

T. P. Kuttiammu: How an Irrigation Engineer Shaped Our Present

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Abstract: This biography is an attempt to document the life of an engineer, T.P. Kuttiammu who is predominantly known for his role in envisioning medium and major irrigation projects, and uncompromising community oriented work among Muslims in Kerala in the late 1950s and 1960s. Based on archival documents, biographies, newspaper reports, and interviews this report explores the way in which the history of things he built- things such as irrigation dams, canals, and mosques-unfolds the life of one of the first Muslim engineering graduates in Kerala.

I. Introduction

The central aim of this report is to document the professional life of T. P. Kuttiammu during the late 1950s and 1960s in Kerala. Kuttiammu Sahib, as he is fondly remembered, worked as a chief engineer of Kerala state for about twelve years, from 1956 to 1967. The life of a middle class Muslim figure like him becomes pertinent to observe how individuals viewed modern Kerala as an entity while they strived for voicing the concerns of a rather marginalised minority like Muslims. Moreover, one can locate his intellectual life in the broader picture of socio-religious reforms among Muslims of Kerala. His predecessors were Muslim leaders who led the organisations such as the Kerala Nadvatul Mujahideen (KNM), and those who forefronted the reform in the realm of matrilineal kinship, and traditional religious practices.¹ He is also considered as one of the leaders of the Indian Union Muslim League (IUML), a political party that represented the concerns of Muslims in the public sphere of Kerala.² Thus, this report

¹ In the past, Islam spread peacefully along the Indian Ocean coast making Muslims a considerable minority in Kerala. Just like other communities, Muslims imagined a community identity in the colonial era. However, Mappilas as a community is heterogeneous involving various castes; and those who are lowest in the social hierarchy such as Pyslans (fisherfolk), Ossans, etc. are mostly unrepresented in mainstream politics. Also see LRS Lakshmi, *Muslims of Kerala: A different perspective* (New Delhi: Foundation Books, 2012).

² Leaders of the IUML such as K.M. Seethi Sahib, Muhammed Islamail Sahib, Uppi Sahib, Pokker Sahib, K.M. Moulavi, M.K. Haji and Abdurrahiman Bafaki Thangal maintained a relationship with Kuttiammu. C.T. Basheer, *T.P.Kuttyammu Sahib* (Calicut University: Grace Books, 2021), 49-51.

attempts to provide a detailed biography of Kuttiammu who expanded modernity among Muslims who have been very orthodox and fairly backward. On the other hand, his official pursuits planned improvements in agriculture and engaged with issues such as ethics in the secular realm in which modern Kerala was imagined in post-independent India.³

Thaitotattu Parmabatukandi Kuttiammu (20-7-1911 to 12-07-1987)'s professional life demonstrates how Nehruvian ideas of building a modern India by constructing dams and irrigation projects under various Five Year Plans (FYPs) shaped his career.⁴ Large dams and irrigation projects came under criticism in the later years for affecting the environment and causing displacement. Yet, they came into existence due to the nationalist rhetoric of progress in post-independent India.⁵

Kuttiammu had mentors like Kanuri Lakshman Rao, an engineer who later became a politician and the Minister for Irrigation and Electricity in 1963, as the latter taught the former during his under-graduation.⁶ Kuttiammu came to Kerala as a special chief engineer on deputation from Madras in 1956. He once wrote that after the formation of Kerala he got a 'great opportunity' for working in his own state 'in a most responsible position'. He was a constant presence behind the process of building modern Kerala which had very few irrigation projects when it was formed. In a letter written on 19 June 1957 to the chief secretary to the government, Kerala, Kuttiammu wrote that he found plenty of scope for the development of irrigation and allied plans and thus for utilising his specialised knowledge in irrigation research, design, construction, and operation.⁷

Moreover, the vibrant public sphere of Thiruvananthapuram city, where he had built a house, '*Nafeesath*' (precious), seems to have shaped his taste for politics, scientific temperament, and social work. 'If Kuttiammu was not an engineer he would have become a public figure', recalls Kamaluddin who as a student activist engaged with Kuttiammu on many occasions.⁸

³ The imagination of modern Kerala has its limitations such as the low status of women, the marginalisation of Dalits, and omission of Muslims from the mainstream.

⁴ Kathleen D. Morrison, "Dharmic Projects, Imperial Reservoirs, and New Temples of India: An Historical Perspective on Dams in India," *Conservation & Society* 8, No. 3 (2010), 182-195.

⁵ Morrison, "Dharmic Projects," 189.

⁶ Interview with Dr. Auswaf Ahsan, on 24,08,2021, Kozhikode.

⁷ Bundle number 9, file number GO (MS) 274/1958/PWD, DSA.

⁸ Interview with Kamaludeen 23-12-2020 held at Thiruvananthapuram.

Kuttiammu had fairly good public speaking and writing skills. Many remember Kuttiammu guiding them on the activities of the Muslim Students Association (MSA) in the city. He was very mature and patient while dealing with people. He excelled in various fields such as technology, politics, journalism, religion, and education.⁹ For instance, he was the syndicate member at the University of Calicut (UC), and also held charge of construction in the UC campus with the power of a chief engineer.¹⁰ He also took part in the establishment of many educational institutions in Kerala. All in all, his activities fitted well in his broader passionate strive for the upliftment of Muslims in India by way of education.¹¹

Kuttiammu's greatness lies in the fact that he was an excellent irrigation engineer. This is notable since he received his entire education in India though he had direct encounter with colonial modernity as his father was a government servant. Moreover, he was very honest, and pious. During the last years of his life he got the opportunity to work in more intellectually oriented jobs such as being the editor of *Chandrika* (the crescent), the mouthpiece of IUML, a Muslim identity based political party in Kerala, from 1971 to 1974. He wrote a column titled *Chitariya chintakal* (scattered thoughts) in the newspaper.¹² He was a voracious reader. He lent books to many people and sometimes even gifted his books to others. He was always keen on the promotion of Muslim education and in building libraries.

Kuttiammu represented an ideal Muslim man who believed in the importance of scientific temperament. He even started a magazine called *Sastravijaram* (scientific thought) which was published for a short while before his death.¹³ He argued that to comprehend the pertinence of

⁹ Some of his writings show that Kuttiammu was a keen observer of the activities of the Muslim Educational Society (MES), a trust prominent in the education sector in Kerala, especially regarding school education. He also designed various buildings of the Thirurangadi Orphanage in Malappuram. Basheer, *T.P.Kuttyammu Sahib*, 122-131; 137-145; 153-160.

¹⁰ University Employs Kuttiammu Sahib, *Malayala Manorama*, 30 June 1970, Kottayam.

¹¹ Recently, the Sachar committee emphasised the low achievements of education and employment among Kerala Muslims too.

