the Chairman of the Board and the Board came in to existence by Gazette Notification on 02/02/2018.

**The Vizhinjam Project**

Vizhinjam International Sea Port Project is a prestigious project in Kerala. It is located at Vizhinjam in Thiruvananthapuram District. Govt. of Kerala signed a Concession Agreement with Adani Vizhinjam Port Pvt. Ltd. (AVVPL) on 17th of August 2015 for the development and operation of Vizhinjam International Sea Port on Design Build, Finance, Operate, Transfer basis (DBFOT). The first Phase of the Port is Planned for a container handling capacity of 1 million TEU (Twenty Foot Equivalent Units) consisting of 800m long berth with future expansion up to 3 million TEU/2000 m berth length, in successive phases. The Port is primarily designed to cater to the transshipment and gateway container business of the region. Phase 1 of the Port will be developed in a period of 4 years with the following.

- Break water of 3,100 meters
- 2960 meters Main break water and 140 meter extension for fish landing harbour.
- 800 meters length container berth capable of handling up to the currently largest 20,000 TEU container vessels.
- Container yard of 500 m width.
- Container Handling/Berth capacity of 1 million TEU per annum.

A fishing harbour for livelihood enhancement of local community.

Subsequent phases of the port will be developed depending on the growth of the traffic. Rs. 81 Crores compensation spent towards 2600 beneficiaries of fisherman community affected by the project.

**Development of Azheekal**

A special purpose vehicle namely Azheekal Port Limited constituted on 16/03/2018, for the all sided development of Azheekal Port, as Chief Minister Pinarayi Vijayan as Chairman and Minister for Ports Ramachandran Kadannappalli as Vice Chairman. SPV started functioning and M/S HOWE Engineering Ltd is entrusted to submit Environment impact assessment study with in a period of one year. Chief Executive Officer is co-ordinating the work. Coastal shipping began to operate from 24/02/2019. During 2016-17 to 2018-19 about 1650 containers handled at Beypore and Azheekal Port.

**Vadakara Port**

An office building constructed at Vadakara Port and inaugurated on November 5th 2018.
Port Directorate

Guest House/Staff quarters constructed near Port Directorate at Valiyathura inaugurated.

Alappuzha Port

In Alappuzha Port a Guest House/Staff Quarters inaugurated by Hon’ble Minister for Finance Dr. T.M. Thomas Isaac. Modified signal station and office complex are also inaugurated at Alappuzha Port.

Channel marking Boya

The Work of Channel marking Boya for inland boats in Muhamma - Kumarakam Route is in the final stage with an expenditure of Rs. 15,43,578/- Measures have been taken to promote coastal shipping.

Kollam Port

13.7512 Hectars of land of Sea puramboku handed over to Dept. of Ports entrusting the ownership in Revenue Dept. Action is being taken to install customs clearance measures such as EDI (Electronic Data Interchange), Plant quarantine Lab, Emigration Check Post proper and Security measures.

The passenger Terminal construction of Kollam Port is almost nearing its completion.

For connecting Kollam Port with National Highway a 1.12Km road from Kollam Port to Kochupla-moodu built at a cost of Rs 7 Crores. The same was inaugurated on 19/02/2017. Cargo movements through Roads made easier and local public are benefited through this facility.

Kodungallur Port

Second phase of Mechanical Dredging started at Kodungallur from 04/12/2018 and the work is in progress. Modernization work completed at Kozhikkode Guest House (Marine Bungalow) and started functioning under port Department.

Water Sports

Initiated the projects to start water sports in Alappuzha, Kozhikkode & Vizhinjam Ports.

Beypore Port

Completed the work of Gate House and Rest rooms & Facia Wall at Beypore Port.

Land acquisition of Kovilakam Land for the development of Beypore Port is in progress. Govt. fixed the land value of

“"We are tied to the ocean. And when we go back to the sea, whether it is to sail or to watch - we are going back from when we came”.

