

**COLONIALISM AND URBAN SANITATION:  
THE CITY OF CALICUT, 1860 - 1947**

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in  
HISTORY

*Submitted by*  
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2024**

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I, Jasriya Yoosof. U.V, do hereby declare that the work presented in the thesis entitled 'COLONIALISM AND URBAN SANITATION: THE CITY OF CALICUT, 1860 – 1947' is based on the original work done by me under the guidance of **Prof. (Dr.) M.P. Mujeebu Rehiman**, Professor, Department of History, University of Calicut and has not been included in any other thesis submitted previously for the award of any degree. The contents of the thesis are undergone plagiarism check using iThenticate software at C.H.M.K. Library, University of Calicut, and the similarity index found within the permissible limit. I also declare that the thesis is free from AI generated contents.

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This is to Certify that the thesis entitled '**COLONIALISM AND URBAN SANITATION: THE CITY OF CALICUT, 1860 - 1947**' is a bonafide record of research work done by Jasriya Yoosof. U.V, submitted to the University of Calicut in partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy in History and that the thesis has not previously formed the basis for the award of any Degree, Diploma, Fellowship or other titles and the thesis is a record of independent and original work on the part of the candidate under my guidance.

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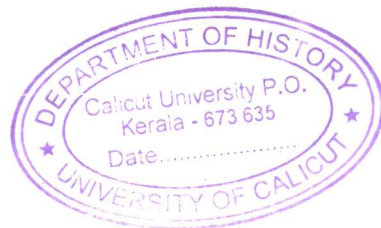
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## **Abbreviations**

MDG	Malabar District Gazettee
NNRP	Native News Paper Report
RAK	Regional Archives Kozhikode
RF	Revenue Files
RFF	Revenue Folded Files
SR	Settlement Register

## **Colonialism and Urban Sanitation: The City of Calicut, 1860-1947**

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### **Abstract**

The study aims to explore the journey of Calicut city as an urban space in the colonial context. The period of the study is from 1860 to 1947 as the 1860s witnessed the introduction of sanitary reforms in colonial India and the period of study ends in 1947, as that year witnessed the culmination of colonial rule. It analyzes the sanitary policies adopted in India under the British regime and how the colonial state used hygiene and sanitation as ideological tools for the subjugation of the local population. The colonial state introduced sanitation as part of the preventive measures against epidemics. The thesis is structured into five chapters excluding the introduction and conclusion.

Introduction chapter deals with the objectives, research questions, methodology, review of literature, chapterisation etc. The first chapter 'Making of the City Space in Colonial India,' discusses urbanization and the process of creating colonial urban cities during that period. The introduction of urban amenities and other initiatives in urban spaces is mentioned. The second chapter, 'Sanitary Awareness: Origin and Its Prolifereation from Britian to Colonial Indian Urban Spaces,' elaborates on various scientific achievements that occurred in the realm of health and medicine. It also explains how these achievements contributed to the proliferation of sanitary knowledge in colonial Indian urban spaces. The third Chapter, 'Colonial Sanitary Reforms as Part of the Public Health Policies', analyzes the motives and vested interests behind the Western public health policies introduced by the colonial government. The fourth chapter, 'Calicut: Emergence and Transformation of a Colonial City,' explores the European interventions in the city of Calicut and the emergence of Calicut as a colonial city. The fifth chapter, 'Debates and Discourses on Sanitation in Colonial Calicut', explores the municipal administration that was responsible for the sanitary works in colonial Calicut.

The conclusion includes the main findings of the study. Hygiene and sanitation became some of the ideological tools of the colonial state to control, subjugate and oppress the colonized. The sanitary measures were used as a tactic to maintain a distance from the physical bodies of the local population who were considered the breeding ground for several epidemics.