¹² In a column written in *Chandrika* newspaper on 12 May 1972, Kuttiammu opposed many traditional devotional practices related to the ancestors and holy men. He viewed that "worship of graves (*kabar*), religious festivities invoking the holiness of the dead (*kodikuttu*), ritual processions (*chandanakudam*), and giving offerings (*vazhipadukal*)" were idolatry (*shirk*), or rituals leading to idolatry. He observed that people based most of the tombs (*maqams*), and commemoration festivals around them on those holy men who lack satisfactory historical credibility. Most of these festivals, according to him, were conducted for making easy money. See Basheer, *T.P.Kuttyammu Sahib*, 176. These opinions can be understood as an influence of protestantisation of Islam given prominence by the Wahabi movement.

¹³ Basheer, *T.P.Kuttyammu Sahib*, 81.

science and to grow scientific temperament one has to admit the importance science has, directly and indirectly, in the minds of people. According to him, an open mind was the product of continuous scientific exploration, cooperation with fellow scientists, and perennial quest for practicing scientific knowledge in life. He thought that those who study science seriously would implement scientific ethos in their life. In brief, he never found any contradiction between modern science and Islam; and rather found a symbiotic relationship between them. Without further delay, let me lay bare the central concerns of this biography.

II. Biography of an Irrigation Engineer

Most of the biographies are written about people who are politicians, businessmen, literary figures, scientists, and learned persons. The micro power dynamics implicate that men have an advantage over women to be more successful in India. Moreover, most of the biographies denote contours of a community in which an individual is a part of.¹⁴ While many have written biographies in Kerala, biography of a technocrat from a minority community, despite all the limitations, is relevant to fill the gap in the cultural sphere. Similarly, biographies of engineers are common in the west but rare in India. Beyond doubt, we should strive to include the history of materials also such as bridges, mosques, and irrigation projects as they have a social life. It is in the context of efforts by individuals to experiment with modern technology and to embrace modernity at large (eg. M.S. Swaminathan, and Verghese Kurien)¹⁵, Kuttiammu as a historical figure becomes relevant. Moreover, Kuttiammu was an important person in the public life of Kerala in the second half of the twentieth century. He contributed heavily to the economic development of Kerala and to social reform among Muslims.¹⁶

¹⁴ See Jose Abraham, *Islamic Reform and Colonial Discourse on Modernity in India: Socio-political and Religious Thought of Vakkom Moulavi* (New York: Palgrave Macmillan, 2014). The social reformists such as Makhdi Thangal, and Vakkom Abdul Khadir Maulavi considered that Islam exists in terms of a broader imagination that transcends the limits of geography. They thereby provided the intellectual basis of current politics, though their approach was not totally unproblematic as many of their ideas distanced from seeing Islam as a discursive tradition as they attempted to return to the Quran and *hadiz*. However, social reformers emphasised the role of education to girls and boys alike, importance of shift in the expressions of religious piety, and the necessity to compare Muslims with other communities.

¹⁵ Verghese Kurien, *I too had a dream* (New Delhi: Roli Books, 2005); P.C. Kesavan, *MS Swaminathan: Legend in Science and Beyond* (World Scientific Publishing Company Pte Limited, 2017).

¹⁶ Basheer, *T.P. Kuttyammu Sahib*, 7.

How was Kuttiammu different from other government servants who served Kerala? Why is his biography significant? This biography attempts to answer these questions using historical methods. This report is based on the research conducted at the Directorate of State Archives (DSA), State Central Library (SCL), and Kerala Legislature Library (KLL) located in Thiruvananthapuram. The work in DSA provided me with very useful communications regarding the appointment of Kuttiammu as a chief engineer, fixing his salary, and appointing him as a consulting engineer after retirement. I incorporated most of these documents to write the skeleton of the biography, and consulted memoirs, souvenirs, government reports, and newspapers. This report also uses direct personal interviews and telephonic interviews with those who have direct experience with Kuttiammu. One published biography authored by C.T. Basheer titled ‘T.P. Kuttyammu Sahib’ became a very useful source.¹⁷

The basis of organisation of the report is thematic though I have taken care to follow chronological order. In brief, the limited availability of records illuminating the career of Kuttiammu has shaped the organization of this report into a few sections. The first section of the report gives details of the early life of Kuttiammu who excelled in his studies and showed aptitude for community oriented activities. The second section unravels the formative years of his career under Madras government. The third section deals with the background of his appointment as chief engineer in Kerala after the formation of Kerala State. The fourth section deals with his relevant efforts as an irrigation engineer to help farmers of Kerala during his professional life. The fifth section is on his life after retirement. The sixth section covers documentation of his social engagements among the public in general and Muslims in particular in Thiruvananthapuram and broadly in Kerala. The last section deals with one of the stories of his community engagement and leadership: rebuilding Palayam mosque in Thiruvananthapuram.

This biography is loosely based on fairly limited historical documents such as government documents, souvenirs and available writings by Kuttiammu himself. Only a few interviews have been conducted with those who know Kuttiammu directly. The availability of secondary sources like books also has been very less. The research on various irrigation projects he undertook also is not totally fleshed out because of the obscure nature of the information available in Public Works Department (PWD) files.

¹⁷ The name Kuttiammu was misspelt as ‘Kuttyammu’.

That said, let me now provide a description of the early life of Kuttiammu mostly focusing on his family background based on the memoirs of childhood friends.

III. A Window to Kuttiammu's Life

On 24 October 2020, one of the days in which Covid 19 Pandemic hit the normal life in Kozhikode, Kerala, I met Auswaf Ahsan, a professor at a dental college, and the grandson of Kuttiammu, at Other Books, a venture to publish books that are relevant to Islam in Malayalam and English.¹⁸ The entire establishment was run in a two room office; and operated with around half a dozen staff. As both of us reached half an hour ahead of fixed time we began to chat.

At the outset, he told me that he wanted me to give emphasis on the life of Kuttiammu as engineer in Madras and Thiruvananthapuram rather than just documenting his community oriented work that many of the available writings focused on. I had heard about Kuttiammu from someone who had direct experience with him for the first time from Auswaf: When Kuttiammu wrote a book on his reading experience of Quran, *Quran Patanathilekku Oru Theertha yatra* (A Pilgrimage into the Study of the Quran), Auswaf, who was in his adolescence, helped out with writing by reading the scripts of the book.¹⁹ He told me how his grandfather always wanted to learn: When Kuttiammu was an engineering student he used to get lessons on the Quran by post; and he was always surrounded by scholars like Mutanisseril Koyakutti Maulavi, a polyglot and Quran scholar.²⁰ Auswaf has very clear memories of Kuttiammu as he was twenty-one years old when the latter died a natural death at the age of 76 in Ramanattukara, Kozhikode. This biography is an attempt to revive Kuttiammu's life story based on such memories and historical documents.