- John F Kennedy
Two Batch of basic Hydrographic course completed in Kerala Institute of Hydrographic and advanced studies. Modernised Survey vessels spending Rs. 31.06 Lakhs.

As per the request of the coastal development co operation survey work carried out covering the area from Vizhinjam to Muthalapozhi. Modern Survey Software installed in the department.

Ponnani Port

Dredging work is in progress at Ponnani Harbour basin. By spending an amount of Rs. 82,55,000 through KSMDC.

Hydrographic Survey Wing

Hydrographic Survey Wing is engaged in the Survey work related to non major ports, fishing harbours and inland navigation. Chief Hydrographic Survey Office at Thiruvananthapuram, Marine surveyor office at Kollam and Beypore Assistant Marine Surveyor office at Neendakara, Alappuzha, North Paravoor (Kodungallur) and Kannur are engaged in the survey and connected work.

An Assistant Marine Survey office - started functioning at Alappuzha from 2016 October 22. Headquarters office of Hydrographic Survey Wing is constructed at Kamaleshwarm in Thiruvananthapuram and inaugurated.

Completed the construction of Assistant Marine Survey office at Kodungallur and inaugurated. Modification work of Kollam Marine Surveyor Office completed.

Modern Survey equipment worth Rs. 45.82 Lakhs issued to newly function to Assistant Marine Survey Office Alappuzha.


Boat inauguration Kollam Hydrographic Department by Minister for Ports Ramachandran Kadannappalli

129.47 Acres of Kovilakam. Land and sanction accorded for issuing the compensation amount.
Semi-High-Speed Rail Line
A paradigm shift in transportation sector

One of the ambitious mega projects of Government of Kerala which is expected to change the face of Kerala by meeting the growing demand for rail passenger traffic. The work on the proposed semi-high-speed rail corridor will commence by 2020.

By Anil Kumar G (Joint General Manager & Company Secretary, Kerala Rail Development Corporation Ltd)

Semi High-Speed Rail Corridor between Kasaragod and Thiruvananthapuram is one of the ambitious mega projects of Government of Kerala which is expected to change the face of Kerala by meeting the growing demand for rail passenger traffic. The work on the proposed semi high-speed rail corridor will commence by 2020. The 532-km corridor is estimated for the cost of Rs 66,000 crore on completion. This is envisaged as a 100% green project and will use the latest railway technologies available in the developed world.

The project will be executed by the Kerala Railway Development Corporation Ltd (KRDCCL), a joint venture company under the State Government and the Ministry of Railways for augmenting the railway infrastructure within the State. The financial resources for the project which is expected to be completed in five years, would be mobilised through foreign loans and from within the country.

The Paris-based engineering and consulting group M/s Systra has been appointed a general consultant for carrying out the feasibility study and detailed project report. The feasibility report found that the semi-high-speed railway line traversing through 11 districts is
KEY FEATURES

100% Green Project

A strategy was adopted to recycle steel and concrete during the construction. Along with that the recycling and reuse of construction waste, use of new low emission construction equipment, replacement of inefficient truck engines and irrigation pumps, urban forestry program etc are other proposed strategies. The Station buildings, depot, administrative building and other service buildings will be designed based on the platinum rating standard of Indian Green Building Council.

Adoption of the latest state-of-the-art technology in Rail Systems. SHSR will be provided with the proven rail system technology like Signalling system- ERTMS level-2 with Automatic Train Control System, Communication system- GSM-R/LTE, Ticketing System- Automatic Computerized system with AFC gate, Rolling Stock-Fully Air-conditioned with modern passenger amenities & max regeneration capability and Power supply system with the latest electric traction system (2X25 kV), modern railway stations.

100% green energy from renewable energy sources will be used during the operation phase. Innovation in solar generation across the corridor in trains, viaducts, walls & energy efficient stations & depots.

