

# KIIFB NEWSLETTER

## Vol 1. Issue 9.1



DEFINING THE FUTURE



### **Our Chairman**

Shri. Pinarayi Vijayan  
Hon. Chief Minister



### **Our Vice Chairman**

Dr. T M Thomas Isaac  
Hon. Minister for Finance

### **From the CEO's desk.....**

This edition of the News Letter comes in the backdrop of the single largest natural calamity that the State has ever witnessed in its history over more than a century.

What has happened is tragically painful – memories of the travails that our people went through will long continue to haunt our public mind. But amidst all the misery that accompanied the disaster, what truly stands out as a silver lining and as a beacon of hope for us is the indomitable spirit of the Malayali in the face of adversity. The people of the State, the youth, the fisherfolk, the Government machinery across all the field departments, the NGOs joined the relief efforts and rallied as one behind Government under a Chief Minister who stoically led from the front through these difficult days. What was also very touching was the benevolence of people across the world, with hundreds of institutions and other Governments in India and across the world who came forward to contribute generously to the relief efforts and offer us solace during these times.

What lies before the State is the arduous task of rebuilding the State. In this edition, we have focused on some crucial principles of a risk centric approach for Planning and Design of Flood Resilient Infrastructure. It is through such an approach that the State can reasonably hope to withstand similar situations in the future.

The Ordinance amending the KIIFB Act was promulgated nearly two years back. This edition carries some reflections to mark the occasion. In fact, given the huge rebuilding task ahead, KIIFB as a new and innovative instrument to finance infrastructure assumes added importance.

For our focus projects, we have selected the Government Medical College, Ernakulam and the Karamana-Kaliyikkavila Road. The Government Medical College, Ernakulam along with the General Hospital Ernakulam (which is also one of the KIIFB funded projects) together will be a big boon to the people of Ernakulam and central Kerala. The Karamana-Kaliyikkavila Road which will essentially join up with the Golden Quadrilateral touching Nagercoil will be another vital piece of connectivity for the State.

We are also in the interest of transparency, publishing a gist of observations recorded by our Inspection Team which they record when they visit projects.

More in our next edition. Happy reading.

**Chief Executive Officer, KIIFB**

# CURRENT PROJECT STATUS

Approved KIIFB Projects as on 30/08/2018

Department Name	Approved projects	
	Number of Projects	Total Amount Rupees in cr.
Agriculture	1	14.28
Transport	2	412.93
PWD - Roads	119	5051.39
PWD - Bridges	40	1026.67
PWD - ROBs	17	523.80
PWD - Flyovers	9	635.50
PWD - Hill Highways	16	1425.67
PWD - Underpass	1	27.59
Water Resources	37	1803.70
SC / ST	8	138.38
Registration	6	89.88
IT	3	1174.13
Tourism	1	39.42
Health	9	1318.57
Higher Education	8	351.21
Sports	19	351.15
Gen. Edn. (Schools)	74	1731.23
Forest	2	212.18
Devaswom	1	141.75
Industries	2	1565.17
Power	8	5200.00
Fisheries & Ports		
LSGD	3	31.69
Housing	1	45.00
<b>Total</b>	<b>387</b>	<b>23311.29</b>



# FOCUS DISTRICT

## Sector Wise Project Status of Kozhikode District as on 29.08.2018

Department	Approved		Work Tendered (Including work started)		Work Started		Under Appraisal	
	Number of Projects	Total Amount Rupees in cr.	Number of Projects	Total Amount Rupees in cr.	Number of Projects	Total Amount Rupees in cr.	Number of Projects	Total Amount Rupees in cr.
Fisheries & Ports							1	145.20
General Education	9	152.27	5	91.8	4	79.86	2	36.17
Higher Education	1	37.22					6	101.78
Labour & Skill Development							1	24.99
Power	1	224.82	1	229.40				
PWD - Roads	10	509.87	7	276.26	6	189.90	7	449.81
PWD - Flyovers	1	54.03						
PWD - Hill Highways	2	232.13						
PWD - Bridges	5	153.41	1	24.91			1	10.00
Tourism							2	136.04
Registration	2	22.20						
SC / ST	1	16.48	1	16.48			1	18.63
Sports & Y Affairs							2	33.00
Water Resources	3	154.80	2	99.40	2	99.40	1	57.00
<b>Total</b>	<b>35</b>	<b>1557.23</b>	<b>17</b>	<b>738.25</b>	<b>12</b>	<b>369.16</b>	<b>25</b>	<b>1089.60</b>