Kuttiammu was born into a middle class matrilineal Mappila Muslim family as son of Povathankandi Acharath Ammu, deputy collector of Malabar and his third wife Thaitotattu

¹⁸ Interview with Dr. Auswaf Ahsan, on 24,08,2021, Kozhikode.

¹⁹ Kuttiammu also wrote books such as *Islamum Palisayum* (Islam and Interest), and *Hajj Yathrayile Samoohika Chinthakal* (Thoughts on Society while being on Hajj Pilgrimage), a travelogue initially published in Chandrika daily from 19 June 1972. He was one of the editors of a book, *Islamika Darshanam* (Islamic Vision) published by Kerala Bhasha Institute, Thiruvananthapuram. Kuttiammu's intellectual pursuits show that his imagination travelled beyond South India as he engaged with cosmopolitanism provided by Islam.

²⁰ Basheer, *T.P. Kuttyammu Sahib*, 45.

Parmabatukandi Khadija in Tellicherry in Malabar, Madras Presidency.²¹ He used his mother's matrilineal household's name in his name, hence, T.P. Kuttiammu. He was educated at Kiliyanad School in Calicut. Later his father enrolled him in Brennan High School in Tellicherry which was a place significant for the Kerala Muslim cultural renaissance.²²

He also received religious education at Thiruvangad Kantipad mosque. He learned Urdu and Arabic from there (these two languages shaped his aesthetic and spiritual life in his later life). In brief, by young age he was a polyglot as he knew Malayalam, English, Urdu, Tamil and Arabic.²³ His love for Arabic, a language of Islamic theology, and contemporary Islamic thought, became evident when he argued for the formal instruction of Arabic in colleges and universities while he actively engaged with the activities of KNM, a well-documented reformist movement in Kerala.²⁴ He was deeply religious but was liberal in his views and secular in his outlook.

In a memoir written about him in 1989, many of his childhood friends recollected Kuttiammu to be a bright student who excelled in mathematics, and languages.²⁵ They added that his punctuality and hard work made him an outstanding student.²⁶ Kuttiammu's early childhood was shaped by historical incidents like the Malabar rebellion of 1921 in which the state formation experiment by Mappila rebels was suppressed harshly by the British.²⁷ Since his father was a deputy collector of Malabar he got direct exposure to those who were arrested by the state. Later,

²¹ Povathankandi Acharath Ammu was given the title of Khan Bahadur for his services to the colonial state. Taitodath Parambathkandi, Karimbin Thazhe, and Cheriya Thaitodathu were *tavazhis* (sub-branches) of Thaitodathu *tharavadu* (matrilineal house) which was around four hundred years old. One of the known ancestors of Thaitodathu *tharavadu* was a certain Pavanpokkar, a rich trader who travelled across Indian Ocean. He built the house for his wife and children as per customs in the matrilineal society of North Malabar. See Basheer, *T.P. Kuttiammu Sahib*, 25.

²² C.O. Aluppi Keyi (lawyer), and Abdurahiman (academician) from Tellicherry, were among a few highly educated Muslims in Kerala. K.M.Seethi Sahib, a leader of Kerala Nadvatul Mujahideen, and a politician, was based in Tellicherry between 1932 and 1956. He had a significant influence on Kuttiammu. See P.A.Rasheed, "Chief Social Engineer", in: *T.P. Kuttiammu Sahib*, ed. C.T. Basheer (Calicut University: Grace Books, 2021), 11.

²³ Bundle number 90, file number: GOMS 101/70/PWD, DSA.

²⁴ Basheer, *T.P. Kuttiammu Sahib*, 76. Kuttiammu argued that studying Arabic was important to Muslims, especially, to grasp Quran, *sunna*, and authentic Islamic books. Arabic was a desired common language for Muslims of Kerala.

²⁵ V. Muhammed, "Kuttiammu Sahib", In: Kuttiammu Sahib Smaranika (A Memoir of Kuttiammu Sahib), ed. Savn Kutty (Thiruvananthapuram: Muslim Association Trivandrum, 1989),1-7.

²⁶ V. Muhammed, 'Kuttiammu Sahib, 2.

²⁷ The rebellion was part of a broader mobilisation across the globe against the colonial forces. Fearing the adverse reaction of people for being a servant under the colonial government during the anti-state rebellion Kuttiammu's father shifted his family from Kozhikode to Tellicherry. See V.Muhammed, Kuttiammu Sahib, 1.

against his father's wish to enroll him as a lawyer, Kuttiammu dreamed of an engineering career.²⁸ It is worth noting that he was a very strict adherent of Islamic life even during his undergraduate education.

In Kuttiammu's long career which includes working as a chief engineer for about twelve years, he provided leadership in the implementation of various irrigation schemes. Those who worked with him remember him as one who did justice to his job as he was free from corruption.²⁹ His official communications were precise and clear though they had government communication as the subject matter. Let me explore some of the highlights of his career in Madras Presidency below.

IV. Early Career in Madras

After graduating in civil engineering from Guindy College, Madras in 1936, Kuttiammu worked as an overseer in Madras Corporation for two months.³⁰ Later he worked as a junior engineer in Madras Electricity Department for six months. In between, he came out successful in a competitive examination held by the Madras Public Service Commission to become an assistant engineer in Madras Public Works Department (MPWD) along with three other candidates. There was the first batch of direct recruits to the Madras Engineering Service in 1937.³¹ There he worked as an assistant engineer for six years and as an executive engineer for ten years.³² Besides, he worked as a superintending engineer for two years.³³

In retrospect, Kuttiammu viewed that he was fortunate to be right in the centre of MPWD during a period of intense activity and development of irrigation in Madras.³⁴ In a letter written to the secretary, Water & Power, Kerala, on 02 February 1970 he claimed that he worked in all the great deltas and in all the major projects in one way or another while being at Madras. This, according to him, included his work experience under stalwarts who consisted of both Indian,

²⁸ Muhammed, 'Kuttiammu Sahib, 3.

²⁹ Telephone interview with Matius Vengal on 1 January 2021.

³⁰ Bundle number 90, file number GOMS 101/70/PWD.DSA.

³¹ Bundle number 9, file number GO (MS) 274/1958, DSA.

³² Bundle number 90, file number GOMS 101/70/PWD, DSA.

³³ Bundle number 9, file number GO (MS) 274/1958/PWD, DSA.

³⁴ Bundle number 90, file number GOMS 101/70/PWD/D.SA.

and foreign born engineers. Kuttiammu in an official communication once asserted that he utilized those opportunities fully to learn and to work.