**Keywords:** colonialism, urban history, colonial Calicut, hygiene, sanitation.



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**കോളനിവൽക്കരണവും നഗര ശുചീകരണവും: കോഴിക്കോട് നഗരം,  
1860-1947**

ജസ്‌രിയ യൂസഫ് യു.വി.  
ഗവേഷക

പ്രൊഫ. (ഡോ.) മുജീബ് റഹിമാൻ  
ഗവേഷണ മാർഗ്ഗദർശി

**സംഗ്രഹം**

കോളനിവാഴ്ചക്കാലത്തെ കോഴിക്കോടിന്റെ നഗര ശുചീകരണ ചരിത്രമാണ് ഈ പഠനത്തിലൂടെ അന്വേഷിക്കുന്നത്. 1860 മുതൽ 1947 വരെയുള്ള കാലഘട്ടത്തെയാണ് പഠന വിധേയമാക്കിയിരിക്കുന്നത്. 1860കളിലാണ് കൊളോണിയൽ ഇന്ത്യ പല തരത്തിലുള്ള ശുചീകരണവുമായി ബന്ധപ്പെട്ട പരിഷ്കാരങ്ങൾക്ക് സാക്ഷ്യം വഹിക്കുന്നത്. അതിനാൽ തന്നെ ആ വർഷത്തിനു അതിന്റേതായ പ്രാധാന്യമുണ്ട്. ഇന്ത്യയിലെ കൊളോണിയൽ ഭരണത്തിന്റെ അവസാനം കുറിക്കുന്ന വർഷമാണ് 1947. അതിനാലാണ് ഈ പഠനത്തിന്റെ അവസാന വർഷമായി 1947 നെ തിരഞ്ഞെടുത്തത്. ബ്രിട്ടീഷ് ഭരണത്തിന്റെ കീഴിൽ എന്തൊക്കെ തരത്തിലുള്ള ശുചീകരണ പ്രവർത്തനങ്ങളാണ് കൈക്കൊണ്ടതെന്നും ഇന്ത്യക്കാരെ അടിച്ചമർത്താൻ എങ്ങനെയാക്കിയാണ് ബ്രിട്ടീഷ് ഭരണകൂടം വൃത്തി, ശുചീകരണം എന്നിവയെ ഉപയോഗിച്ചതെന്നും ഈ പഠനത്തിലൂടെ അപഗ്രഥിക്കുന്നു. പകർച്ചവ്യാധികൾക്കെതിരായ പ്രതിരോധ നടപടിയെന്ന രീതിയിലാണ് ബ്രിട്ടീഷ് ഭരണകൂടം ഇന്ത്യയിൽ ശുചീകരണ പരിഷ്കാരങ്ങൾ നടപ്പിലാക്കിയത്.

നിലവിലെ പഠനം അഞ്ചു വ്യത്യസ്ത അധ്യായങ്ങളായി ക്രമീകരിച്ചിരിക്കുന്നു. ആമുഖവും ഉപസംഹാരവും വേറെ തന്നെ നൽകിയിരിക്കുന്നു. ആമുഖം ഉൾക്കൊള്ളുന്നത് പഠന ലക്ഷ്യങ്ങൾ, ഗവേഷണ ചോദ്യങ്ങൾ, ഗവേഷണത്തിനുപയോഗിച്ച രീതിശാസ്ത്രം, സാഹിത്യ അവലോകനം, അധ്യായ ഘടന എന്നിവയാണ്. 'കൊളോണിയൽ ഇന്ത്യയിലെ നഗര രൂപീകരണം' എന്ന ആദ്യ അധ്യായത്തിൽ എങ്ങനെയാക്കിയാണ് കൊളോണിയൽ നഗര രൂപീകരണം നടന്നതെന്ന് അപഗ്രഥിക്കുന്നു. വിവിധങ്ങളായ എന്തൊക്കെ സൗകര്യങ്ങളാണ് ഇത്തരം കൊളോണിയൽ നഗര പ്രദേശങ്ങളിലുണ്ടായിരുന്നത് എന്ന് കൂടി പരിശോധിക്കുന്നു. 'ശുചീകരണ അവബോധം: ഉദയവും അതിന്റെ കൊളോണിയൽ ഇന്ത്യൻ നഗര പ്രദേശങ്ങളിലേക്കുള്ള കടന്നു വരവും' എന്ന അധ്യായത്തിൽ ആരോഗ്യ മേഖലയിൽ, ശാസ്ത്രീയമായി ഉണ്ടായി വന്ന കണ്ടുപിടുത്തങ്ങൾ എങ്ങനെ സ്വാധീനം ചെലുത്തിയെന്നും അവ പിന്നീട് പകർച്ചവ്യാധി പ്രതിരോധ പ്രവർത്തനങ്ങൾക്ക് എങ്ങനെ മുതൽക്കൂട്ടായി മാറിയെന്നും പരിശോധിക്കപ്പെടുന്നു.

