Celebrating 25 years of excellence

Newsletter

Vol 8 Issue 6 June 2025





Groyne fields at Chellanam

www.kiifb.org

Kerala Infrastructure Investment Fund Board

Projects - Statistics

Department	KIIFB Approved Projects	
	No. of Projects Approved	Approved Amount (₹. in Crore)
PWD	516	₹ 34,071
Agriculture	1	₹ 21
Animal Husbandry	1	₹ 16
Ayush	2	₹ 183
Backward Classes Development Department	1	₹ 18
Coastal Shipping & Inland Navigation	19	₹ 3,518
Culture	17	₹ 499
Devaswom	2	₹ 139
Fisheries and Ports	26	₹ 643
Forest	9	₹ 617
General Education	158	₹ 3,221
Health & Family Welfare	99	₹ 6,490
Higher Education	67	₹ 2,122
Home	6	₹ 231
Industries	2	₹ 105
Information Technology	6	₹ 1,945
Labour & Skills	5	₹ 94
Local Self Government	29	₹ 815
Power	18	₹ 5,200
Planning & Economic Affairs Department	2	₹ 138
Registration	6	₹ 90
Revenue	5	₹ 95
SC/ST Development	10	₹ 182
Science & Technology Department	5	₹ 279
Sports & YA	41	₹ 917
Tourism	14	₹ 629
Transport	3	₹ 601
Water Resources	102	₹ 6,956
Total	**1172**	**₹ 69,834**

Projects under Land Acquisition Pool of ₹ 20,000 Crore

PWD-NHAI	1	₹ 6,769
Industrial Parks - 3 projects - ₹13988.63 Cr	6	₹ 16,421
Taking over of land from HNL - ₹ 200.60 Cr		
Kochi - Banglore Industrial Corridor & Global City - ₹ 2214.00 Cr		
Total	**7**	**₹ 23, 190**

KIIFB Approved Projects Grand Total

Infrastructure Projects	1172	₹ 69,834
Projects under Land Acquisition Pool	7	₹ 20,000
Total	**1179**	**₹ 89,834**
Fund disbursed to projects (as on 31/05/2025)		**₹ 35,437 Cr.**

Editorial

"It is not what you start that matters but what you finish," says Shiv Khera in his famous bestseller Live While You Are Alive.

After four years of project planning and implementation with this government, KIIFB has also started its evaluation on this aspect and is now making genuine efforts to prepare a list of projects that can be completed each month. This exercise, aimed at helping and motivating implementing agencies to ensure the timely completion of projects, is named 'Mission 365', with a target period ending on 31st March 2026.

"April is the cruellest month," says T.S. Eliot in The Waste Land. But for those living in the coastal areas of Kerala, the monsoon days are the cruellest, if we observe closely. Therefore, this month, the KIIFB Newsletter is featuring a beautiful picture of the sea protection work carried out in Chellanam Panchayat of Ernakulam District, which is considered one of the most adversely affected villages in Kerala.

The Board of KIIFB, chaired by the Hon'ble Chief Minister on 28th May, has sanctioned 22 new projects estimated to cost ₹865 crore and has also given in-principle approval for 8 more projects, for which detailed project reports are currently under appraisal. It brings great hope to see that five of these projects belong to the Forest and Wildlife Department, designed to address the much-discussed man-animal conflicts, and another five projects are for the Higher Education Department, which aim to provide high-standard accommodation facilities for both domestic and international students at all five of our universities.

Yes, "staying focused is tough but rewarding." KIIFB is also striving to deliver that reward to society—especially to the weaker sections and the youth.

Happy reading!! STAY TUNED

.

Chief Editor

Office
2nd Floor, Felicity Square,
MG Road, Statue,
Thiruvananthapuram - 695001
Kerala, India.
Phone +91 (0471) 2780900
WhatsApp +919072000430

Contents

1. **Studies On Concrete Slab Panel Based Solar Thermal Energy Harvester**
Antony Davis, Draftsman (TRC-PSC Buildings) 5

2. **Building The Future: Climate-Resilient Road Design In The Era Of Climate Change**
Nadhiya F.m., Junior Consultant, Trc-Transportation 11

3. **Transforming Coastal Livelihoods: Chethy Fishing Harbour Project Progresses Under Kiifb Funding** 15

4. **India's Carbon Trading Landscape: Mechanisms And Future Prospects**
Peggy Nepram, Sustainability Expert – Social, ESG 18

5. **Economy & Market Watch**
Ajosh Krishnakumar, General Manager, Finance & Administration 22

6. **Tender Updates - May 2025** 24



Groyne fields at Chellanam
Pic Courtesy :
Anoop C Raj,
Section Officer

Scan for downloading Newsletters

STUDIES ON CONCRETE SLAB PANEL BASED SOLAR THERMAL ENERGY HARVESTER

Antony Davis, Draftsman (TRC-PSC Buildings)

ABSTRACT- Urban areas are the engine for development besides its advantage as centralized system the concrete forest poses significant threat to the environment due to its heat island effect. On the other hand, there is a significant amount of energy waiting to be harvested. This paper aims to develop a solution which is a Dual-purpose slab panel which acts as both Solar water heater and structural member simultaneously. The major goals while developing the slab panel are economic viability, minimum maintenance, reliability, user friendliness and ease of installation. After constructing a small room and slab panel physically, the slab was installed above it on an open terrain both thermal and structural are conducted. The main objective of the study is reduction in internal temperature of room; how much thermal energy can be harvested and how the introduction of aluminum coil inside the slab affects structural performance. During the study two slabs were constructed. One with coil on the Tension side and the other with coil on the compression side. The temperature readings are taken individually of both the water coming from the slab and the internal room temperature of rooms. The thermal results show there is a significant reduction in internal room temperature and decent temperature in output of hot water. Structural study shows there is no significant reduction in the load carrying capacity of the slab. The results show the concept is promising which helps in creating both reduction in temperature internally and externally.

Keywords: Heat island effect, Hottel-Whillier-Bliss equation, and Solar flat plate collectors.

1. INTRODUCTION- Rising Mercury and Declining Earth.

Humankind is now facing the most complex issues than ever before- "Urbanization." Urbanization is the engine of development for a country. Urban areas are literally concrete forests, from roads to buildings. Large land area is converted into urban area by filling the agricultural land, water bodies, vegetation or by deforestation. The after effect of constructing these skyscrapers and concrete buildings next to each other will retard the natural flow of wind into the city. This blocking of natural flow of wind will create high temperature pockets inside the city itself. These structures made up of concrete act as a thermal reservoir. It absorbs the heat and releases slowly during the night which leads to elevated temperature during the day & night.

This elevated temperature in the urban area will reduce the thermal comfort for the residents inside the city and for occupants inside the building. It will aid the need for air conditioners inside the building and vehicles. The hot air from the condenser unit is ventilated into the same urban area with no natural ventilation again increasing the temperature. These series of issues create a domino effect on socioeconomics of any country.

In conclusion economic development and environment are interrelated. A development vision

without ignoring nature is the only way to mitigate these issues. Innovation in sustainability engineering is the cornerstone for making this vision into reality. Extensive study has been conducted in developing Solar water heaters based on concrete. Avanti et.al., (1996) conducted a study on developing a solar water heater based on concrete, Mikel., et.al.,(2016) developed a Low Temperature District Heating (LTDH), Rangsit.,et.al.,(2011) developed a roof integrated solar concrete panel using PVC pipes as a the coil. Most are developed based on the vision of developing a cheap alternative for replacing expensive solar water heater.

Since the buildings are closely constructed most of the solar radiation hitting the wall area is negligible compared to the roof of the building. Vegetations or plantations and sunshades cover most of the walls of the houses but still the roof is exposed to the solar radiation in the full area for the entire day. This makes the roof slab the victim of solar radiation and since it was made from concrete the heat is absorbed and retained. This retained heat is then transferred to the room during night. The room temperature will rise rapidly because the volume of room is small, and natural ventilation is not available. From here it is confirming that the roof of the building has the key role in absorbing solar radiation. The basic platform for developing is this, because if concrete slabs behave like a thermal reservoir, why cannot it be used to harvest the already available thermal energy? By taking this approach, it is possible to cool the temperature of the roof, and it will mitigate the heat island effect inside the city. The following reduction in temperature inside and outside the building will create a significant impact for the occupants because people will utilize the hot water for their domestic use. This can create a direct impact on the economy and environment because no fuel was burnt to increase the temperature of the water and to reduce the temperature of the building. The present study aims at harvesting the thermal energy from the roof slabs elements of structure. The proposed harvesting technique is expected to have a dual impact.