In one of his letters written to the chief secretary to the government, Kerala on 19 June 1957, Kuttiammu summarized his career in Madras as very productive.³⁵ In Madras State he had built buildings, roads, and bridges. He also gained experience in erection and demolition. He worked in tasks such as building aerodromes; and had experience in areas of irrigation and navigation. He later specialized in irrigation. For six years he worked in Godavari, Krishna, Cauvery and other deltas being in charge of irrigation and navigation.

He was at the helm of building Irrigation Research Station (IRS) located in Poondi while working as an executive engineer. He visited several research centers and irrigation sites across India before setting up IRS. In order to ensure continued water supply throughout the year for conducting experiments without interruption, IRS was ideally located at the downstream adjacent to Poondi Reservoir. Kuttiammu was an executive engineer in July 1945 when he along with J. Visweswara Rao, the first Assistant Research Officer (ARO), assumed the leadership in setting up IRS and continued to run it as its executive engineer. IRS is now known as Institute of Hydraulics & Hydrology (IHH).³⁶ The brochure of IHH states that the research station met the requirements of Madras Presidency before the re-organisation of the states during 1952 and 1953: the presidency included current states of Andhra Pradesh, Tamil Nadu, and parts of Kerala.

He also participated in the design of Tungabhadra, lower Bhavani, Ramapad Sagar, and Malampuzha irrigation projects. For five years he was in charge of the investigation and design of giant projects that exceeded a budget of Rs. 10 billion: Krishna Pennar³⁷ and Nagarjuna Sagar. After working as a deputy chief engineer in Madras for a short while he focused on the Amaravathi project, first as an executive engineer and then as a superintending engineer.

³⁵ Bundle number 9, file number GO (MS) 274/1958/PWD, DSA.

³⁶ Brochure of the platinum jubilee of Institute of Hydraulics & Hydrology, accessed from <http://tnwrdirhpoondi.in/> on 06-03-2021.

³⁷ Bharathan, a retired chief engineer of PWD Kerala, who worked under him in Madras presidency, wrote how Kuttiammu was in charge of the Krishna Pennar project as executive engineer. Bharathan also remembered how the mighty irrigation project linking river Krishna in Andhra Pradesh with Pennar in Tamil Nadu with a 300 mile long canal was actualised. K. Bharathan, "Reminiscence of a colleague", In: Kuttiammu Sahib Smaranika (A memoir of Kuttiammu Sahib), ed. Savan Kutty (Thiruvananthapuram: Muslim Association Trivandrum, 1989), 96.

Simultaneously, he was directing the investigation of the Parambikulam Aliyar project. Kuttiammu also became confident about his leadership skills in “establishing perfect cooperation among officials, job workers, workmen and the public”.³⁸ He was sure that his work “earned a name for quality, efficiency, and economy”.

During the course of research activities Kuttiammu came in close contact with internationally reputed engineers such as Dr. John L. Savade, Dr. Karl von Terzaghi, and Dr. Ajudhiya Nath Khosla.³⁹ He also worked directly under many eminent engineers. As he was secretary of MPWD exhibition committee for a few years, Kuttiammu organized several exhibitions including ‘the Madras pavilion’ at the International Engineering Exhibition held in New Delhi in 1951. As a delegate from Madras, he attended several engineering conferences including a series of international conferences held in Bombay and New Delhi in 1951. Along with J. Visweswara Rao, Kuttiammu presented a paper at the International Congress on Large Dams and contributed several papers on engineering related subjects in technical journals.

His entry into Kerala marked a qualitative shift in his life. Let me summarise here from many official correspondences that dealt with the background of Kuttiammu’s appointment as a special engineer.

V. Appointment in Kerala

Kuttiammu’s professional life as a chief engineer consisted of many organised activities. His cohort relied on him for the work on various lift irrigation schemes,⁴⁰ major irrigation projects, and anti-sea erosion projects. Kuttiammu’s varied experience consisted of dealing with engineering tasks of “buildings, roads, bridges, air raid precautions, aerodrome and flood control, land reclamation, beach protection, minor ports, and irrigation”.⁴¹

³⁸ Bundle number, 9, file number GO (MS) 274/1958/PWD, DSA.

³⁹ Bundle number, 9, file number GO (MS) 274/1958/PWD, DSA.

⁴⁰ For a case study of the advent of irrigation technologies in a village in Kerala, see Vineetha Menon, Antonyto Paul & K.N. Nair, “Dynamics of Irrigation Institutions: Case Study of a Village Panchayat in Kerala,” *Economic and Political Weekly* 40, no. 9 (2005), 893-904.

⁴¹ Bundle number 90, file number GOMS 101/70/PWD/DSA

At the time of state reorganization Kuttiammu somehow preferred to remain in Madras though he was the only Malayalam speaking superintending engineer.⁴² He attempted to stay there because he thought he had better opportunities for work on irrigation development in Madras; and because he was certain of promotion as chief engineer on Rs. 1500-1800. However, P.S. Rao, Acting Governor of Kerala, insisted that he come to Kerala to be appointed as a chief engineer for irrigation.

Kuttiammu was a special chief engineer by a deputation from the government of Madras on a scale of Rs. 1000-1200 from 8 October 1956. As per the re-organisation of duty in the PWD on 8 October 1956, he held the responsibilities of large irrigation projects, medium irrigation projects (which also consist of lift irrigation projects), anti-sea erosion projects, inland water transport, small ports, and engineering workshops.⁴³ He became permanent special chief engineer of Kerala from 1 November 1956.⁴⁴ He succeeded K.K. Kartha in June 1957 as the chief engineer in charge of 'general and establishment' matters as he was senior to K.B. Menon who was appointed as the chief engineer of roads and buildings.⁴⁵

It is important to note that Kuttiammu was about to be promoted as a chief engineer in Madras when he was transferred to Kerala as a 'special chief engineer'. As stated above, he promptly held the charge of administration as he was the senior most chief engineer.⁴⁶ When he joined as a chief engineer he was paid Rs. 1400 per month which was the salary of a chief engineer in Kerala.⁴⁷ Kuttiammu was disappointed at this as he was about to be appointed as a chief engineer in Madras on a scale of Rs. 1600 per month before being transferred to Kerala. After two years of complaining he was granted a salary of 1600 with effect from his appointment in November

⁴² Bundle number 20, file number GO NO 129, 1959/PWD; Bundle number 9, file number GO (MS) 274/1958/PWD, DSA.

⁴³ PWD: Many Projects Come under Special Chief Engineer. Malayala Manorama, 10 October 1956, Kottayam.

⁴⁴ Bundle number 14, file number GONo (MS) 580/PWD/1958/DSA.

⁴⁵ Bundle number 3, file number R Dis 8551/1957/PWD, DSA.

⁴⁶ Kuttiammu's title changed a few times based on the reorganisation of duties in the PWD. See Administrative Report of the public works department for the year 1963-64, Ernakulam: The Government Press, 1966, p.iii.