'പൊതുജനാരോഗ്യത്തിന്റെ ഭാഗമായ കൊളോണിയൽ ശുചീകരണ പരിഷ്കാരങ്ങൾ' എന്ന മൂന്നാം അധ്യായം കൊളോണിയൽ ഭരണകൂടം പാശ്ചാത്യ രീതിയിലുള്ള ചികിത്സ സമ്പ്രദായങ്ങൾ പരിചയപ്പെടുത്തിയതിന്റെ പിന്നിലുള്ള വിദേശാധിപത്യ ഭരണകൂടത്തിന്റെ ശുഭ്രതാൽപര്യങ്ങളും ലക്ഷ്യങ്ങളും എന്തായിരുന്നുവെന്ന് പരിശോധനാ വിധേയമാക്കുന്നു. നാലാം അധ്യായമായ 'കോഴിക്കോട്: ഒരു കൊളോണിയൽ നഗരത്തിന്റെ ജനനവും രൂപാന്തരവും' പരിശോധിക്കുന്നത് കൊളോണിയൽ നഗരം എന്ന രീതിയിലുള്ള കോഴിക്കോടിന്റെ വളർച്ചയെയാണ്. വിവിധ യൂറോപ്യൻ ശക്തികളുമായി കോഴിക്കോടിനുണ്ടായിരുന്ന

സമ്പർക്കത്തെപ്പറ്റി പരാമർശിക്കുന്നു. അഞ്ചാം അധ്യായമായ, 'കൊളോണിയൽ കോഴിക്കോടിന്റെ ശുചീകരണ പ്രവർത്തനങ്ങളുമായി ബന്ധപ്പെട്ട ചർച്ചകളും സംവാദങ്ങളും' പരിശോധിക്കുന്നത് കോഴിക്കോടിന്റെ നഗരകാര്യഭരണ സംവിധാനത്തെക്കുറിച്ചും അവ ശുചീകരണ പ്രവർത്തനങ്ങളിൽ എന്തൊക്കെ തരത്തിൽ പങ്കാളികളായി എന്നതിനെക്കുറിച്ചുമാണ്.

പഠനത്തിന്റെ പ്രധാന കണ്ടെത്തലുകളാണ് ഉപസംഹാരത്തിൽ നൽകിയിരിക്കുന്നത്. വൃത്തി, ശുചീകരണം എന്നിവ കോളനിവൽക്കരണത്തിന്റെ ഒരു ഉപകരണമായി വർത്തിച്ചു. അതു വഴി ജനതയെ നിയന്ത്രിക്കാനും കീഴടക്കാനും അടിച്ചമർത്താനും കൊളോണിയൽ ഭരണ സംവിധാനത്തിന് കഴിഞ്ഞു. തദ്ദേശീയരായ ജനങ്ങളെ അല്ലെങ്കിൽ അവരുടെ ശരീരത്തെ പകർച്ചവ്യാധികൾക്ക് കാരണമായി തീർന്നേക്കാവുന്ന പ്രജനന നിലമായാണ് കൊളോണിയൽ ഭരണകൂടം വീക്ഷിച്ചത്. അതിനാൽ തന്നെ ശുചീകരണ പ്രവർത്തനങ്ങളെ തദ്ദേശീയരായ ജനതയിൽ നിന്ന് അകലം പാലിക്കാനുള്ള ഒരുപാധമായി സ്വീകരിച്ചു.

കീവേർഡ്സ്: കോളനിവൽക്കരണം, നഗര ചരിത്രം, കൊളോണിയൽ കോഴിക്കോട്, വൃത്തി, ശുചീകരണം.