(i) Harvested thermal energy used as a heating source of water and

(ii) Providing thermal comfort to the interior.

- To study the structural behavior of the proposed precast concrete panel.
- To analyze interior thermal comfort level.

2. METHODOLOGY

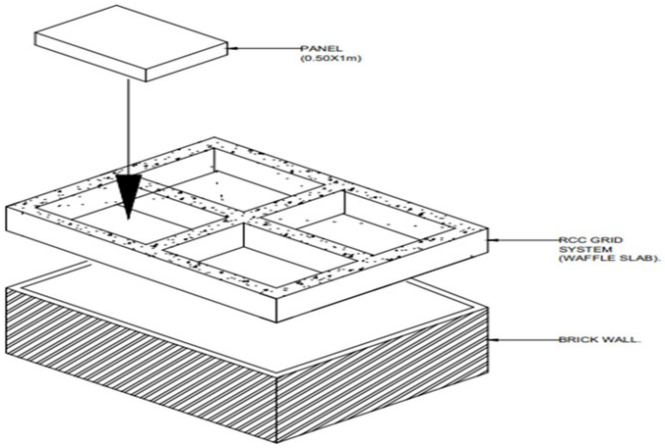


Figure 1: Concept for large scale implementation.

In this study a series of thermal studies and structural studies are performed. It is known that when we place serpentine coil inside the slab there will be a reduction in concrete volume which reduces the performance. To study this reduction in performance and how it affects the temperature output two types of slabs are used. On one slab the serpentine coil is placed on the tension zone and on the other slab the coil is placed on the compression zone. For ease of conducting the study the slab size is scaled down to 0.5 of actual concept. The size of slab is 1m×0.5m. Two rooms of the same size with height of 1m are constructed with an access point. The access points are used to take the internal temperature of the room. Thermal studies are conducted during daytime (9:00am to 5:00pm) on the span of 14 days at 30 minutes interval. Both internal and external temperature of each room are individually monitored and plotted to the graph. The ambient temperature of each day is also monitored. This data can used to analyze the thermal reduction inside the room. The structural study is conducted to study the reduction in the load carrying capacity of the slab. For conducting this study, a total of Three slabs are casted. Two slabs containing coils on tension and

compression zone and one normal slab is cast as specimen for testing. All three slabs are loaded until it fails. The deflection load curve is plotted for each slab. Ultimate load and crack load are marked for each slab.

3.FABRICATION OF SERPENTINE COIL FOR WORING FLUID CIRCULATION

The primary purpose of the H-W-B Equation would be to provide insights into the radiative heat transfer occurring between the absorb plate (made of concrete) and the fluid flowing through the collector. While concrete is not typically considered an ideal material for absorber plates due to its relatively low thermal conductivity compared to metals, it can still absorb and transfer heat through radiation. Understanding the radiative heat transfer using the H-W-B Equation helps to optimize the temperature distribution within the solar collector. By adjusting factors such as the absorber plate temperature and the flow rate of the fluid, it is possible to maximize the efficiency of heat transfer from the absorber plate to the fluid. While the Hottel-Bliss equation can be a useful tool in understanding radiative heat transfer within the collector, a comprehensive design approach for a solar flat plate collector would involve a combination of theoretical modeling, empirical data, and practical engineering considerations.

Table 1: Maximum Efficiency inputs

Variable	Variable detail	Input value
Ul	Heat loss Cf	10
Kp	Thermal conductivity	1.95
Tp	Thickness of slab	0.08
Di	Internal dia. of tube.	0.008
W	Spacing of tubes	0.05
Cp	Specific heat capacity of fluid	5233.75
Do	Outer Dia of pipe	0.09
F	Fin effectiveness equation of the plate	2.16
F'	Rate of energy flowing through the plate to the fluid.	1.92
Fr	The heat removal factor	0.48

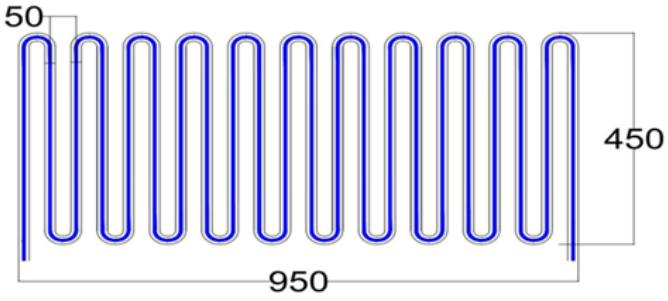


Figure 2: Proposed configuration of coil.

Aluminum possesses relatively high thermal conductivity, though it is slightly lower than that of copper. The thermal conductivity of aluminum typically ranges from about 200 to 250 watts per meter-kelvin (W/m·K) at room temperature. Despite being lower than copper, aluminum's thermal conductivity is still significant, making it a preferred material for heat sinks, automotive radiators, and other heat transfer applications, particularly due to its lightweight nature and corrosion resistance.



Figure 3: Aluminum coil after fabrication.

3.Concrete structural design for solar thermal harvester panel.

Table 2: General details of slab

Length of slab	1m
Breadth of slab	0.5m

Includes the weight of concrete filler over the panel	3 kN/m^2
Live load on the slab	3 kN/m^2
Fck	25 N/mm^2
Fy	500 N/mm^2

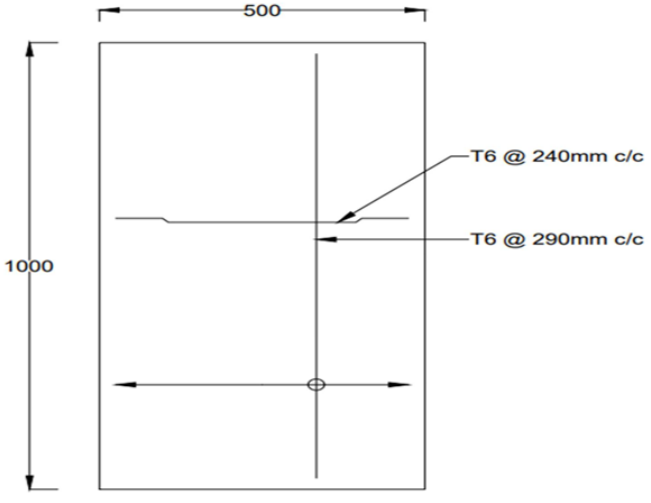


Figure 4: Final Design of slab

4. THERMAL STUDY

Theoretically, the serpentine piping system integrated within the slab is designed to effectively absorb a substantial amount of heat. This mechanism mitigates the transfer of heat into the room through the roof slab, consequently lowering the internal room temperature. This enhancement contributes to heightened thermal comfort for occupants and a consequent reduction in power consumption, whether from air conditioning units or conventional fans. In the context of an ordinary solar flat plate collector (FPC), its performance is contingent upon its ability to consistently attain maximum temperatures over time. However, this performance is subject to variations throughout the year due to fluctuating weather conditions, local climate nuances, and the specific placement of the flat plate collector. Given our focus on developing a dual-purpose FPC, it is imperative to thoroughly comprehend how the system operates both in reducing internal room temperature and achieving optimal temperatures as a water heater.

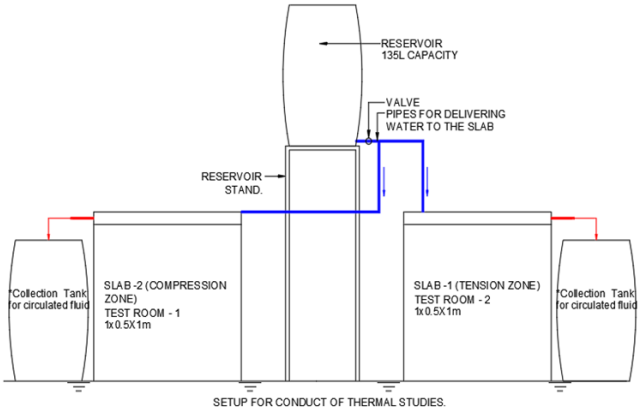


Figure 5: Set up for conduct of thermal studies.