Drives mode shift from polluting Buses & Private vehicles. By 2028, SHSR will divert road vehicles and trucks from the road, causing a reduction of approximately 2,37,663 tons of carbon dioxide equivalent and 3,81,899 tons by 2051.

Transit-oriented development to maximize the non-fare box revenue.

Last mile connectivity with system driven e-vehicle public transport system, multi-model integration, charging and parking facilities for the electric vehicles etc. will be included in the SHSR terminal design. Connectivity with 2 major airports of Kochi and Trivandrum and existing railway stations being planned.

Ten stations are planned at Thiruvananthapuram, Kollam, Chengannur, Kottayam, Ernakulam, Trichur, Tirur, Kozhikode, Kannur & Kasargod.

The travel time between Thiruvananthapuram and Kasargod will be reduced to just 4 hours from the existing travel time of 12 to 14 hours by rail/road.

feasible and financially viable for this project.

Kerala Railway Development Corporation Limited (KRDCL) has commenced steps to go forward with the project. Discussions are going on with multinational funding agencies. First trains on this track will have 9 fully air-conditioned aluminum coaches. They could be extended to 12 or 15 later. The trains will run primarily on solar energy. This will reduce 1.8 lakh metric tonnes of carbon emissions by slashing road transport on the route by 21%.

The alignment proposed will be 80% parallel to the existing tracks up to Thrissur from Thiruvananthapuram and 90% parallel from Thrurunavaya to Kasaragod with railway bypasses at Vadakara and Thalassery. The curves in the initial 300-km corridor will have to be straightened to lay the high speed railway line.

The line will reduce pollution on the roads and congestion, improve safety and reduce dependence on imported oil. Planned urban development of the cities along the corridor, and development of new cities along the SHSR line can be used to drive benefits for the socio-economic development in the regions served by the line.
My Kochi, My Metro

Since its inception, Kochi Metro has garnered attention for its many innovative and inclusive measures

By Keziah Maria, Dilin Shaji (Information Assistants, District Information Office, Ernakulam)

On 17 June 2017, marking the end of a four-year long haul, Kochi City witnessed a new dawn. One which would take its transportation system to a new height and lay out tracks to faster, easier journeys.

The inaugural day, the city saw a heavy rush of curious commuters queuing up at stations to experience what was going to be “the ride of their lives.” Over 62,000 travellers were recorded on the first day, collecting revenue that crossed Rs 20 lakhs. Prime Minister Narendra Modi unveiled the plaque in the presence of Chief Minister Pinarayi Vijayan at Kaloor Stadium, following a ride from Palarivattom to Pathadippalam station. Kochi Metro’s official app, ‘Kochi1’ was also inaugurated at the event.

Since its inception, Kochi Metro has garnered attention for its many innovative and inclusive measures. Starting from being the first metro in India to be constructed in record time to the recruitment of 23 members from the transgender community, Kochi Metro has turned heads for all the right reasons. The rail authority became India’s first metro service to create a gender-neutral workspace and to bring about other disruptive changes, like the installation of feeding pods and plastic bottle recyclers in select stations. And with e-auto feeders, installation of solar power plants, horticulture and rainwater harvesting projects, the metro introduced Kochi to more sustainable alter-
natives. Apart from these firsts, Kochi Metro opened its first police station at Kalamassery, which was inaugurated by Chief Minister Pinarayi Vijayan. Following discussions, the Council of Ministers on 12th June 2019, announced the decision to extend Kochi Metro Phase 1 from SN Junction to Tripunithura railway station.

The council also allocated Rs 356 crores towards the project. KMRL is waiting for the
Central Government nod for the second phase from JLN Stadium to Kakkanad. The preparatory work for the second phase of Kochi Metro, from JLN Stadium to Info Park, Kakkanad has begun. The Social Impact Study has been completed and survey work for preparing sketches for land acquisition is underway. KMRL plans to acquire 2.8630 hectares of land along the JLN-Info Park stretch, of which 72 hectare is government land. As part of its green initiatives, Kochi Metro has planted nearly 7,427 trees through the years, across the city.