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## INTRODUCTION

Cultural domination was one of the psychological effects of colonialism, which was experienced by all former colonies of the British Empire. Military occupation of a weaker section of people by a far more superior power can happen very easily through coercion. In other words, capturing and colonizing the physical body is simple, but colonizing and interfering with the thought process of those colonized subjects and inflicting upon them the inferiority complex is more layered and twisted to be understood. The gradual process through which the British instilled this in the Indian minds and how it is still prevalent in Indian society is fascinating. The British followed several means towards attaining this objective. One of the significant ideological aspects through which the colonial supremacy over the mindset of Indians was established through the introduction of Victorian notions of hygiene and cleanliness. The sanitary policies introduced by the British in India as a part of the public health endeavours following these ideological moorings is the subject matter of the present study titled ‘Colonialism and Urban Sanitation: The City of Calicut 1860-1947’. It is an attempt to study how the colonial sanitary policies acted as an ideological tool towards the subjugation of the natives. It also tries to analyse the urban sanitary history and how sanitation and hygiene were adopted and practised in the urban spaces like towns or cities.

Hygiene simply means the clean condition that enables the people to lead a healthy life, and as from very old times itself, humans understood the indestructible bond between it and health. Thus, from an ancient past of India itself, we can see a sanitary consciousness. The first evidence of the history of sanitation of the Indian people can be traced back to the Indus Valley Civilization, as they were well versed

with the conservation of water, drainage systems for the removal of waste water, the presence of toilets and bathrooms in the housing complex etc. and till modern times, many other cities lack these amenities of the Indus urban life.<sup>1</sup> In the words of R C Majumdar, in the Indus valley civilization, “most of the houses had a well, a bathroom, and a good system of covered drainage connected with that of the street. All these as well as the main buildings were made of well made burnt bricks, which have been excellently preserved to this day and would be considered highly creditable even according to our modern standards.”<sup>2</sup> In the context of the sanitary history of Indus, we also have some other details regarding the toilet system used there, and a toilet case has been found at Harappa.<sup>3</sup> The toilet jars used in the Harappan period were made of ivory, metal, pottery, stone etc and small toilet tables were also there, which were specially designed for women.<sup>4</sup>

After the disintegration of the Indus glory also, India had its understanding of sanitation, and many works on architecture draw attention towards the specific subject matter. *Silpasasthra* is a work on architecture, according to which there were specific areas for the living of various communities in the cities, and in the context of sanitation in the ancient Indian cities, it mentions the living condition of *Chandalas*, who lived a *krosa*<sup>5</sup> or two away from the city.<sup>6</sup> *Mayamata*, an ancient Indian text on housing and architecture, mentions that the *Chandalas* were the sweepers and scavengers of the

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<sup>1</sup> D D Kosambi, *The Culture and Civilization of Ancient India in Historical Outline*, Routledge and Kegan Paul Ltd, London, 1965, p.54.

<sup>2</sup> R C Majumdar, *Ancient India*, Motilal Banarsidass, Delhi, 1968, p.21.

<sup>3</sup> K Oberoi, ‘Toilet in Ancient India’ in, Dr. Shrinivas Ritti and Dr. B R Gopal (Ed.), *Studies in Indian History and Culture*, Prof. P B Desai Felicitation Committee, Karnatak University, Dharwar, 1971, p.505.

<sup>4</sup> R C Majumdar (Ed.), *The History and Culture of Indian People*, Bharatiya Vidya Bhavan, Bombay, 1971 (1951), p.179.

<sup>5</sup> A land measuring unit used to be in the ancient period and according to *Arthasasthra*, *krosa* is about 3000 meters.

<sup>6</sup> K Rangachari, ‘Town Planning and House Building in Ancient India’, in Dr. Raj Kumar (Ed.), *Essays on Ancient India*, Discovery Publishing House, New Delhi, 2003, p.259.

town, but Manu refers to them as executioners who carry out the capital punishment.<sup>7</sup> *Chandalas* were not allowed to live in Aryan towns and villages.<sup>8</sup> Old scriptures like the *Naradiya Samhita* mentions the fifteen duties of the slaves and the disposal of human excreta as one of them. The *Vajasaneyi Samhita* attributes the above duty to the *Chandals* and the *Paulkasa* slaves.<sup>9</sup> The Chinese traveller Hsuan Tsang who visited India during the time of Harsha, refers to the living condition of the untouchables, such as scavengers. They lived outside the villages, and when they entered the town, they needed to announce their entry by shouting loudly so the other people could keep distance from them in order to not get polluted by their approach.<sup>10</sup>