Table 3: 14 days Peak output & average output of water temperature

Day	Peak output water temperature reading of slab 1 (in°C).	Average output water Temperature reading of slab 1 (in°C).	Slab 2 output water Temperature reading of (in°C).	Average output water Temperature reading of (in°C).
1	47.9°C	41.7°C	42.1°C	40.1°C
2	49.1°C	43.1°C	42.1°C	40.2°C
3	47.6°C	41.7°C	42.5°C	40.1°C
4	47.8°C	41.7°C	42.8°C	39.8°C
5	47.6°C	41.7°C	42.5°C	40.1°C
6	49.1°C	43.7°C	45.7°C	42.1°C
7	46.3°C	41.7°C	42.1°C	40.3°C
8	47°C	42°C	40.8°C	39.3°C
9	47°C	42.7°C	40.7°C	39.7°C
10	47°C	41°C	42°C	39.1°C
11	47°C	41°C	42.3°C	40°C
12	48.1°C	41.7°C	42.5°C	40.1°C
13	47°C	42.7°C	42.3°C	40.3°C
14	47°C	42.7°C	42.3°C	40.3°C
Mean Temperature	47.54°C	42.08°C	42.34°C	40.11°C
Standard deviation	0.82°C	0.79°C	1.14°C	0.68°C

By conducting the 14-day thermal study the readings show that the slab can deliver hot water with temperature ranging between 40°C to 49.1°C simultaneously reducing the internal temperature of the

mockup room by around 4°C in some areas. The key area where development is necessary in context of sustainable engineering are reducing the internal & external temperature of the building without the need of extra energy and utilizing the abandoned energy which is aids the heat island effect has to be utilized for the other purposes which reduces the likeliness occurring heat island effect. In our system it only utilizes gravity as the potential for the circulation of the water inside the coil. The demand for energy is rising around the world day by day due to global warming. The implementation of the system not only reduces the room temperature but can harvest heated water from it. Our slab design does not include any other system like glass covering or thermal insulation around the sides to maximize efficiency. It is a simple slab with an embedded pipe inside it. The temperature can be increased into level by increasing the surface area by creating a wave like surface and painting the surface with black color. However, the current strategy enabled us to create the results without these subsystems which makes it an easy to use and durable solar heat harvester which is cheap to mass produce by of the shelf materials and ordinary skilled labor.

5. STRUCTURAL STUDY

This part of the study presents how the coil effect the load carrying capacity of the coil and how much reduction in load carrying capacity of the slab has been declined because of the presence of coil. Because there is a small reduction in the volume of concrete. The relationship between load and deflection of a concrete slab is governed by its material properties, dimensions, and support conditions. Increasing load typically leads to greater deflection due to the slab's elasticity. Test results help assess the slab's structural performance and inform design considerations for real-world applications.

COLLAPSE LOAD OF THE SLAB

$$Mu = Fy \times Ast \times d \times \left(1 - \frac{(0.77 \times fy \times Ast)}{(b \times d \times fck)}\right)$$

$$d = 80\text{-}20 - 6/2$$

$$= 57 \text{ mm}$$

$$Ast = 141.372 \text{ mm}^2$$

$$Fy = 500$$

$$Mu = 500 \times 141.372\left(1 - \frac{(0.77 \times 800 \times 141.372)}{(500 \times 57 \times 29)}\right)$$

$$Mu = 3.76378 \text{ kN.m}$$

$$Mu = \frac{WL}{4}$$

$$3.76378 = \frac{W\,X\,0.9}{4}$$

$$\therefore W = 16.730 \text{ kN}$$

Here it is estimated that the collapse load of the slab is 16.730 kN or 1.6 Tons.

Table 7: Collapse load of the slab

Type of slab	Collapse load kN
Ordinary slab	14.5
Slab having coil at tension zone	14.5
Slab having coil at compression zone	14.5

After the conducting the deflection vs load test and collapse load test it is very clear that the slabs performed very similarly and there is no change in the collapse load. This indicates that the presence of the hollow tube does not create any sort of disturbance to the performance of the slab. This is a promising advantage because it reduces the consumption of concrete by a small amount, but it can perform as same as the ordinary slab. The crack patterns are very similar single line across the sides and bottom of the slab which is expected outcome. In conclusion, structural study, the performance of the slab remained satisfactory, and it is reliable and safe concrete panel which can be used for real-world applications.

6. CONCLUSION.

1. The thermal study has been conducted for 14 days. The average mean temperature of 14 days obtained from Slab-1(Compression zone) is 42.1°C and 40°C from Slab -2 (Tension zone). The standard deviation obtained are 0.79 and 0.68, respectively. The peak temperature of fluid recorded is 49.1°C for Slab-1 and 45.7°C for Slab-2. The mean of peak temperature is 47.54°C and 42.34°C, respectively. The standard deviation of peak temperature is 0.82 for Slab-1 and 1.14 for Slab-2. For an ordinary slab with embedded fluid circulating tube the thermal harvester panel performed satisfyingly. This concludes that the amount of heat gained by circulating fluid can be further increased by providing black surface and thermal insulations on the four sides of the panel and recirculating the fluid using the bell siphon system.
2. The ideal position for absorbing thermal heat is in the compression zone. There is significant gain in heat compared to the tension zone. The fluid circulating tube at compression zone absorbed nearly 20% more heat than the fluid circulating tube attention zone. But the interior temperature of the room remained the same. It is clear that, the ideal place for circulation tube is in the compression zone.
3. The heat which is intended to transfer into the room & environment has been absorbed by the circulating fluid. This system drastically reduced the amount of heat reaching the interior of the room by 1.7 °C to 3°C in peak temperature day and 4°C in ordinary day than the ambient temperature. This nearly 10% reduction in heat than ambient temperature. It is very well known that for a closed room the interior temperature of the room will increase due to the absence of ventilation and limited volume of air in it. From this thermal study it is clear that the interior temperature has been reduced significantly without any need for other appliances or energy.
4. The structural study part is having been focused on how the load bearing capacity of the slab will be affected and how it behaves due to the presence of the 10.25m fluid circulating coil embedded in the slab during loading. For this an ordinary slab and two more slabs each having fluid circulating tubes on different zones, one on tension zone and other one compression zone is casted. Theoretical calculation shows that the collapse load is 1.6 tons for the ordinary slab. During testing all slabs behaved the same and collapsed at 1.45 tons. The maximum deflection was 2.750mm. The theoretically calculated value and collapse load after the test was almost identical. After the structural study it is clear that the presence of the fluid circulating tube does not strengthen nor weaken the load carrying capacity of the Slab panel based solar thermal harvester.

Building the Future: Climate-Resilient Road Design in the Era of Climate Change

Nadhiya F.M., Junior Consultant, TRC-Transportation

As climate change ramps up, infrastructure systems across the globe are facing mounting challenges from extreme weather events. Among these, our road networks—essential lifelines for trade, travel, and emergency responses—are especially at risk. From relentless flooding to scorching heatwaves, these climate pressures jeopardize the safety, functionality, and durability of our roads. In response, civil engineers are stepping up with innovative climate-resilient road design, a strategy aimed at ensuring our roadways can endure the changing climate of tomorrow



Road split apart during flood occurred in 2018

Kerala is at the forefront of integrating climate resilience into its road infrastructure, recognizing the urgent need to adapt to the escalating impacts of climate change. The state's proactive approach encompasses innovative design, advanced materials, and comprehensive planning to safeguard its road networks against extreme weather events such as floods, landslides, and coastal erosion.

Understanding the Need for Climate-Resilient Roads:

Traditional road design has often leaned on historical climate data, operating under the assumption that the future will resemble the past. But with climate variability on the rise, those assumptions are becoming outdated. Roads are now facing increased exposure to:

Flooding and Heavy Rainfall: More intense rainfall and rising sea levels can overwhelm roads, undermining their foundations and disrupting transportation.



Extreme Heat and Heatwaves: Elevated temperatures can soften asphalt, leading to rutting and deformation.

Freeze-Thaw Cycles: In colder regions, fluctuating temperatures can cause cracks and potholes due to freeze-thaw damage.

Storm Surges and Coastal Erosion: Roads located near coastlines are increasingly vulnerable to rising

sea levels and more powerful storms. Climate-resilient Road design takes these emerging risks into account, integrating adaptive strategies and forward-thinking technologies to create roads that stand the test of time.



Key Principles of Climate-Resilient Road Design:

1. Risk and Vulnerability Assessment: To kick off climate-resilient design, it's crucial to grasp the unique risks that a region faces. Engineers dive into climate models, hazard maps, and historical data to pinpoint which road segments are most at risk. With the help of advanced geospatial tools and digital twins of road networks, they can simulate various climate scenarios, offering invaluable insights for effective planning.