## Sector Wise Project Status of Pathanamthitta, District as on 29.08.2018

Department	Approved		Work Tendered (Including work started)		Work Started		Under Appraisal	
	Number of Projects	Total Amount Rupees in cr.	Number of Projects	Total Amount Rupees in cr.	Number of Projects	Total Amount Rupees in cr.	Number of Projects	Total Amount Rupees in cr.
General Education	5	69.97	2	25				
LSGD	1	10.36						
Devaswom	1	141.75						
Sports & Y Affairs	2	23.79	2	23.79	1	7.31		
Water Resources	3	152.10	2	99.40	2	99.40		
PWD - Roads	12	456.59	8	208.76	3	82.92		
PWD - Bridges	5	81.04	4	71.69			2	26.34
<b>Total</b>	<b>29</b>	<b>935.60</b>	<b>18</b>	<b>428.64</b>	<b>6</b>	<b>189.63</b>	<b>2</b>	<b>26.34</b>

# FOCUS PROJECT - 1

## GOVERNMENT MEDICAL COLLEGE, Ernakulam

Kerala is a state with a robust Health care system, with both the Public and Private sectors contributing their mite. The general public rely on the former, owing to reasons as financial affordability, easier physical reach and recognized expertise that the personnel in this sector possess.

To further supplement the extensive health network that the State already has, the Government Medical College, Ernakulam, which is a tertiary care centre, has been identified to be supplemented with the requirements as infrastructure improvement through creation of Super specialty departments, sufficient space for efficient functioning of departments, modern equipment/devices/systems/hospital furniture, development of a patient – friendly atmosphere etc. which the institution in its current infant stage of development lacks. The Project for developing the facilities at MC, Ernakulam envisions the institution to achieve the status of the Apex Tertiary Referral Hospital in the State.

The Project includes the following :

- Mother and Child Health Centre
- Super Speciality Wing including Cath Lab



- Dental wing
- Physical Medicine & Rehabilitation
- Enhancement of Radiology Department

The above developments shall be supported through construction of ancillary facilities as :

- Staff Quarters
- Post graduates' Hostel
- Indoor Stadium cum Auditorium & Gymnasium
- Common Amenities Centre including Canteen & Hospital Kitchen, commercial area and dormitories

The new Hospital Block is of around 5.73 lakh sq ft and shall require 42 – 48 months for its completion. The associated facilities including staff quarters, PG quarters, indoor stadium & auditorium, canteen & hospital kitchen, common amenities centre etc. will be developed in line with the development of new Hospital Block.

Execution of the Project is done by Infrastructure Kerala Ltd (INKEL). The Project has been approved for funding by KIIFB at a cost of Rs. 285.31 cr. Work in this regard has been awarded and about to start in a couple of days.

# FOCUS PROJECT - 2

## KARAMANA- KALIYIKKAVILA – Phase I - Reach II

The Project Karamana – Kaliyikkavila Road widening is a prestigious one undertaken by the State Government, with the aim of developing the corridor connecting the capital city of Thiruvananthapuram with a border district of Tamil Nadu.

Currently the second reach has been taken up under KIIFB funding. Following the completion of Phase I, Phase I Reach II –Pravachambalam – Vazhimukku with a total length of 6.5 Km, funded by KIIFB, is active. The 5.6-km stretch between Pravachambalam and Kodinada at Balaramapuram forms the major part of the second





phase of the Karamana-Kaliyikkavila stretch. Land acquisition work in this respect has been completed.

The project aims at widening the existing road to a four-lane divided carriage way along with the improvement of all CD structures as per the IRC standards and MoRTH specifications. Government of Kerala is providing funding assistance for rehabilitation and resettlement too.

This road, being an important infrastructure facility facilitating the movement of goods and persons, direct as

well as the indirect impacts are likely to be experienced by various sections of the population. Economic activities in and around the areas the road traverses are bound to multiply. The transportation time saved is likely to have a highly beneficial impact on related activities such as horticulture, fishing, poultry development and animal husbandry. The total estimate for this project is Rs. 162.46 Cr. Kerala Road Fund Board (KRFB) is the SPV of this project. Expected completion period of the Project is 18 months. Work in this respect has been tendered.