The *Arthasasthra* gives very precise details for the layout of cities, and archaeological excavations carried out in modern times tend to confirm that a square or rectangular grid plan was usually preferred by those city planners. The position of cities seems to have been consistently, and for obvious reasons, were near the banks of a river.”<sup>11</sup> This proximity to the river or the water body can be viewed in the context of the importance they had given to the sanitation of the town. “Wells could be according to the *sasthras* dug anywhere without any restriction: for a copious supply of water is essential for the Hindu in his daily life. Wells should be dug where there is a good underground supply, and the thoughtful *silpins*<sup>12</sup> would not impose any conditions about the places of their locations.”<sup>13</sup> Tanks were another source of water for purposes like washing and drinking water, so tanks were constructed for rainwater

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<sup>7</sup> Ibid.

<sup>8</sup> Michael Edwardes, *Everyday Life in Early India*, B T Batsford Ltd, London, 1969, p.27.

<sup>9</sup> Bindeshwar Pathak, *Road to Freedom-A Sociological Study on the Abolishon of Svavenging in India*, Motilal Banarsidass Publishers, Delhi, 2003 (1991), p.37.

<sup>10</sup> R S Sharma, *India's Ancient Past*, Oxford University Press, New Delhi, 2005, pp.261-262.

<sup>11</sup> Michael Edwardes, Op. Cit., p.74-75.

<sup>12</sup> Craftmen who have knowledge of *silpasasthra*.

<sup>13</sup> K Rangachari, Op. Cit., p.262.

harvesting as well, as the stored water may be helpful in the non-rainy season. “With a climate, normally dry it was only necessary to obey the dictates of cleanliness to ensure healthy living. Where there existed a good irrigation tank, this was retained for the purpose of water supply, usually deepened and embanked to ensure cleanliness, while other tanks of lower levels provided accommodation for washing and bathing.”<sup>14</sup>

Kautilya in *Arthasasthra* has also put forward some suggestions regarding the construction of houses, and “considerate neighbourliness is apparently the first and last principle of his code.”<sup>15</sup> Various rules were mentioned with regard to this in mind, as it was not allowed to build a drain or a pit for dirty water removal from the interior of a house, if it is less than three feet from the neighbour’s wall. Even though *Arthasasthra* explained all these details in the context of sanitation, there was no mention about the the employment of scavengers by the state for the removal of night soil, and at the same time, the text sheds light on the prohibition of open defecation in the city spaces.<sup>16</sup>

The Maurya capital of Pataliputra mentioned by Megasthenese indicates that it “occupied a narrow strip of land along the river Ganges measuring about nine miles long by only one and a half miles broad.”<sup>17</sup> The city was “surrounded by an immense wall of timber with loopholes for archers and a deep, wide moat.”<sup>18</sup> ...The moat itself functioned both as a reservoir and a drain and must have been the source of many

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<sup>14</sup> Ibid., p.263.

<sup>15</sup> Dr. Y D Sharma, ‘Ancient House Planning’, in Dr. Raj Kumar (Ed.), *Essays on Ancient India*, Discovery Publishing House, New Delhi, 2003, p.289.

<sup>16</sup> B N Srivastava, *Manual Scavenging in India*, Concept Publishing Company, New Delhi, 1997, p.15.

<sup>17</sup> Michael Edwardes, *Op.Cit.*, p.75.

<sup>18</sup> Moat is a deep ditch with water that surrounds a palace or city to provide it with defense.

diseases.”<sup>19</sup> The knowledge about the water-borne diseases may have been the reason why Megasthenese made such remarks about the city of *Pataliputra*.