⁴⁷ Bundle number 10, File number GOMS 366/PWD dated 19-04-1958. DSA

1956. He retired from his post on 04 October 1967.⁴⁸ In total, he remained as a chief engineer for about twelve years.⁴⁹

It will not be out of place to document highlights of his career as chief engineer in Kerala. Kuttiammu's legacy as an honest technocrat enabled him to be active after retirement and even gave him an afterlife even after his demise.

VI. Vignettes of Professional Life

In an official document titled "Particulars of professional experience" he himself claimed that his dedicated work experience in Madras became handy in the development of irrigation in Kerala.⁵⁰ He started and developed the Department of Irrigation as a branch under the PWD.⁵¹ In a public talk held at Maharaja's Technological Institute, Thrissur on 06 February 1957 he stated that the problems in Kerala are totally manageable by aptly using the available natural resources though Kerala had deficit in resources:

"Some people say that Kerala faces various problems in development. All the states in India have their own problems. However, problems in Kerala are different from that of the problems of other states. We have to opt for a programme to solve problems differently. We do not have any unsolvable problems if we use the water resources and other natural resources properly"⁵²

K. Bharathan who worked under him as an engineer stated how Kuttiammu prepared "the Advance Report on Water Resources of Kerala", a detailed study of the entire water resources of Kerala, by 1958.⁵³ Moreover, Kuttiammu prepared various master plans, started a research station, and implemented several large and small irrigation schemes. Most of these irrigation plans were aimed to improve cultivation of paddy in Kerala.⁵⁴

Kuttiammu prepared the master plan of the Kerala Engineering Research Institute (KERI) ahead of the visit of Prime Minister, Jawaharlal Nehru for laying the foundation stone at Peechi,

⁴⁸ Bundle number 74, file number G.O.No.(MS) 118/1967/PWD, DSA.

⁴⁹ The age of retirement was changed just then by orders passed by the government reducing the age of compulsory retirement on superannuation from 58 to 55 years. See an application for 60 days of leave by Kuttiammu, Bundle no. 74, File number, G.O.No. (MS) 118/67/PWD, DSA.

⁵⁰ Bundle number 90, file number GOMS 101/70/PWD, DSA

⁵¹ Bharathan, "Reminiscence of a Colleague,"96.

⁵² Natural Resources in Kerala: Proper Utilisation of Resources will Solve Problems, Malayala Manorama, 09 February 1957, Kottayam.

⁵³ Bharathan, "Reminiscence of a Colleague," 96.

⁵⁴ P.K. Viswanathan, "Irrigation and Agricultural Development in Kerala: An Analysis of Missed Linkages", *Review of Development and Change* 7, No.2 (2002), 279-313.

Thrissur on 26 April 1958.⁵⁵ In a letter written to the secretary, Public Works & Communication, Kerala, on April 1958 he submitted a comprehensive note on the scheme. Moreover, in an estimate report written on 14 April 1958, he emphasized the need and urgency for the systematic and intensive development of the water resources of Kerala. He added that for the upcoming decades there were a large number of power, irrigation and allied schemes to be investigated, designed and executed. These, according to him, posed a large number of technical problems in a way necessitating study and research with the aid of hydraulic models.

He noted that hitherto all problems relating to water resources development undertaken in the state were referred to research stations at Poona or Madras. Regarding the immediate necessity of a hydraulic research institute for Kerala, Kuttiammu argued that if a research station was established, all local problems can be tackled by this station quickly, economically, and satisfactorily. The Kerala engineers could be directly and intimately associated with the studies at all stages with significant benefit to the department as a whole. Eventually, KERI came into existence on 13th, June 1960 in a way helping Kerala to conduct research studies in irrigation.

Kuttiammu was very keen on implementing various lift irrigation projects faster. There was a clause that lift irrigation schemes costing less than Rs. 100 thousand had to be approved by district collectors. However, he found that the collector's offices caused unnecessary delay even though the projects were sanctioned by budget and approved chief engineer.⁵⁶ In a letter written to the secretary of the Public Works Department (irrigation) (PWDI) he requested to expand the chief engineer's authority to sanction such schemes as lift irrigation schemes taken up by the government were mostly big ones benefiting areas above 200 acres. On 08 May 1958, the government approved that the chief engineer would accord administrative sanction for all lift irrigation schemes costing up to Rs. 100 thousand.

K. Bharathan, a colleague of Kuttiammu, in his memoirs about the latter stated how the latter guided various schemes such as minor irrigation, anti-sea erosion, navigation, flood control, ports and harbours along with major irrigation schemes.⁵⁷ He recalled that Kuttiammu started

⁵⁵ Bundle number 10, file number GONo (MS) 330, 1958, PWD/DSA.

⁵⁶ Bundle number 11, file number GOMS0412/58/1958,PWD, DSA.

⁵⁷ Bharathan, "Reminiscence of a Colleague," 96.

major projects like Kallada,⁵⁸ Pamba, Chitturpuzha, Kanhirappuzha, Kuttiadi, and Pazhassi by 1961.⁵⁹ Building Thanneermukkom bund to prevent salt water from entering Vembanad Lake and thereby recovering agricultural land was another ongoing project during those times.⁶⁰

In a discussion conducted as a part of 15th annual conference of Indian Institution of Engineers, Kerala branch, on the topic of controlling flood in Kerala, Kuttiammu pointed out that flood control is a complicated and important issue in Kerala, and that merely the erection of bunds with stone would not totally stop the flood.⁶¹ He added that there were no ways in which flood could be totally controlled, but multifaceted flood control measures could alleviate gravity of the disasters. He offered proposals to control floods by building reservoirs to contain excess water, taking measures to prevent soil erosion, constructing canals to channelise excess water from the rivers, increasing the depth of riverbeds, and preserving low-lying areas by building bunds. “Idukki dam constructed by Kerala State Electricity Board (KSEB) could reduce the flood happening in Periyar River”, stated Kuttiammu. He observed that farmers could stop soil erosion by doing farming in stacked terraces in hilly regions in a way preventing reduction in the depth of rivers. He defined controlling flood as a national concern, and further stated that flood and sea erosion caused a lot of destruction, and these issues should be given priority in the planning. “We have to plan for letting the rivers in Kerala to flow smoothly into the sea. In those cases where there are lakes parallel to rivers, we can set up spillways channelising river water into lakes”, said Kuttiammu.

In fact, Kuttiammu was recognized many times in his career.⁶² He was a delegate in an international conference on large dams held in New Delhi in 1951. He was nominated as the

⁵⁸ Kuttiammu discussed the Kallada irrigation project to be set up in Parappur with Kanuri Laxman Rao in an ‘irrigation and power seminar’ held at Trivandrum in 1963. The former actively tried to get sanction for the project in the early 1960s. Bundle number 68, file number GOMS 93/1966, PWD, DSA.