2. Material and Structural Innovation: Innovative materials and design techniques are essential for roads to withstand extreme conditions: -

- Modified Asphalt Mixes: Using polymer-modified bitumen enhances resistance to rutting and cracking, especially in high temperatures.
- Permeable Pavements: Porous asphalt and concrete allow water to seep through, which helps minimize surface runoff and flood damage.
- Geosynthetics and Reinforced Embankments: These materials play a key role in stabilizing soils and protecting against erosion during heavy rainfall.
- Cool Pavement Technologies: Lighter-coloured, reflective surfaces help reduce heat absorption, which can lessen heat-related damage.

3. Elevated and Strengthened Drainage Systems: Effective drainage is fundamental to climate resilience. Roads equipped with improved culverts, elevated causeways, and green infrastructure—like bioswales and retention ponds—are better suited to manage heavy rainfall and mitigate flood impacts.

4. Flexible and Adaptive Design Standards: More and more, engineers are embracing performance-based design, which allows for roads to be easily retrofitted or upgraded as climate risks change. This approach may involve modular construction techniques and materials that can be swapped out without the need for extensive reconstruction.

Integrating Nature-Based Solutions:

Nature has a remarkable way of helping us tackle the challenges posed by climate change. By weaving nature-based solutions (NbS) into road design, engineers can tap into the strength of ecosystems to lessen our vulnerabilities.

i. **Vegetated Buffer Zones and Green Corridors:**
By planting trees and greenery along roads, we can soak up excess rainwater, stabilize the soil, and provide some much-needed shade to combat heat.

ii. **Wetland Restoration:**
Bringing wetlands back to life near roadways can naturally filter stormwater and lower the risk of flooding.

iii. **Coastal Protection with Mangroves and Dunes:**
In coastal regions, these natural barriers can absorb wave energy and shield our roads from erosion.

Global Examples of Climate-Resilient Road Projects:

The Netherlands – Room for the River Program Rather than just reinforcing river dikes, Dutch engineers have reimagined road networks and riverbanks to safely handle seasonal flooding, blending

roads with green spaces and water channels.

United States – Florida's Resilient Roads In response to rising sea levels and hurricanes, Florida's transportation authorities are elevating at-risk highways and investing in cutting-edge pavement materials that can withstand saltwater intrusion.

India – Climate-Resilient Rural Roads. The Pradhan Mantri Gram Sadak Yojana (PMGSY) program now includes climate-resilient standards for rural roads, featuring enhanced drainage and flood-proofing in areas prone to cyclones.

Strategic Initiatives for Climate-Resilient Roads in Kerala:

1. **Risk-Informed Infrastructure Planning**
   In January 2024, Kerala's Chief Secretary mandated that all infrastructure projects, including roads, must adhere to risk-informed development principles. This directive requires a detailed checklist assessing natural disaster risks and implementing appropriate safety measures before project clearance.
2. **Advanced Construction Materials and Techniques**
   The Kerala Public Works Department (PWD) is adopting cutting-edge materials and methods to enhance road durability:

- **Ultra-High Performance Fibre Reinforced Concrete (UHPFRC):** Developed in collaboration with IIT Madras and IIT Tirupati, UHPC offers exceptional strength and longevity, suitable for bridges and coastal infrastructure. UHPFRC, a new technology has adopted in KIIFB Project- Thirunavaya - Thavanur Bridge in Malappuram District, as a pilot project.
- **Slag-Based Cement:** Particularly effective in coastal areas, this cement resists chloride-induced corrosion, extending the lifespan of structures exposed to saline environments.
- **Superpave Asphalt Mix:** This advanced bitumen mix enhances road performance, especially in regions experiencing significant temperature fluctuations.

3. **Full Depth Reclamation (FDR) Technology:**
   FDR is being implemented by KIIFB in various districts, including Kollam and Thiruvananthapuram, to rehabilitate existing roads by recycling and stabilizing the entire pavement structure. This method not only improves road strength but also promotes environmental sustainability by reducing the need for new materials



Pulverization of existing pavement layers for implementation of FDR

A stretch from Anayadi to Pallikkal in Pathamthitta District of 5.9km has been selected as Pilot Project for implementation of FDR Technology.



Application of surface or wearing course at Anayadi to Pallikkal Stretch

4. **Climate-Informed Road Maintenance Management System (RMMS):**

Under the Rebuild Kerala Development Program, the PWD established a GIS-based RMMS to assess and manage climate risks across the state's 7,000 km core road network. This system enables proactive maintenance and prioritization of roads most vulnerable to climate-induced hazards.

5. **Integrated Coastal Highway Development:**

The ambitious 625 km Thiruvananthapuram–Kasaragod Coastal Highway project is being developed with climate resilience in mind. The highway will incorporate elevated embankments, reinforced structures, and eco-friendly drainage systems to mitigate the impacts of sea-level rise and coastal erosion.

The Role of Digital Tools and Data:

The transition to climate-resilient roads is driven by digital technology:

- **GIS-Based Climate Modelling:** Geographic Information Systems (GIS) combine climate forecasts, land use, and topography to pinpoint risks.
- **Digital Twins:** These real-time, digital replicas of road infrastructure help us anticipate failures and fine-tune maintenance schedules in the face of extreme weather.
- **IoT-Enabled Sensors:** Sensors embedded in pavements and bridges keep an eye on stress, temperature, and moisture, providing valuable data to proactively tackle climate-related damage.

Addressing Challenges and Oversight:

Despite these advancements, challenges persist. The Kerala High Court recently expressed concern over the collapse of an embankment along the under-construction NH 66 at Kooriyad in Malappuram district. The National Highways Authority of India (NHAI) admitted to construction lapses, highlighting the need for stringent quality control and adherence to resilient design standards.



Aerial view of Kooriyad NH

As climate-resilient road design starts to gain attraction, it's not without its hurdles:

- Funding Gaps: The initial investment for resilient materials and adaptive designs can be steep, but they often lead to savings in the long run.
- Policy and Regulation: It's crucial to update design codes to align with climate projections for broader acceptance.
- Data and Capacity: We need accurate climate data and skilled professionals to customize designs for local risks.

Looking forward, it's essential to weave climate considerations into every phase of road planning, design, and maintenance. By fostering collaboration among governments, engineers, and communities, we can ensure that our roads not only endure but also flourish in a changing climate.

Conclusion:

Paving the Way for a Resilient Future Designing climate-resilient roads is more than just a technical challenge—it's a chance to rethink our approach to building for the future. As communities expand and climate challenges intensify, innovative road engineering practices will be crucial for creating safe, reliable, and sustainable transportation systems.

Our Kerala government commitment to building climate-resilient road infrastructure is evident through its comprehensive planning, adoption of innovative technologies, and integration of sustainability principles. While challenges remain, the state's proactive approach sets a benchmark for other regions facing similar climatic challenges. By merging advanced materials, adaptive designs, nature-based solutions, and digital innovation, we can construct roads that can weather storms and heat—roads that are prepared for the future.

Transforming Coastal Livelihoods: Chethy Fishing Harbour Project Progresses Under KIIFB Funding

Project Overview

Chethy, located in Alappuzha District, was identified as a potential fish landing centre by the Central Institute of Coastal Engineering for Fishery in their Master Plan for the Development of Fishing Harbours and Fish Landing Centres in India. Based on this recommendation, the Government of Kerala decided to provide essential infrastructure to develop a fish landing centre at Chethy. Consequently, the Government of Kerala has taken various steps in the 2018-19 financial years to secured harbour basin enabling to carry out responsible fisheries activities around the year, and to have a Refuge Harbour to provide immediate safe berthing facility during natural calamities like cyclones and act as the base for sea rescue operations.

The objective of this project proposal is to establish a Fishing Harbour at Chethy in Alappuzha District. This initiative is driven by the longstanding demand of local fishermen and stakeholders involved in the fisheries sector and its allied industries. The proposed development seeks to address several critical issues, including:

- Inadequate infrastructure facilities in the fisheries sector at Chethy.
- Absence of responsible and sustainable fishing practices among local fishermen.
- Unharvested fishery resources resulting from insufficient infrastructure.
- Adaptation to evolving trends in fleet design, vessel size, fishing techniques, gear, and catch composition.
- The absence of a safe harbour along the entire coastal stretch of Alappuzha.

The Chethy Fishing Harbour project, with an estimated investment of ₹182 crore, encompasses a comprehensive development plan designed to modernize the fishing infrastructure while preserving the cultural and environmental integrity of the region. Key components of the project include:

- **Breakwaters**: Construction of two breakwaters totalling 1,620 meters to protect the harbour basin from strong sea currents and to ensure safe docking of fishing vessels. It acts as a barrier that absorbs and deflects the energy of incoming waves, thereby creating a calm water area behind it.
- **Wharf and Auction Hall**: The wharf facilitates the efficient unloading of catch, while a spacious auction hall streamlines the sale process, ensuring better prices for fishermen.
- **Dredging and Basin Development**: Dredging and development of the harbour basin to accommodate a larger boat and improve navigability.
- **Supporting Infrastructure**: Internal roads, parking areas, an approach road, gatehouse, and an overhead water tank to support the daily operations and logistics of the harbour.