## REFLECTIONS ON THE SECOND ANNIVERSARY OF KIIFB

KIIFB is into its third year of revival after the reconstitution of the Board vide the Kerala Infrastructure Investment Fund (Amendment) Ordinance, 2016 notified on 19.08.2016. The Ordinance was replaced by the comprehensive Kerala Infrastructure Investment Fund (Amendment) Act, 2016 notified on 05.11.2016 which clearly outlines the strategy for funding of major infrastructure projects in the state through the off-budget route. Within just two years KIIFB has been able to approve tender-ready projects worth ₹23,311 cr. make payments for these projects to the tune of ₹723.26 cr. and have a current cash reserve of ₹4220 cr. Phenomenal Activity is being witnessed all

around. Still doubts are raised from various quarters, including some of the stakeholders, as to whether KIIFB is a working model.

### What is the KIIFB Model?

The edifice of KIIFB Model is built up on a very down to earth model that we see around in our daily lives but fail to perceive its significance, simply for the reason of being quite commonplace. Almost everyone of us desires to have a house of our own. We seldom wait to accumulate the required funds on our own before beginning to build the house. Most of us build our houses with borrowed capital from various sources, preferably

subsidised house loans. We tend to resort to this method with a view to acquire the asset as early as possible at today's cost (lest the costs keep on increasing over the period of time which we would otherwise have taken to accumulate the required funds) and spread the cost over a period of 10 to 15 years on an average, by which time our earnings would have increased and the value of money would have decreased and we would find the repayment less of a burden over the period. All we have to ensure is prompt implementation and repayment. KIIFB is based on this simple and time-tested model. KIIFB borrows bulk funds and facilitates massive infrastructure development now at today's cost and then ensures easy repayment over a period of 10-15 years. KIIFB's state of the art hassle-free appraisal, approval, monitoring and disbursement mechanism will ensure time-bound and qualitative project implementation, fully eliminating cost escalation. This system is already proving to be cost effective, reading from the consistent trend in below estimate quotes for KIIFB project tenders.

### **How will KIIFB get the required funds?**

A whopping ₹50,000 cr. infrastructure development in 5 years? and that too without any collateral assets to pledge! This question without doubt could raise many eyebrows. But be assured, KIIFB can get the required funds at ease. For high volume institutional borrowings without collateral security, the lender relies solely on the credibility of the borrower based on cash flows and credit rating. Credit rating primarily takes into account the financial stability, creditworthiness and track record based on several parameters. In connection with a proposed General Obligation Bond issue, the top-ranking rating agencies ICRA and CRISIL have accorded an initial credit rating of A+ to KIIFB in terms of a Structured Repayment Obligation. Besides, the Act provides for the implicit guarantee backing of government. NABARD has already accorded in-principle sanction for a long-term loan of ₹4000 crore of which ₹100.80 cr. has already been disbursed. HUDCO as well as several banks have come forward to finance KIIFB projects. Indian Rupee Denominated "MasalaBonds" are proposed to be issued in Singapore and UK shortly. The novel Pravasi Chitty being launched by KSFE with KIIFB assistance will be the cheapest and biggest source of KIIFB funds. Steps for incorporating a KIIFB sponsored Asset Management Company (AMC) is fast progressing. The AMC will mobilise funds from all types of investors through various investment structures such as Infrastructure Investment Trust (InVIT), Alternative Investment Fund (AIF), Infrastructure Debt Fund (IDF), Mutual Funds, etc. for investment in KIIFB projects. Sources

are abundant and KIIFB with its basket of ready to implement projects is well placed to absorb these funds.