⁵⁹ Bharathan, “Reminiscence of a Colleague”, 96.

⁶⁰ Kerala State Administration Report 1958-59 (Trivandrum: The government Press, 1960), 226-280; Kerala Administration Reports 1961-62 (Trivandrum: The Government Press), 209-219; Administrative Report of the Public Works Department for the year 1963-64 (Ernakulam: The Government Press, 1966), 87; Administration Report for the Year 1964 -65 (Public Works Department, Ernakulam: Government Press, 1966), 33.

⁶¹ Institution of Engineers’s Annual Conference Discusses some Practical Suggestions for Flood Control: Speeches of Chief Engineer and Others, Malayala Manorama, 07 January 1962, Kottayam.

⁶² Bundle number 90, file number GOMS 101/1970/PWD, DSA.

member of Indian representatives to the International Conference on Irrigation and Drainage held during 11-21 May 1963 in Tokyo, Japan.⁶³

After returning from Japan, Kuttiammu submitted suggestions to the Kerala government for transforming 150,000 acres, which include Kuttanad region, into land which could be cultivated twice a year (*irippoo nilam*), and making sandbanks and swamps in Kerala suitable for agriculture.⁶⁴ He praised the agricultural technologies of Japan mentioning how Lake Hachirogata was drained in a land reclamation project to make 42,000 acres cultivable; and how sea was drained using big pumps to make 82,000 acres cultivable.

In his field trip Kuttiammu also observed anti-sea erosion technologies in Japan. He explored how Japan that had a long coastline utilised those areas fully by developing many fishing harbours, organising activities of collecting pearls and fishing, planting trees for protecting the ports from sea erosion, and installing concrete pillars, and sheets to prevent sea erosion.⁶⁵

Kuttiammu inaugurated irrigation activities in the Periyar Valley Project (PVP) on 03 June 1967 in Ernakulam.⁶⁶ PVP was conceived around 1947 with an estimate of Rs. 64.2 million for irrigating 63,300 acres of land in the region which falls in erstwhile Travancore. Inaugurating PVP, he explained that lack of funds, and non-availability of staff delayed the implementation of the project, and assured that the rest of the work would be finished fast. He also made it clear that PVP was not a storage project but a scheme that redirected flowing water.⁶⁷ He told the public that developmental problems of Kerala were totally solvable if the government projects attracted the cooperation of the people. He continued that since paddy, coconut, arecanut and black pepper require hydration, people should use water properly without wasting it.

He was a member of the Central Board of Irrigation (CBI), and the Inland Water Transport Committee (IWTC). He was the chairman of the Institution on Engineers-Kerala Centre.

Kuttiammu also undertook the construction of seawalls with stones along the coastline in

⁶³ Kuttiammu Going to Tokyo, Malayala Manorama, 04 May 1963, Kottayam; Kuttiammu Went to Japan, Malayala Manorama, 14 May 1963, Kottayam.

⁶⁴ One and Half Lakhs Acres can be Made into Land Cultivable Twice a Year: Sri. Kuttiammu Says the Model of Japan can be Followed, Malayala Manorama, 14 June 1963, Kottayam.

⁶⁵ One and Half Lakhs Acres, Malayala Manorama, 14 June 1963.

⁶⁶ Periyar Quenches the Thirst of Paddy Fields: the Project was Inaugurated, Malayala Manorama, 04 June 1967, Kottayam.

⁶⁷ Periyar Quenches the Thirst, Malayala Manorama, 04 June 1967.

Kozhikode, Ernakulam, Alapuzha, Kollam, and Thiruvananthapuram to prevent sea erosion at a length of 50 miles under the third FYP in 1962.⁶⁸ On 21 February 1966 Kuttiammu was nominated as a member secretary in the beach erosion board in which the chairman of Central Water & Power Commission (CWPC) was the head.⁶⁹

When Kuttiammu presided over the ninth annual conference of Kerala Engineers Association held in Thrissur on 30 October 1961, he laid down the significance of accountability among engineers.⁷⁰ He advised engineers to do their duties honestly as they play an active role in planning and execution of FYPs. He also told the audience that engineers should exercise self-control to avoid immoral tendencies even as they are entrusted with great powers. He always walked the talk as his willpower and honesty made him an icon among engineers.⁷¹

In brief, his long career witnessed the onset of irrigation projects all over Kerala giving boost to the development of agriculture. He was a true modernist who believed in the modernisation of rural India's agricultural practices for facilitating the development of the nation.

VII. Post-Retirement Period

After retirement he was a member of the Kerala State Planning Board (KSPB) for two years. In 1970 he was appointed as a consulting engineer because of his expertise in dealing with interstate river water problems involving Tamil Nadu, Mysore, and Kerala.⁷² His duties were to gather all the relevant technical data and prepare statements for claiming Kerala's share of the Cauvery waters; guide the detailed investigation of projects; scrutinize and finalise the project reports on inter-state waters; and attend to any other matter on which the government might require his advice. The discussions on utilization of the Cauvery waters were entering a crucial state in those days. The order appointing him stated that it was necessary to have the assistance of an experienced officer who had got a sufficient background and thorough knowledge about

⁶⁸ 50 mile Seawall will be Constructed in the Third FYP: States Chief Engineer, Sri. Kuttiammu. Malayala Manorama, 19 April 1962, Kottayam.

⁶⁹ Bundle number 67, file number 41/1966/PWD, DSA.

⁷⁰ Engineers should be Honest in their Duty: Says Kuttiammu in the Annual Conference of Kerala Engineers' Association. Malayala Manorama, 31 October 1961, Kottayam.

⁷¹ T.P. Kuttiammu Passes Away. Malayala Manorama, 13 July 1987, Kottayam.

⁷² Bundle number 90, file number GOMS 101/70/PWD/DSA.

these problems. Following the appointment he met C.H. Muhammed Koya, then Minister of Education and Home on 03 April 1970. Mr. Koya suggested increasing his remuneration from Rs. 500 to Rs. 900.

Former Supreme Court judge and Kerala's minister of law and irrigation between 1957 and 1959, V.R. Krishna Iyer recollected Kuttiammu as a remarkable person with "tremendous passion for making available the water resources of Kerala for purposes of irrigation." The former noted the latter's grasping of local conditions, familiarity with the needs of farmers and great energy and technological equipment. Iyer added that Kuttiammu was a people's engineer, and 'a fine man with a religious dedication to serve Kerala'.⁷³ Indeed, Kuttiammu was well researched on the matters of the rivers and he actualised the scope of irrigation for improving agriculture in Kerala.⁷⁴

Let me summarise his social reform activities among Muslims as that made him a historical figure who inherited the values of Muslim politicians like Muhamad Abdurrahiman Saheb.⁷⁵ Abdurrahiman Saheb engaged with questions such as education, laws of inheritance of property, and personal laws among Muslims of Kerala during the late colonial era.