Significant progress has already been made, with portions of the breakwaters completed. The project is expected to be fully completed by March 2026. The present status of the work is as follows:

North Breakwater	50% completed
South Breakwater	60% completed
Tetrapod Casting	60% completed



Why Chethy Fishing Harbour?

Alappuzha district has a coastal stretch of approximately 82 kilometers but lacks a fully operational fishing harbour along its entire length. The proposed project site at Chethy is strategically located between Thottappally Harbour (40 km south) and Chellanam Harbour (20 km north), making it an ideal location for developing a much-needed fishing harbour to serve the local fishing community. Recognizing this potential, the Government of Kerala, through KIIFB, has initiated the development of Chethy Fishing Harbour—a transformative infrastructure project aimed at empowering the local fishing community, boosting the state's fisheries sector, and ensuring long-term socio-economic benefits.

Chethy was identified by the Central Institute of Coastal Engineering for Fishery (CICEF) as one of the most suitable locations for a fish landing centre in Kerala. Despite having a vibrant community of traditional fishermen, the area has long suffered due to a lack of adequate infrastructure, including safe berthing, hygienic fish handling facilities, and proper storage systems. These deficiencies led to high post-harvest losses, unsafe landing practices, and economic vulnerabilities among local fishermen.

The construction of a modern fishing harbour addresses these critical issues by providing well-planned facilities that meet current and future demands. It ensures safer mooring, better fish handling, and a streamlined value chain from catch to market.

Objectives of the Project

Infrastructure Development: Establish essential facilities such as breakwaters, landing platforms, auction halls, ice plants, chilling rooms, and storage yards.

Fishermen's Welfare: Create a secure and efficient environment for daily fishing activities, thereby enhancing livelihoods and work safety.

Economic Boost: Minimize post-harvest losses and improve the income of the fishermen through better market access and value addition.

Sustainable Fishing: Encourage responsible and sustainable fishing practices with infrastructure that supports scientific fishery management.

Impact on Local Economy and Community

Once completed, the Chethy Fishing Harbour is expected to directly benefit over 2,500 active fishermen and more than 5,000 individuals indirectly as learned from the available reports, providing them with steady employment, improved living standards, and better integration into the formal economy. The harbour will act as a hub for economic activity, promoting the development of secondary industries like ice production, fish processing, transport, and exports.

A Model for Coastal Development

The project stands as a model for coastal infrastructure development, integrating environmental considerations with economic needs. With KIIFB's financial backing and the technical oversight of expert agencies, Chethy is on its path to becoming a sustainable, modern, and people-centric fishing harbour. This initiative is not just a construction project—it is a vision to revitalize Kerala's fisheries sector, empower its coastal population, and ensure long-term resilience in marine livelihoods.

Once completed, the Chethy Fishing Harbour will benefit the entire fishing community and associated

industries in the region. The project is financially viable, based on the projected increase in fish production and the overall fishery potential of the area, and will significantly contribute to the socio-economic development of the Alappuzha coastal region.

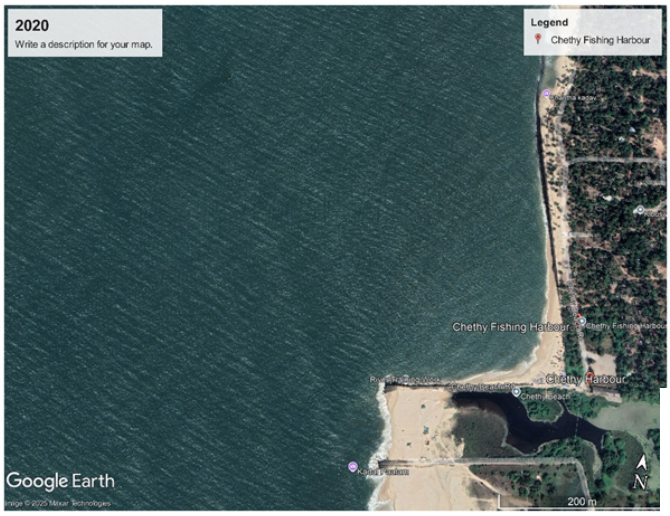
Environmental Considerations

Recognizing the ecological sensitivity of coastal regions, the project incorporates measures to mitigate environmental impact:

- **Sustainable Design**: The harbour's design ensures minimal disruption to the natural coastal processes and marine ecosystems.
- **Waste Management**: Facilities for proper disposal and treatment of waste are integrated to prevent pollution and maintain the cleanliness of the harbour and surrounding areas.

Conclusion

The Chethy Fishing Harbour represents a crucial milestone in strengthening the coastal infrastructure of Alappuzha. Identified long ago by CICEF as a potential fish landing centre, the area suffered from poor facilities and unsafe working conditions for fishermen. This development will directly benefit over 2,500 fishermen and thousands more in allied sectors by providing safe berthing, hygienic handling spaces, and essential support infrastructure. Positioned strategically between two major harbours, Chethy now fills a critical gap along Kerala's 82 km coastline. Ultimately, the harbour will uplift the local economy, ensure sustainable fishing, and improve the livelihoods of the coastal community.



Chethy Fishing Harbour in 2020: A Glimpse Before Transformation



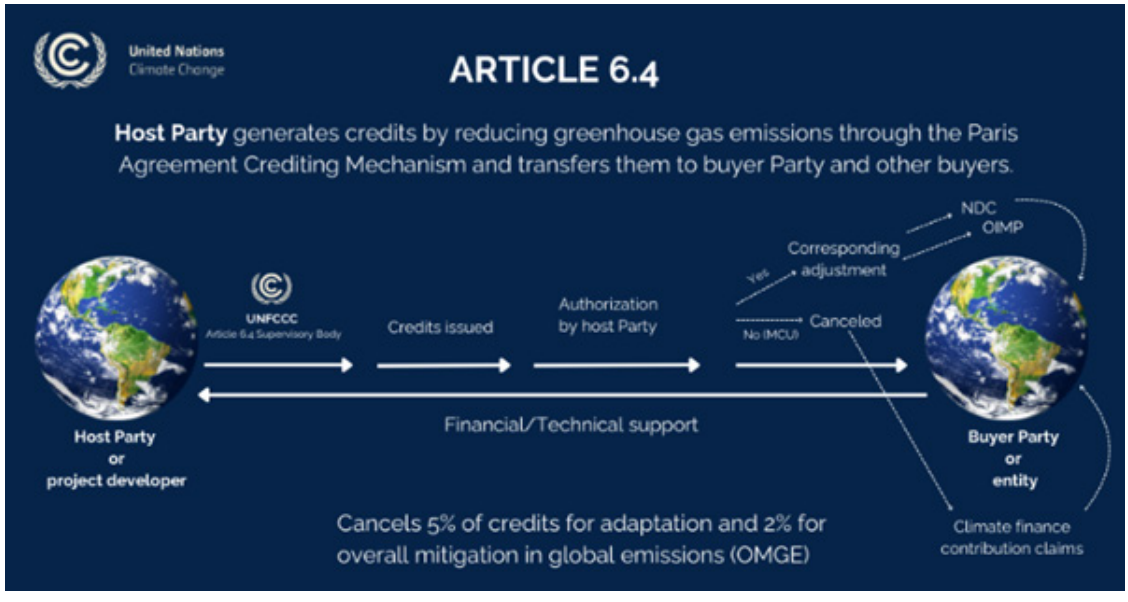
Chethy Fishing Harbour in 2025 – Progressing Steadily Through Construction Phase