Last month, KMRL proudly completed two years of successful operation, with over 2.8 million happy commuters and many new initiatives under its belt. Indeed, none of it would have been possible without the support and cooperation of the public. Together, let us continue to strive for a greener, safer future. 

 Muhammed Safar & Sahil
 Students of Rajagiri college of Social Science

For us the ride in Metro is just a better smooth experience. Traffic free metro journey make us so happy travel to college and back to home. It’s time consuming. The irregular old road days are just a past memory for us. Metro makes our journey easier as well as reduce the tiredness and journey time than the bus travel. They say that they can concentrate more in the studies as they could reach home earlier.
Kochi Metro rail provides an awesome journey. Its time consuming and could travel safely. Metro train expense is less than that of petrol. So we prefer metro more than bike and car.

Anees K & Abdul Rashid
Ifthar Restaurant

Water Metro Project

The contract for the construction of terminals the first phase of the ambitious Water Metro project has been awarded. The project was conceived with multi-modal integration in mind, with state-of-the-art boats and amenities at piers. The project is set to cover 16 routes across 10 islands and the terminals, once established will aid tourism and other prospects of the area.
Detrimental to the Core

It is rather unfortunate that the Union Budget, presented by Nirmala Sitharaman fails to take the interests of the states into consideration. Over centralisation, weakening of states, erosion of whatever financial autonomy was left with the states etc. are the hallmarks of the budget 2019-20.

By JYOTSNA P (Assistant Professor in Economics, Zamorin’s Guruvayurappan College Kozhikode)

The budget is detrimental to the interests of the states in general and Kerala in particular. The minister and the Union Government are yet to realise that strong states are in no way inconsistent with the concept of a strong centre. Strong states are imperative for a powerful union, as states are the factors that constitute union. The budget too should not forget the fact that states too have genuine identity of their own, culturally, linguistically and even historically. This identity is in no way separate from the identity of the nation. Union Government is supposed to assume the role of a facilitator or coordinator to ensure equitable distribution of resources and balanced development that reassures that no region is lagging behind. The centre should not act as an overlord. That is why framers of the constitution stressed in the federal features, not withstanding whatever unitary features it has.

When the planning commission was done away with, and the planning policy was given a go bye, what states lost was a forum, where they could raise their demands and express their genuine grievances. When, the centre started to finalise the terms of reference of the suc-
cessive Finance Commissions, states lost yet another field, where they could play a role in highlighting the genuine demands. Both the dissolution of planning commission and the unilateral intervention of the centre in the finalisation of the terms of reference of the finance commissions went a long way in accelerating the process of discriminatory treatment of states on political considerations. The economic policy, which was rejected at hustings by the people of states were thrust upon the state governments, by linking the policy of liberalisation - privatisation - globalisation to the further allocation of funds from the centre. This negates the very concept of democracy; it goes without saying. Many of the items, which figured in the state list were unilaterally taken away and included in the union list, resulting in heavy revenue loss on the part of states and heavy mobilisation of resources in the union exchequer. At the same time, a series of responsibilities, involving heavy financial expenditure were passed on by the centre to the states and it resulted in heavy pauperisation of the latter. One has to go through the Union Budget 2019-20, against the backdrop of what had happened on these lines in the financial relations between Union Government and states. A perusal of it enables us to realise that the Union Budget 2019-20 is yet another blow to the states which stand already weakened. One can notice a considerable reduction; to be precise, a fall of Rs. 91,000 Cr in the gross revenue from the central taxes and it is calculated that 40% of this will have to be borne by the states, which are already relegated to the backdrop of Indian economy.