VIII. Social Reform Activities

During his stay in Madras Kuttiammu was active in the Malabar Muslim Association (MMA).⁷⁶ After coming to Kerala he took the responsibility of organising Thiruvananthapuram Muslim Association (TMA).⁷⁷ The city of Thiruvanthapuram supposedly offered a charm to Kuttiammu as he could meet various Muslim leaders like C.H. Muhammed Koya, a prominent leader of IUML and a gifted orator; could become part of the successful political assertion of Muslims; and had interface with the ideas of social reform advocated by Muslim intellectuals of Kerala

⁷³ V.R.Krishna Iyer, "Mr. T.P.Kuttiammu", In: Kuttiammu Sahib Smaranika (A Memoir of Kuttiammu Sahib), ed. Savan Kutty(Thiruvananthapuram: Muslim Association Trivandrum, 1989), 98.

⁷⁴ See entry on 'water resources': T.P. Kuttiammu, *Visvavijanakosam*, vol. 4 (Encyclopaedia)(Kottayam:Sahitya Pravarthaka Co-operative Society, 1972), 645-649.

⁷⁵ Muhamad Abdurrahiman hailed from a landowning family in Kodungalur, Thrissur. He set up Al-Ameen newspaper aiming Keralite Muslims' political reform, while was active Indian National Congress's high politics from Kozhikode, on 12 October 1924.

⁷⁶ This was later known as Madras Malayalee Muslim Association. See T.P. Kuttiammu Passes Away, Malayala Manorama, 12 July 1987, Kottayam.

⁷⁷ Kuttiammu also formed the Muslim Association and an Islamic library at Tellicherry. Basheer, *T.P.Kuttyammu Sahib*, 45.

like Vakkom Moulavi.⁷⁸ Being an old city built around Sri Padmanabha temple, the deity of Travancore's rulers, the city gradually had become a space of syncretism since Christians and Muslims also constituted considerable numbers.

S. Kamaluddin, who is a member of TMA, clearly remembers Kuttiammu's leadership skills.⁷⁹ TMA was formed in the guidance of the likes of Kuttiammu in November 1957 to meet the social and intellectual needs of various people who came to Thiruvananthapuram for higher education and jobs.⁸⁰ Kuttiammu was the second president of TMA. TMA aimed to provide education, and to work for the social, cultural, and economic progress of the Muslims who were socially and educationally backward.⁸¹

Kamaluddin adds that at his house in Thiruvananthapuram, Kuttiammu met community workers, especially the youth, and gave suggestions and advice. He remembers how Kuttiammu organized various programmes in 'the Crescent Hostel' run by TMA: There used to be discussions and public talks in the late afternoons on Fridays in this hostel in the leadership of Kuttiammu. Dr. Fazil Marickar, a physician who was active in community work while he was a medical student also remembers Kuttiammu as an unquestionable leader of TMA.⁸² All the activities of Kuttiammu completely came in the realm of the secular in which Marickar wanted to involve for improving his personality. "Whenever I visited his house I found that he and his family retained the simplicity of those who hail from North Malabar", says Marickar.

In general, Kuttiammu inherited the intellectual legacy of his predecessors, as he engaged with traditional *ulemas* to fight poverty and superstitions among Muslims; and he always advised Muslims to work hard for holistic progress of their community.⁸³ Beyond doubt, Kuttiammu created a space for Muslims in Kerala to discuss religious matters beyond the limit of various factions such as Mujahids, Sunnis, and Jama'ate Islami. When a trust was constituted in

⁷⁸ Vakkom Moulavi (1873-1932), father of *Islahi* movement among Muslims of Kerala, hailed from Travancore. See Jose Abraham, *Islamic Reform and Colonial Discourse on Modernity in India: Socio-political and Religious Thought of Vakkom Moulavi* (New York: Palgrave Macmillan, 2014).

⁷⁹ S. Kamaluddin. Thiruvananthapuram Muslim Association: Memoir of a Member (undated pamphlet).

⁸⁰ TMA was registered under Thiruvananthapuram-Kochi Charitable Society Act in October 1966.

⁸¹ Basheer, *T.P. Kuttiammu Sahib*, 58.

⁸² Telephone interview with Fazil Marickar on 25-12-20.

⁸³ Muslims should Actively Work towards Progress, Malayala Manorama, 04 August 1966.

Kozhikode in the memory of Kuttiammu leaders across factions were invited for taking part in the events.⁸⁴

Kuttiammu organized various Islamic seminars in different parts of Kerala during 1963 to 1969. Relevance of technical education; spread of secular education; role of *sharia* (Islamic law); progress in the status of women⁸⁵; maintenance of *wakf* (endowed) properties; and the importance of mosques were among the topics discussed. The discussions were published as Kerala Islamic Seminar Review (KISR) in five volumes.⁸⁶

While delivering a talk on the subject “Muslims and technical education” at the Islamic seminar held at Kozhikode on 16 May 1964, Kuttiammu called for Muslims youth to secure admission in engineering colleges without reservations changing status quo in which they only managed to get admission with the help of affirmative action.⁸⁷ He advised youth to acquire technical education more than ever since India was growing in the field of science and technology in that era. He added that when Muslim students join Engineering Colleges that would improve the plight of Muslim community and the nation. He also stressed the need for an educational programme to combine religious and modern education well. Similarly, in a note written in KISR in 1966 Kuttiammu argued that Muslims could not separate *deen* (religion) and *duniav* (earthly things). According to him Muslims had to work by understanding that religious matters such as *sharia* were pivotal to earthly life.⁸⁸ He was elected as the secretary of Kerala Islamic Seminar Council on 14 July 1969.⁸⁹

His work among the people made him a multi-faceted person and a true nationalist while being a good Muslim. In the next section, we will observe how his engagement with the construction of Palayam mosque made him a legend among engineers.

⁸⁴ Kuttiammu Trust Unveils, Malayala Manorama, 07 June 1989, Kottayam; Filippo Osella & Caroline Osella, “Islamism and Social Reform in Kerala, South India,” *Modern Asian Studies* 42, no. 2/3, (2008), 317-346.

⁸⁵ Historically one of the major limitations of Muslim leadership in Kerala was the lack of proper representation for women. Right from the early 20th century social reformers discussed women’s issues in a way that women became an object of reform rather than being active agents in forging their own history notwithstanding the existence of women’s wing for various religious factions.

⁸⁶ Basheer, *T.P. Kuttyammu Sahib*, 52-57.