### **How will KIIFB repay the debt?**

The Kerala Infrastructure Investment Fund (Amendment) Act, 2016 provides for assured revenue streams through Government budgetary support in the form of ₹1/- Cess collected on the sale of each litre of petrol and diesel, upto 50% share of Motor Vehicle Tax and any additional funds needed to meet shortfall in repayment. Besides 25% of KIIFB projects are expected to be revenue generating and will provide for the repayment of the funds lent to them. This raises the question of sustainability i.e. whether these streams will be sufficient for the repayment or will it be an additional burden on the government. A simple calculation can prove this. The EMI for ₹50,000 cr. taken at one go @12% interest for a period of 15 years will be ₹600.08 cr. The projected average monthly yield from MV Tax and petroleum cess alone comes to ₹540 cr. plus 25% expected yield from self-supporting projects i.e. ₹150 cr. will sufficiently support the repayment. This is a conservative calculation based on 16% growth rate for MV tax and 10% growth in cess collection. The actual growth rate is expected to be even higher. Given the current trends the average interest rate on borrowing is expected to be less than the above applied rate of 12%. The sunny side is that the borrowing will be in a phased manner in accordance with the progress of implementation, so the resultant repayment period will be more spread out and the monthly repayment load will be considerably less than the above projected ₹600+ cr. Besides, there will be some savings through the earnings from short-term reinvestment of reserve funds. With ₹50,000 cr. worth of infrastructure in place, the majority being road infrastructure, revenue receipts especially from MV tax and petroleum cess will witness considerable increase during the repayment period, way ahead of the projections.

### **Will the KIIFB borrowings impact the State's Debt?**

KIIFB being a sustainable model as proved above will not dent the state finances or multiply its debt. M.V.Tax currently constitutes only 7% of the State's Revenue Receipts. The impact on the state budget will therefore be minimal whereas the gains from the massive infrastructure asset formation will propel the State's revenues.

In general, KIIFB is a very simple but hitherto unexplored model of development. It is so simple that it is hard to believe. That is the beauty of the KIIFB model.



# Planning and Design of Flood Resilient Infrastructure

## Risk Centric approach

Public Infrastructure systems are planned and built based on the principles of strength, safety, durability, sustainability, life cycle cost and specific functional utility. These systems are designed for meeting the projected functional requirements for the estimated service lifespan. There are also certain regulatory requirements to be considered in the design process particularly in the context of unexpected disasters like Earthquake, Fire etc. In such cases design process is carried out based on the past data and strengthening of the structures and elements are done by increasing the factors of safety. This approach is generally based on the principles that structures and systems can resist the disasters to a limited extent. Designing them for resisting the worst cases of impacts from unexpected disasters like heavy floods may not be economically viable considering the resource crunch in the public infrastructure sector. Alternate philosophies including risk- based approaches and design for resilience are being discussed across the world in the context of large scale disasters like floods.

### Resistance, Resilience and Risk

Planning and designing structures and infrastructure facilities for resisting the worst anticipated external forces, during the occurrence of large-scale disasters like heavy floods needs rethinking, as conventional methods and processes may lead to over design. This happens because the elements of the system are expected to develop resistance towards the significantly higher loads/effects generated during the disasters. This approach necessitates large capital expenditure without having matching benefits during the normal service life. Increased cost of maintenance and upkeep is another drawback of such over designed systems. The design based on resistance to worst disaster conditions shall be limited to strategically important infrastructure systems having importance in the context of National Security and those essential during mass evacuation like situations.

Principle of Resilience and its application in the planning and design of Infrastructure systems is gaining importance in the context of large scale disasters occurring across the globe affecting large population and causing heavy damages to infrastructure facilities. From engineering point of view, concept of resilience is related to the structural integrity of the systems and physical infrastructure, essential to ensure the continued

operational performance during extreme loading which may occur during events like heavy floods. Climate resilient infrastructure design is being discussed as an alternate design philosophy to reduce physical vulnerability of critical infrastructure. The design in such context will include provision for retrofitting and rehabilitation in the event of large scale disasters. The selection of technology and use of materials will focus on the easiness with which a retrofitting can be taken up with minimum additional cost and maximum speed in the post disaster scenario. In general resilience covers both physical and societal aspects of the infrastructural systems and is based on the principles of Robustness - inherent capacity to withstand external actions without losing the functional utility, Redundancy - inbuilt provisions to allow alternate options, substitutions etc, Resourcefulness - capacity to mobilise needed resources and services in emergencies and Rapidity - the speed with which the disruption can be overcome. In the Resilience based approach the infrastructure facilities are viewed as systems and not just components e.g. how the elements in energy, transport, water supply etc together will work in the post disaster situation.

Risk evaluation is the basis of selection of design philosophies and in ascertaining the capacity of the existing systems in the context of a disaster. The risk of damage to critical infrastructure like major roads, ports, electricity, communication systems, hospitals etc., must be assessed in depth to formulate resilient design choices. The assessment of risk will help to categorise the facilities in terms of the vulnerability and importance, which in turn will help the planners and designers to choose appropriate technologies to minimise the damages and to ensure the continued functional utility of the critical infrastructure during the disaster and post disaster scenario.