The unprecedented floods last year had a devastating effect both on land and on the economy of Kerala. Even the reputed international agencies such as UN team, World Bank team etc. estimated that the loss will go beyond 31,000 crores, which is more than the annual plan size that we have. Without sufficient help from the centre, the state will not be in a position to meet the heavy expenditure, involved both in the compensation and in the rebuilding. But, the centre chose to ignore the dire needs of the state in this regard and refused to allocate even a penny in the budget.

Government of Kerala has been consistently requesting the centre to raise the debt limit from the present 3% to 4.5% at least, so that the state will be at liberty to go in for further grants and loans from various sources and mobilise the fund required for the times to come. The budget conveniently slips this point too.

When statutory rationing was introduced in Kerala, an assurance was given on the floor of the parliament by the Centre, that the food deficiency will be bridged from the central pool, as the deficiency is a sequel to the centres insistence that the state should shift its focus from traditional crops to cash crops, specially spices, as it would fetch foreign exchange in a big way to the foreign exchange reserve of the centre. The state did as per Centre’s dictates and landed in a predicament, where it had to go out with a begging

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bowl for food grains. The centre never addressed this question.

In 1970's more than five items from the state list were unilaterally shifted by the centre, to the list of additional excise duty, by effecting an amendment in central fiscal acts, and the state of Kerala has been suffering a lot since then, as it took away its rights to tax on those items and accrue revenue. In this case also, an assurance was given by the then Prime Minister on the floor of the Lok Sabha that the centre would make up the loss. But the Centre did never keep its word. On an average, state loses Rs. 5000 crore a year, since then.

In 1990’s the union government as per the recommendations of a finance commission, extended special assistance to deficit states to bridge the gap and make the economy ‘0’ deficit. The only state which was deprived of the assistance was Kerala, despite Kerala being a deficit state. It was because of that refusal to allocate special amount that the accumulation of deficit in Kerala's economy rose to alarming levels. Yet another factor to be borne in mind is that ours is the state which contributes greatly to foreign exchange reserve, by way of immense contribution of migrant labour ranging from Gulf countries to the United States.

All these go to prove beyond doubt that Kerala deserves a rightful treatment, if not a special treatment. However, it is rather unfortunate that the budgets never pay heed to what we demand. The main demands of Kerala such as AIIMS, Railway Zone, full fledged coach factory, increased allocation to public sector institution etc. do not figure anywhere in the budget. It is to be noted that Kerala is the state which will have to suffer the most due to the hike in the cess of petrol-diesel prices, as this is the state which has to import even food grains from far off states. The hike effected on petrol-diesel will have a cascading effect on essential commodities as it would lead to corresponding hike in freight charge rate too. The state of Kerala will have to suffer the brunt of it.

The scant regard the Union Government pays to the downtrodden and the dispossessed get reflected in the way in which they cut short the allocation meant for MNREGP. The amount has been reduced by 1,084 Cr from last year’s 61,084 Cr to this year’s 60,000 Cr. The allocation to coir board has come down from last year’s Rs. 3 Cr to 1 Cr, this year. Rubber Board, Bamboo Mission etc. are the other organisations that suffer heavy loss due to the reduction policy of the Centre.

Though the state has been seeking special assistance for the setting up of an Ayurveda Research Institute, the budget does not have even a mention of it. Despite the fact that the state chose to acquire and hand over 200 acres of land in Kozhikode for the setting up of a medical institute at par with AIIMS, even token allocation is not earmarked in the budget. Doubling of railway lines, further electrification of railway lines, extension of lines, survey, extension of Chennai - Bangalore industrial corridor to Cochin are the other prominent demands which have been ignored. No rescue package is planned for Kerala in the aftermath of the devastating floods. Taking into consideration, the aspect of high rate of infla-
tion, one can notice that whatever is allocated is too meagre, even to keep the projects afloat. There is no justification for the cut down of allocation to Cochin Port Trust and Shipyard from Rs. 660 Cr to 495 Cr, and Rs. 67 Cr to 46 Cr respectively. The non inclusion of Malabar Cancer Centre in the ‘Rashtriya Arogya Nidhi’ also is unfortunate.