INDIA'S CARBON TRADING LANDSCAPE: MECHANISMS AND FUTURE PROSPECTS

Peggy Nepram, Sustainability Expert – Social, ESG

Introduction

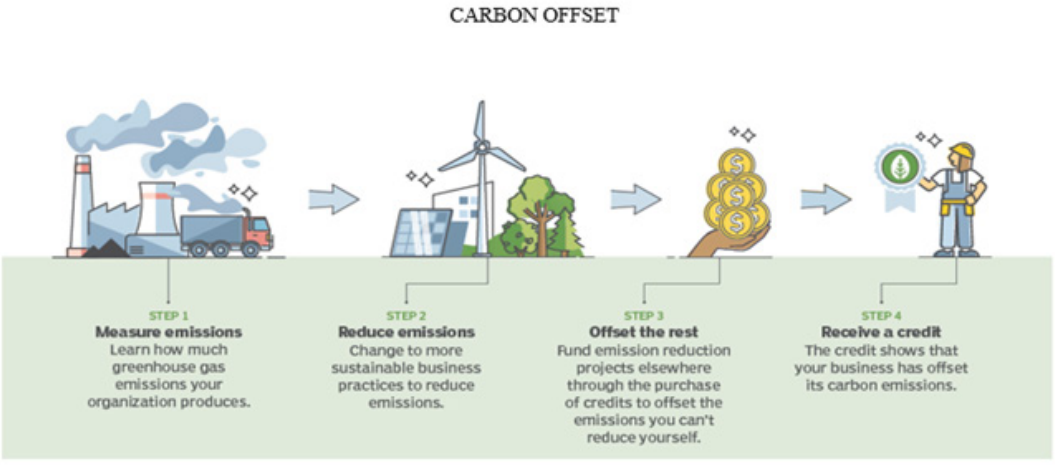
Human activities are the main driver of climate change. Burning fossil fuels emit greenhouse gases that trap heat like a blanket around the Earth, raising temperatures. Key greenhouse gases include carbon dioxide and methane. Major emitting sectors are energy, industry, transport, buildings, agriculture, and land use. The Paris Agreement, adopted at COP21 in December 2015, is a global treaty aiming to limit warming to well below 2°C, with efforts to cap it at 1.5°C above pre-industrial levels. Article 6 of the Agreement promotes international cooperation and financial support for developing countries. Article 6.4 establishes a UNFCCC framework to trade carbon credits.



Source: UN Climate change

Carbon credit

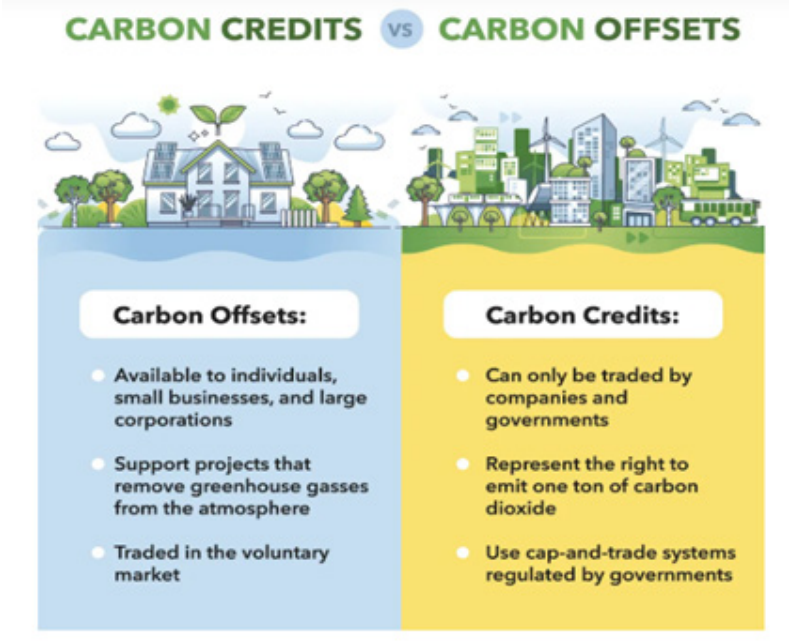
The carbon crediting mechanism under the Paris Agreement helps countries enhance climate ambition and implement national plans cost-effectively. It promotes verifiable emission reductions, attracts funding, and enables international cooperation. For instance, a company can reduce emissions and sell the credited reductions to another company abroad, which can use them to meet its own targets. The mechanism also supports climate finance for developing nations, with a portion of proceeds allocated to adaptation efforts.



Carbon credit and carbon offsets

Carbon credit and carbon offsets are the two mechanisms available in the carbon market. A carbon credit is a unit of measurement that represents one metric ton of CO^2 or the equivalent of another greenhouse gas (GHG) that has either not been emitted into the atmosphere or has been permanently captured and stored. This unit accounts not only for CO^2 but also for other greenhouse gases, which are converted into an equivalent amount of CO^2 based on their Global Warming Potential (GWP). For example, one ton of methane, with a GWP of 28, is equivalent to 28 tons of CO^2, demonstrating how different gases are factored into the calculation of carbon credits. This mechanism quantifies GHG reductions achieved by specific projects, historically located in regions where such reductions are particularly necessary or effective. Carbon credits are serialized, issued, tracked, and retired via electronic registries, ensuring their traceability and integrity.

Carbon offsets allows an entity to compensate for the carbon dioxide and other greenhouse gas emissions produced by reducing or removing emissions somewhere else. It is reduction, avoidance, or removal of greenhouse gas emissions in a sector not subject to an emissions cap.



While carbon offsets and carbon credits serve the same purpose of reducing GHG emissions, they have different implications. Carbon credits are typically associated with regulatory programs where companies adhere to a cap-and-trade system, whereas carbon offsets are voluntary initiatives that individuals and companies can participate based on their environmental commitments. The purchase of carbon credits signals a long-term commitment to reducing GHG emissions, while carbon offsets allow businesses and individuals to mitigate their carbon footprint in the short term.

Global carbon market: European Union Emissions Trading System (EU ETS)

The EU ETS is based on a "cap and trade" principle. The cap refers to the limit set on the total amount of GHG that can be emitted by installations and operators covered under the scope of the system. This cap is reduced annually in line with the EU's climate target, ensuring that overall EU emissions decrease over time. The EU ETS cap is expressed in emission allowances with one allowance giving right to emit one tonne of CO2 eq (i.e., carbon dioxide equivalent). Allowances are sold in auctions and may be traded. As the cap decreases, so does the supply of allowances to the EU carbon market. Under the system, companies must monitor and report their emissions on a yearly basis and surrender enough allowances to fully account for their annual emissions. If these requirements are not met, heavy fines are imposed. While allowances are predominantly sold in auctions, companies receive some allowances for free. Companies may also trade allowances among themselves as needed. If an installation or operator reduces emissions, the company can either sell the spare allowances and/or keep them to use in the future. All these operations are recorded in the Registry. The price of allowances is determined by the EU carbon market, which is subject to a robust set of oversight rules.

Carbon market in India

India is developing a robust National Framework for the Indian Carbon Market (ICM) through a national carbon credit electronic platform. This aims to support entities undertaking GHG emission reduction projects by pricing their decarbonization efforts. The framework includes two key mechanisms: a compliance mechanism targeting emissions from energy and industry sectors, and an offset mechanism to incentivize voluntary GHG reductions from non-regulated entities.

To enable this, the Energy Conservation (Amendment) Act, 2022 empowers the Central Government to specify a Carbon Trading Scheme and authorize designated agencies to issue carbon credit certificates, each representing one tonne of CO_2 equivalent reduction. Under this, the Carbon Credit Trading Scheme (CCTS) for the compliance market was notified.

A National Steering Committee for Indian Carbon Market (NSCICM), chaired by the Secretary of the Ministry of Power and co-chaired by the Secretary of MoEFCC, oversees ICM. The Bureau of Energy Efficiency (BEE) serves as the scheme administrator, responsible for setting targets, issuing certificates, developing market stability mechanisms, accrediting verification agencies, and maintaining a secure database.

For the offset mechanism, eligible projects can apply for carbon credit certificates following procedures set by BEE based on NSCICM recommendations. These projects follow a defined cycle before credit issuance. Offset sectors will be included in phases:

- Phase I: energy, industry, agriculture, waste, forestry, transport
- Phase II: fugitive emissions, construction, solvent use, carbon capture.

Greenhouse Gas Emission Intensity Targets, 2025

On April 16, 2025, the Ministry of Environment, Forest and Climate Change (MoEFCC) released the draft Greenhouse Gas Emission Intensity Target Rules, 2025, as part of the Carbon Credit Trading Scheme, 2023 (CCTS). This scheme aims to reduce greenhouse gas emissions by setting emission intensity targets for specific sectors (industries, agricul-

ture and horticulture) and allowing trading of carbon credits. Entities that fail to meet their emission targets can purchase carbon credits to comply with the scheme.