Creating resilient infrastructure shall be done with the objective of overcoming direct and indirect impacts. Direct impacts include sudden shocks during a disaster and slow impacts like those due to climate change. Indirect impacts include the effects of depleting or degrading natural environment due to infrastructure system failure. While creating resilient infrastructure systems, it is also to be ensured that integration, co-ordination, and sequencing are carried out in such a way that failure of one system does not lead to failure of all those facilities connected to it.

## Inspection Notes.....

For its inspections, the Administrative Inspection Wing took up packages under “Up-gradation of 141 High Schools as Centre of Excellence” and “Betterment of Infrastructure facilities in 229 Schools” implementing by KITE (Infra Division).

The status of the projects is as shown below:

Project Name	Total Number of Schools under the project	Approved by KIIFB	DPR submitted to KIIFB and awaiting sanction	DPR yet to be submitted to KIIFB
Upgradation of 141 High Schools as Centre of Excellence	141	138	3	
Betterment of Infrastructure facilities in 229 Schools	229	185	27	17
<b>Total</b>	<b>370</b>	<b>323</b>	<b>30</b>	<b>17</b>

Of the above mentioned 323 schools approved by KIIFB, 208 were grouped in to 25 clusters for tendering purposes. Out of this 208 schools, work order was issued for 172 and 31 were re-tendered and 5 were not tendered. Though the Administrative Sanction for the above 208 schools were issued for a total out lay of Rs. 1147.93 cr., KIIFB funding is limited to Rs. 897.40 cr. and the gap funding to the tune of Rs.250.53 cr. is proposed to be met from other sources such as development funds of MLA/MP/LSG/School Alumni/CSR. It is found that many schools are facing difficulties in mobilizing the funds through the above sources and which caused deviation/change in components/design of most of the sub projects.

Apart from the above, certain discrepancies and procedural laxities on the part of KITE were noted during inspection such as- non up loading of the Baseline-0 WBS of the project component in the KIIFB portal, higher TS amount than the amount accepted by KIIFB in the Detailed Appraisal Report (DAR), non-preparation of estimate for TS in PRICE software, non-receipt of Monthly Progress Report (MPRs)

within the stipulated time from the consultancy, M/s WAPCOS (PMC) engaged by the SPV, non-approval of the deviation/change in components/design in the sub projects by KIIFB, non-preparation of a ‘Plan B’ for the project as decided by the Technical Committee etc. The SPV is, therefore, asked to furnish specific remarks on the above for a detailed analysis of the implementation of the project. The AIW will conduct next inspection based on the reply from the SPV.

Another project inspected by the AIW this fortnight is the “Construction & Renovation of Modern Slaughterhouse (Abattoir) in 17 LSGIs” under LSG Department, proposed to be implemented through M/s Investment in Municipal and Panchayat Asset Creation for Transformation Kerala Ltd (IMPACT Kerala) as SPV. Out of the 17 projects proposed, KIIFB has approved the following 3 projects for funding:

- Construction of Multispecies Modern Slaughterhouse (Abattoir) at Thiruvalla in Pathanamthitta District. (LSG003-01).
- Construction of Multispecies Modern Slaughterhouse (Abattoir) at Chattukapara in Kannur District. (LSG003-02)
- Construction of Multispecies Modern Slaughterhouse (Abattoir) at Perinthalmanna in Malappuram District. (LSG003-04)

As per the implementation schedule of the above 3 sub projects approved by KIIFB on 22.06.18, the civil construction and Plant procurement were proposed to start in June 2018 & July 2018 respectively, but the SPV has not executed the tri-partite agreement and not started the tender process so far. On inspection it has felt that the SPV has not get a clear idea about the mechanism of WBS and not prepared and uploaded the Baseline-0 WBS to the project Portal. Of late the 2nd board meeting of SPV held on 7.08.18 has decided to form a Technical Committee for the implementation of the project. Since the SPV has not aware of the KIIFB guidelines issued in G O (Ms) No. 69/2018/Fin dt. 24.02.18, necessary instructions were given then and there to follow the revised guide lines in the implementation process. It has also noted that there is no sufficient man power at present in the SPV to handle the project. KIIFB will review the projects as there is delay in the implementation.



An initiative of Govt. of Kerala  
for KIIFB Projects