⁸⁷ Muslims Should Strive for Attaining Success without Reservation in Education, Malayala Manorama, 17 May 1964, Kottayam.

⁸⁸ Basheer, *T.P. Kuttyammu Sahib*, 150-152.

⁸⁹ T.P. Kuttiammu, Council’s Secretary, Malayala Manorama, 15 July 1969, Kottayam.

IX. Rebuilding Palayam Mosque

Now the Palayam square in Thiruvananthapuram is well-known as the sign of Indian pluralism locating Palayam mosque, St Joseph cathedral, and an old Ganesha temple.⁹⁰ Dr. Zakir Hussain, President of India, inaugurated the renovated Palayam mosque on 20 December 1967 in the presence of various dignitaries including that of Kuttiammu, who was the engineer in charge of the construction.⁹¹ The custodians of the mosque belonged to those who adhered to the Hanafi School among Sunnis. The mosque Kuttiammu rebuilt in Indo-Saracenic style also became a model for various other mosques in Kerala; and he himself built many other mosques.⁹²

As Kuttiammu's article in *Visvavijnanakosham*,⁹³ a Malayalam encyclopaedia, indicates he had a thorough knowledge of mosques. To start with, he defined the mosque as "a clean open space with its direction towards *Kaaba* of Mecca". He appreciated the value of Kerala's old mosques like Muchchandipalli in Kozhikode as heritage buildings.⁹⁴ He also documented the pivotal role mosques such as the one at Kanjirapally near the Hindu pilgrim centre of Sabarimala have in the pluralistic tapestry of Indian society.

Kuttiammu visited various mosques in India along with J.C. Alexander, the architect of Palayam mosque to design it. Kuttiammu termed the architecture of the mosque as that of Mughal style.⁹⁵ He adopted the Arabic calligraphy on the arches at the front from Taj Mahal at Agra, and Jama Masjid at Old Delhi. He modeled the dome after Gol Gumbaz at Bijapur. He adopted the grilles from Red fort, New Delhi. After Alexander drew a single-story mosque with tall walls, Kuttiammu suggested making it a double-floor mosque.

"Once I asked Kuttiammu about the significance of dome and minaret in the mosque architecture. He told me that Islam is unlike Christianity (with emphasis on materiality) or Hinduism (with emphasis on spirituality). He added that Islam is a mix of both material and spiritual matters: dome signifies materiality and minaret points to heaven signifying spirituality."

⁹⁰ Sasi Tharoor, "Why India's Intolerance Problem is Hurting its Global Reputation," *New Perspectives Quarterly* (2016), 57.

⁹¹ Secularism is the Best Policy for India, Kerala Kaumudi, 21 December 1967, Thiruvananthapuram.p.1, column 1.

⁹² The term Indo-Saracenic refers to India's Islamic architecture. G. H. R. Tillotson, "Indian Architecture and the English Vision," *South Asian Studies* 7, no.1 (1991), 60.

⁹³ T.P. Kuttiammu, *Visvavijnanakosham*, vol. 8 (Kottayam: Sahitya Pravarthaka Co-operative Society, 1972), 179,

⁹⁴ T.P. Kuttiammu, "The Mosques of Kerala," In: *Splendours of Kerala*, ed. Mulk Raj Anand (Bombay: Marg, 1983), 112-115. Also see Mehrdad Shokoohy, "Architecture of the Sultanate of Ma'bar in Madura, and Other Muslim Monuments in South India", *Journal of the Royal Asiatic Society* 1, No. 1 (1991), 75-92.

⁹⁵ Kuttiammu, "The mosques of Kerala," 114-115.

remembers Gopalakrishnan, son of the contractor, Govindan, who supplied workers to build the Palayam mosque, and a designer of various mosques in Kerala.⁹⁶

While building the Palayam mosque Kuttiammu imagined it to be a modern space of worship. He desired the architecture of a mosque to have facilities for women to offer prayer. “Usually women do not go to mosques for communal prayers. However, these days’ mosques have special facilities for women to offer communal prayers. This trend is increasing” he writes in *Visvijanankosham*.⁹⁷ In a letter written to Palayam Muslim Jamat on 27 December 1967 he suggested the proper utilisation of the facilities built for women in the mosque architecture.⁹⁸ He cited the examples such as Jama Masjid of Old Delhi, and Hazratbal Masjid of Srinagar, for incorporating women in the spaces of worship even in orthodox settings.

The Palayam mosque symbolised the sensibilities of pan-Indian Islamic brotherhood which appeared first time during the Khilafat movement in 1920s. During that time Muslims of Kerala engaged with modernization that happened all over India even as they responded to globally significant movements like the *Islahi* movement. In the backdrop of this, Kuttiammu’s social engagements sought participation of Muslims of Kerala for enhancing nationalism in the post-independent era.

X. Conclusion

This biography of Kuttiammu, an engineer hailing from Kerala, India during the post-independence period, explored how he had a prolific career as an administrator and engineer in which he achieved the appreciation and love of those around him. The initial sections in this biography dealt with the ways in which Kuttiammu became an aspiring individual during his early life. The latter sections observed how his professional life unfolded vignette of struggle for ambitious engineering projects-mainly irrigation projects that intended to change the agrarian structure- that became the building blocks of Kerala modernity in which despite low per capita income the social indicators showed signs of a developed society.

⁹⁶ Interview with Gopalakrishnan on 15-12-2020 at Thiruvananthapuram, Kerala.

⁹⁷ T.P. Kuttiammu, *Visvavijnanakosham*, 184.

⁹⁸ T.P.Kuttiammu, “A Plan for Reorganizing *Jamat*,” In: *Kuttiammu Sahib Smaranika* (A memoir of Kuttiammu Sahib), ed. Savan Kutty (Thiruvananthapuram: Muslim Association Trivandrum, 1989), 69-75. Kuttiammu suggested building a *zanana khana*, a separate section of the mosque for the use of women.

We also observed how he could become a part and parcel of India becoming sustainable in the production of food. Moreover, this biography is relevant as it unfolds the life of various engineering projects that ask for recognition for India in the world with its wonderful infrastructure, high political ambition, and pluralistic life. Mosques Kuttiammu built symbolize the blend of tradition and modernity in a way making them ideal spaces of worship.

In his personal life he adhered to discourses on Islam put forwarded by KNM in Kerala which attempted protestantisation of Islam by going back to Quran and hadith to purify religion. He was very much the product of his times: he inherited many ideas of religion from his precursors like Vakkom Moulavi who engaged in the reform of Islam, and was influenced by discursive field in which many Muslim politicians continued to engage in discussions regarding the elimination of superstitions, refinement of women's role in society, and advancement of Muslim community through education. He was different from any other government servant since he blended his ordinary activities with the knowledge he attained through religious and secular learning. He was a true leader.

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