The draft rules are part of India's wider aim of reducing greenhouse gas emissions across many industries, helping it to achieve its Paris Agreement 2015 Nationally Determined Contributions (NDC). The Greenhouse Gas Emissions Target (GEI) Rules have two main objectives. The first is to achieve the NDCs by reducing GEI through the reduction or removal of greenhouse gas emissions. The second is to promote sustainable, cutting-edge technologies within high-emission industries to meet concerns such as climate change. The Bureau of Energy Efficiency (BEE) will determine the GEI targets for entities in industries such as aluminium, cement and paper which come under the industries sector that are required to meet assigned emission intensity targets. Each entity will have to meet its targets for a defined compliance year. The baseline and target values are set out in the schedule to the rules.

The GEI targets are set for fiscal years 2025-26 and 2026-27, using each entity's 2023-24 production levels as the baseline. For example, Vedanta Limited (aluminium industry) reported a production volume of 1,238,336 tonnes of aluminium in 2023-24. Its baseline emissions intensity was calculated at 13.4927 tCO2 equivalent. Under the new targets, Vedanta must reduce this figure to 13.2260 tCO2 equivalent by 2025-26 and further to 12.8259 tCO2 equivalent by 2026-27. The projects in the list from the State of Kerala include two companies – Malabar Cement Limited, Palakkad and Travancore Cochin Chemicals Limited, Ernakulam.

Should entities fail to meet these GEI targets, they may purchase carbon credits from the Indian Carbon Market (ICM) portal. Such certificates can be banked and used in future compliance periods. Relevant data and documents must be submitted through the ICM portal within defined time limits. Entities that exceed their targets by reducing emissions to below the required level will earn carbon credits, which they can trade in the market. Entities that fail to meet their targets can remain compliant by purchasing carbon credits from others. Entities that fail to comply must pay environmental compensation (EC) within 90 days from the date of imposition. The Central Pollution Control Board (CPCB) may impose EC equal to twice the average price at which carbon credit certificates are traded during the trading cycle of that compliance year. The amounts collected through environmental compensation will be maintained in a separate account and used for promoting the CCTS, following recommendations from the national steering committee and approved by the government.

Way forward

The carbon market initiatives of India, align with the growing global momentum towards carbon trading, marking a pivotal shift toward a sustainable, low-carbon economy. By prioritizing transparency, integrity, and quality in carbon credit generation, these markets can effectively contribute to climate change mitigation while unlocking new avenues for economic growth and innovation. The GEI Target Rules signal India's commitment to implementing a domestic framework quantifying emissions across material sectors. The rules are expected to drive the adoption of sustainable technologies and promote low-carbon growth across the industrial landscape. Nevertheless, the rules are an important step towards a compliant carbon market.

In this context, the Kerala Infrastructure Investment Fund Board (KIIFB) has taken significant strides in aligning its infrastructure investments with sustainability goals. Its green initiatives in the building sector have already resulted in an estimated reduction of 80,000 tonnes of CO_2 equivalent emissions per year, reflecting its proactive role in climate action. Consultancies related with carbon audit and trading is also a prospective field for consideration by KIIFCON.

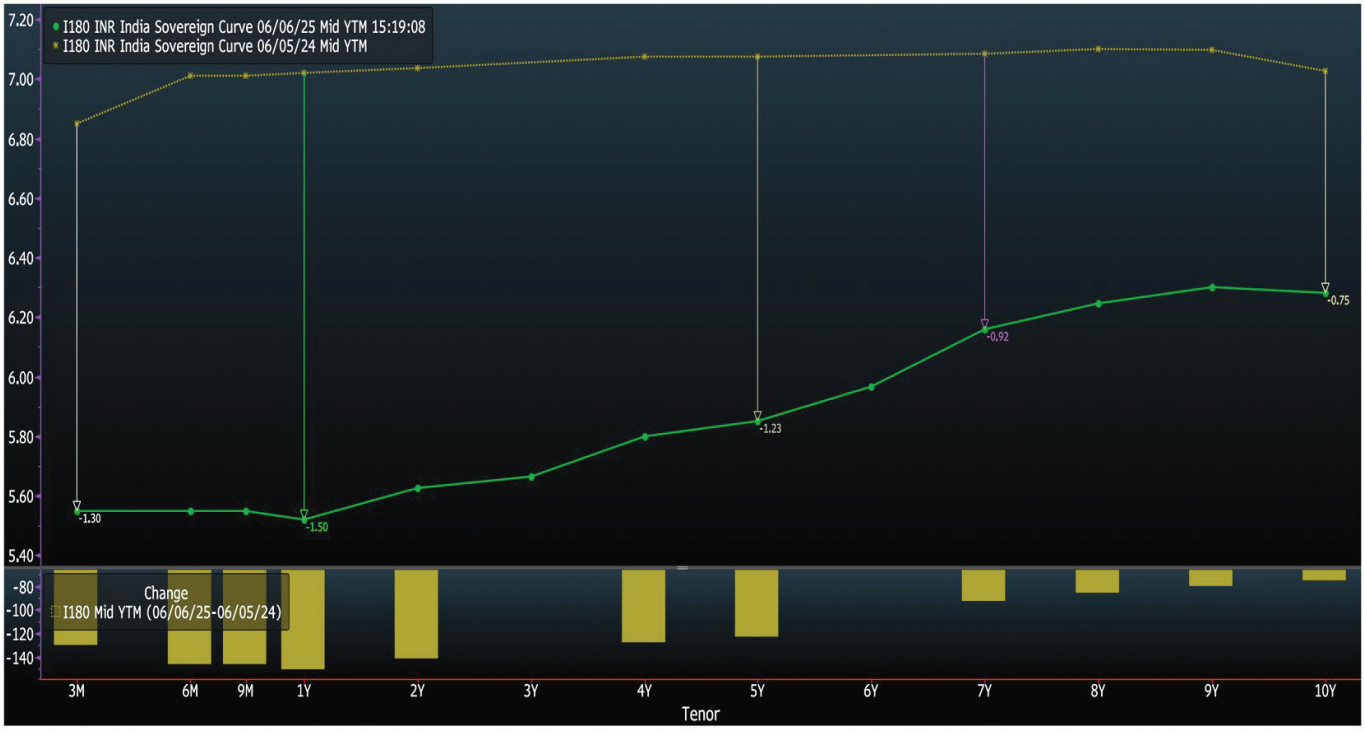
With ongoing efforts to integrate sustainability measures into the power, building, and road sectors, KIIFB is strategically positioned to generate additional verified carbon credits shortly. This not only reinforces its commitment to environmental stewardship and supports the net-zero emission targets of India and Kerala but also opens up the opportunity to leverage carbon trading mechanisms under the Paris Agreement to access climate finance and incentivize further green investments.

Economy & Market Watch

Ajosh Krishnakumar,
General Manager, Finance & Administration

In this edition of Economy & Market Watch, we do a study on India Sovereign yield curve to analyse how the yield curve has evolved in the last 12 months.

The following chart depicts the India Sovereign yield curve on 5th June 2024 and the yield curve dated 6th June 2025.



TAs may be seen from the above chart, there has been a significant downward shift in the India Sovereign yield curve, in the last 12 months. During the 12-month period, the yields for India Sovereign bonds of 3M to 10 Y tenors decreased between ~75 to ~150 bps.

The above chart also indicates a significant steepening of the India Sovereign yield curve since June 2024 with the spread in yields between 3 M and 10 Y tenors increasing from ~18 bps as on 5th June 2024 to ~72 bps as on 6th June 2025.

Additionally, a slight inversion could be seen in the current sovereign yield curve between tenors 9M - 1Y and 9Y – 10Y.

Resolution of Monetary Policy Committee (MPC) in June 2025:

In the 55th meeting of Monetary Policy Committee (MPC) held in June 2025 (4th to 6th of June) under the chairmanship of Shri Sanjay Malhotra, Governor RBI, MPC decided to reduce the policy repo rate under the Liquidity Adjustment Facility (LAF) by 50 basis points to 5.50% with immediate effect. Accordingly, the MPC had reduced the policy repo rate cumulatively by 100 bps since beginning of Feb 2025. This decision, as per the MPC, is in consonance with the objective of achieving the medium-term target for consumer price index (CPI) inflation of 4 per cent within a band of +/- 2 per cent, while supporting growth.

In terms of inflation outlook, assuming a normal monsoon, June MPC projected CPI inflation for FY 2025-26 at 3.7 per cent, with Q1 FY 26 at 2.9 per cent, Q2 FY 26 at 3.4 per cent, Q3 FY 26 at 3.9 per cent and Q4 FY 26 at 4.4 per cent, with risks evenly balanced.

On domestic economic growth outlook, June MPC projected the real GDP growth for 2025-26 at 6.5 per cent (YoY) with Q1:2025-26 at 6.5 per cent, Q2:2025-26 at 6.7 per cent and Q3: 2025-26 at 6.6 per cent and Q4: 2025-26 at 6.3 per cent, with risks evenly balanced.