The Union Budget is inflationary and detrimental to the economy of this country and people as a whole. The crony capitalism driven fiscal policy gets reflected in the reduction of corporate tax and the annual writing off of NPA, which the corporates owe to the exchequer. The budget is a mere statement of receipts and expenditure, rather than a statement of fiscal policy which would defend India from the invasion of the trends of recession, and help to hide over the crisis in which India has landed.

It seems, the Union Finance Minister is on a disinvestment spree, as she has put its target on Rs. 1,05,000 Cr for the year 2019-20. In 2018-19 the disinvestment was to the tune of Rs. 80,000 Cr only. One cannot but say that the hallmark of this year’s budget is disinvestment which scales further heights.

Only a nominal increase is effected on capital expenditure and it means that the development along with growth will come to a grinding halt. The capital expenditure registers only a marginal increase from Rs. 3,16,623 Cr in 2018-19 to Rs. 3,38,569 Cr in 2019-20, which denotes no increase, if considered against the background of the rocketing rates of inflation.

The budget serves the purpose of the corporates and the multinational institutions which eat into the vitals of the nation and leaves no stone unturned in the process of financial invasion on the lines of late capitalism. The pro-corporate reforms announced by the Finance Minister, the never ending spree of disinvestment, the opening up of the flood gates of core markets for FDI, and the silence maintained on the problems of the common people including the farmers and the unemployed unequivocally betray the fact that the government sides with the finance forces, particularly the corporates, who brought the NDA dispensation back to power.

The scant regard with which the present dispensation treats the weaker section gets proved in the lowered figures or the stagnant figures allocated for them. Though women were quite hopeful, when Nirmala Sitharaman assumed office as the first woman finance minister, they were shocked as she brought down the expenditure on women from 5.1% to 4.9% of the total budget.

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It is unfortunate that there has been a decline in central allocation for umbrella schemes for Scheduled Castes by Rs. 2,000 Cr. There has been no increase in the allocation for minorities, and it speaks volumes of their attitude towards the minority sections. Nirbhaya Fund too does not get any increases in this budget. At a time when subsidies should go up, the budget ensures its stagnation at last year’s level.

The main feature of this year’s budget is that the FM chose to conceal the real figures and actuals, between the lines and leave even the economists in the dark, by maintaining some sort of a secrecy, so as to hide the ways in which she is going to mobilise the funds for the implementation of the budget. In a democracy this goes against the very concept of ethics, transparency and accountability, as even the members of parliament are not aware of the real accounts. The sum total of the budget, against this background is sheer scheming, coupled with pro-corporate manipulation of figures.
Beaming with happiness

IAS topper Sreedhanya is getting congratulated by Chief Minister Pinarayi Vijayan

Credit: Kerala State Civil Service Academy
The Evolve - e mobility Expo held at Kochi showcased manifold e-vehicles ranging from scooters to buses. Thus, Kerala becomes a paragon of excellence for other states in India by introducing e-mobility on its roads on a larger scale in the short run. Many activities are being conducted across the State for creating a favourable ambience in implementing the Government’s e-vehicle policy.

The Government organisation, Kerala Automobiles Ltd (K.A.L), made electric auto rickshaws for the first time in the country. It will also make electric buses for KSRTC in collaboration with the Swiss firm HESS. The MoU for this was exchanged between K.A.L and HESS.
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Printed and Published by U.V. JOSE I A.S., Director, Information & Public Relations Department on behalf of Government of Kerala and Printed at Orange Printers Pvt.Ltd., Thiruvananthapuram and published at Publication Wing, Information & Public Relations Department, Government Secretariat Annexa, Thiruvananthapuram, Kerala. Editor-in-Chief : U.V. JOSE I A.S.