Source: RBI, Bloomberg



Tender Update - May 2025

Sl. No.	SPV	Sector	Work Description	Tender Value
1	KRFB	PWD	KIIFB-KIIFB 2025-2026 Premonsoon works-Premonsoon works to Mannarkkad Chinnathadakam road km 8/000 to 52/362 General Civil Work	₹ 4,23,712.00
2	KWA	WRD	KIIFB Parappanpoyil karakkunnath road Deposit work	₹ 43,80,903.00
3	KWA	WRD	KIIFB-TRAN2-WRD005-126- Replacement of transmission mains	"1,88,73,397
4	KRFB	PWD	KIIFB-Improvements to Pazhakutty Mangalapuaram Road in Thiruvananthapuaram District-Reach 1- CH 0/000 to CH 7/020- Balance work Part TS.	₹ 10,95,74,832.00
5	KRFB	PWD	KIIFB-Urgent Rectification Work in Airport Road 1 Thalassery-Koduvally- Mambaram-Anjarakkandy Mattannur Road Ch 1/800 to 11/300 General Civil Work	₹ 12,69,245.00
6	KRFB	PWD	KIIFB-Hill Highway- Reconstruction of Kallikkadu Bridge across NIP Canal and Construction of Kallikkadu Mukundara Bridge across Neyyar River- General Civil Work	₹ 5,09,35,167.00
7	KSCADC	FSH	KIIFB- FSH002-01 lmproving Educational Infrastructure in selected schools of the coast of Kerala - Educational Infrastructure Works at Thiruvananthapuram District- GLPS Varakala Tvpm-Balance Work	₹ 40,96,450.00
8	KSCADC	FSH	KIIFB- FSH003-11 Strengthening of the Fish Marketing Infrastructure in Five Districts of the State- Nayarambalam Fish Market in Ernakulam District Civil, Electrical and Fire Fighting works	₹ 1,22,61,682.00
9	KSCADC	FSH	KIIFB FSH002-05 Improving Educational Infrastructure in selected schools of the coast of Kerala- Educational Infrastructure works at Alappuzha District Phase 1 GUPS Karthikapally GHSS Veeyapuram-Electrification(Re-Tender2)	₹ 10,34,465.00

10	KWA	WRD	KIIFB-TRAN2 - WRD005-126-Replacement of transmission mains in Muvattupuzha Circle-Project-3-UWSS to Piravom-Replacement of 350 mm AC gravity main from Kakkad TP to Piravom Hospital Junction-Laying 350 mm Dl K9pipe-Pipeline Work-1	₹ 1,88,73,397.00
11	SKF	SYA	KIIFB - Construction of C.K. Omkaranadhan Indoor Stadium at Kalpetta, Wayanad - Maple Flooring	"₹ 1,29,06,501
12	IMPACT	LSGD	Modern Gas Cremetorium in Kallliasseri GP	NA
13	IMPACT	LSGD	Modern Gas Cremetorium in Thuvvur GP	NA
14	IMPACT	LSGD	Modern Gas Cremetorium in Vallathol Nagar GP	NA
15	IMPACT	LSGD	Construction of Gas Crematorium in Haripad Municipality	NA
16	IMPACT	LSGD	Modern Gas Cremetorium in Panangad GP	NA
17	IMPACT	LSGD	Modern Gas Cremetorium in Moothedam GP	NA
18	KRFB	PWD	KIIFB-Improvements to Pazhakutty Mangalapuaram Road in Thiruvananthapuaram District-Reach 1- CH 0/000 to CH 7/020- Balance work Part TS.	₹ 10,95,74,832.00
19	KRFB	PWD	KIIFB-2024-25 Aluva Munnar Road-DBM Patch and BC Overlay From Ch.7/600 to Ch.11/995-General Civil Work	₹ 3,21,22,717.00
20	KSCADC	FSH	KIIFB FSH002-05 Improving Educational Infrastructure in selected schools of the coast of Kerala- Educational Infrastructure works at Alappuzha District Phase 1 GUPS Karthikapally GHSS Veeyapuram-Electrification(Re-Tender)	₹ 10,34,465.00

21	KSITIL	HED	Augmentation of infrastructural facilities at Sree Neelakanta Govt. Sanskrit College, Pattambi	₹ 7,24,25,965.00
22	KRFB	PWD	KIIFB-Hill Highway- Reconstruction of Kallikkadu Bridge across NIP Canal and Construction of Kallikkadu Mukundara Bridge across Ney-yar River- General Civil Work	₹ 5,09,35,167.00
23	KSCADC	FSH	KllFB-FSH003-06 -Strengthening of Fish marketing Infrastructure in Trivandrum, Kollam, and Alappuzha districts Phase-2- Thamarakulam Fish Market, Alappuzha District Civil and Electrical works(Re-Tender)	₹ 1,49,40,140.00
24	KSITIL	HED	Augmentation of infrastructural facilities at Sree Neelakanta Govt. Sanskrit College, Pattambi	₹ 7,24,25,965.00
25	KWA	WRD	KIIFBLaying of 500mm DI K9 pipeline to interconnect 33.5LL OHSR in Valiyakunnu Attingal to 400mm DI Pipeline in Attingal	₹ 2,53,04,611.00
26	KITCO	HED	Augmentation of Infrastructure Facilities at Government Arts and Science College Thazhava	₹ 15,84,58,370.00
27	SKF	SYA	KIIFB - Construction of Phase II of Vadakara Indoor Stadium - Re-tender	₹ 3,70,19,469.00
28	WAPCOS	HFW	Implementation of Extension of ramp and other infrastructural facili-ties for geriatric ward, GH Changanaserry	₹ 41,37,685.00
29	KILA	GED	Development of GMUPS Cheerankadappuram, Malappuram - Con-struction of new building -Composite Work	₹ 1,35,54,705.00
30	KILA	GED	KIIFB KILA 1c r GHSS Vazhamuttom(School code 43069) Nemom LAC Vertical expansion of existing building Composite Work	₹ 1,09,93,191.00
31	KILA	GED	KIIFB KILA 1cr GUPS Chavara South(School code 41339)Chavara LAC Auditorium block Composite Work	₹ 55,35,009.00

32	KILA	GED	KIIFB KILA KIIFB 1cr Project GHSS Vakkom(School code 42052) Attingal LAC Construction of the new building Composite Work	₹ 1,08,66,062.00
33	KRFB	PWD	KIIFB-2024-25 Aluva Munnar Road-DBM Patch and BC Overlay From Ch.7/600 to Ch.11/995-General Civil Work	₹ 3,21,22,717.00
34	KSITIL	HED	Augmentation of infrastructure facilities at Government Engineering College, Thrissur	₹ 9,55,24,832.00
35	KWA	WRD	KIIFB--Replacement of transmission mains in Muvattupuzha -Project-3-UWSS to Piravom-Replacement of 350 mm AC gravity main from Kakkad TP to Piravom Hospital Junction	₹ 1,88,73,397.00



Fund Mobilization Status	
Particulars	**Amount (₹ Cr.)**
Contribution from Government of Kerala	22,113
Fund mobilized from financial market	32,472
Total	**54,585**

** Provisional figure as on 31-03-2025*

PRAVASI Chitty Statistics as of 31ST MAY 2025

Total number of customers	220951
Total number of subscribers	63839
Total amount collected	INR 5294.68 Cr
KIIFB Deposit bond subscribed	INR 965.00 Cr
KIIFB Security bond subscribed	INR 243.236 Cr

PRAVASI Dividend Scheme

Total number of registrations	52472
Total no. of depositors	4233
Total amount deposited	INR 331.05 Cr

KIIFCON

Designing the Future...

(A 100% Subsidiary of KIIFB)

Our Key Service Areas

1. Consulting & Advisory Services
2. Environment Services
3. Design & Engineering
4. Project & Contract Management
5. Geographic Information System
6. Quality Management

KIIFCON Pvt. Ltd,
7th Floor, Felicity Square, Statue,
M.G. Road, Thiruvananthapuram,
Kerala- 695001

0471-2780900

kiifcon@kiifb.org
bd@kiifcon.com

www.kiifcon.com

Printed and Published on 01/06/2025, by the Chief Executive Officer for KIIFB, Felicity Square, 2nd Floor, Opp. AG's Office, M G Road, Thiruvananthapuram 695 001 Tel: +91 471 278 0900 financeadmin@kiifb.org, www.kiifb.org