The city was divided among sixteen sections, and these “sections were criss-crossed by other streets and lanes. The main streets were very wide, paved with cobbles, and had gutters running down the middle. But the side streets and lanes were narrow, the latter dark and dirty. The lanes were for the use of untouchables- the sweepers and removers of refuse- men too unclean to be allowed to mingle with the upper classes on the main streets.”<sup>20</sup> The site of the house was selected based on the availability of water, and each family had its own private water supply. The house of the rich people had a number of buildings separated from the main house, like the toilets, guest rooms, store rooms and the kitchen. The most extravagant people also had a steam bath.<sup>21</sup>

Megasthenese mentions the presence of parks and gardens where the rich spent their leisure time. “Naturally, in a hot climate gardens, and parks required a great deal of water to sustain them, and there are descriptions of ponds, fountains, and elaborate bathing pools that not only supplied water for the garden but also allowed the rich to cool themselves in warm weather.”<sup>22</sup> He adds, “as well as private gardens, there were also public ones with bathing pools and fountains....As the population of the town expanded, suburbs grew up outside the walls, and the lower classes were encouraged to settle there. In these suburbs were the situated butcher’s shops, cemeteries, and places of execution.”<sup>23</sup>

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<sup>19</sup> Michael Edwardes, Op.Cit.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid., pp. 78-80.

<sup>22</sup> Ibid., p.82.

<sup>23</sup> Ibid.

Many such instances about sanitary knowledge can be culled out from the book of ancient India and also during the time of the Mughals. Babur was astonished with the way the Indian population needed very few kinds of facilities for habitation. “When they were shifted to a new place, they were content with some sort of bore well or pool or a tank of water for their needs, without requiring elaborate constructions like canals and bridges.”<sup>24</sup>“Among the contributions of Muslims towards Indian town planning may be their beautiful and spacious mosques, their gateways probably the use of fountains, domes, a new arch, roofed tanks, baths etc. and all these went to enrich an Indian city. Big reservoirs were laid within very near the city for the supply of water, especially in case of siege or scarcity of rain”<sup>25</sup>

A social division among the city dwellers in the context of sanitation and hygiene can be seen in the above discussed instances, like the ancient Indian cities, as certain sections of people, like scavengers, leather dressers, beggars etc were living a life of segregation from the rest of the population. They were living on the outskirts of the town.<sup>26</sup> The cleanliness and the waste management of an urban town were undertaken by the state during this time. It can be viewed from the presence of a scavenging class: as they were employed by the institution. But the biggest irony is that the people who were keeping the cities clean were living a life of segregation from the rest because of their occupation and the subsequent lower status assigned due to the nature of their job.

Thus the colonial construction that the sanitary knowledge was introduced to Indians by them was a weak argument, as we can clearly see from the above mentioned instances that the sanitary activities were present in India from the Indus civilization itself, and the later ruling classes were also given a significant amount of

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<sup>24</sup> K M Ashraf, op.cit., p.195.

<sup>25</sup> Ibid., p.198.

<sup>26</sup> Ibid., p. 200.

attention towards it in the urban milieu at least. Hygiene as an ideological tool was used by the caste system in India to differentiate and subjugate the lower caste population. The segregation and the inhuman treatment received by the 'cleaning section' of society are also visible in the ancient and medieval periods of Indian history, and unfortunately, which is still prevalent today. The notion of purity and pollution of the caste system in portraying the other as inferior is also used in India by colonialism in manipulating the minds of the Indian subjects, and sanitary reforms under the public health policies were one of the strong ideological machinery used to create this inferior 'other'.

### **Objectives of the study**

The primary objective of the present study is, to critically analyse the relationship between health, hygiene, and sanitation in Calicut city during the colonial period and to examine how the municipal administration of the city adopted various policies towards sanitary reforms in the background of public health. It also analyses the sanitary policies adopted in India under the British regime and the introduction of sanitation measures as part of the preventive medicine in the history of Britain in their fight against the control of epidemics.

### **Sources and Methodology**

The present study explores the history of sanitation in the colonial city of Calicut as part of understanding public health. For the reconstruction of that colonial era in the history of Calicut, a wide range of archival sources from the Regional Archives Kozhikode and the State Archives Madras have been analysed and interpreted. Various laws and legislations related to public health, the Malabar District Gazette containing the day-to-day activities of the Calicut municipality and the proceedings of the municipal council, revenue files under the category of folded and unfolded carrying information regarding sanitation, District Gazetteers of the Malabar

district, manuals etc. are used for the present study. Secondary sources such as books, newspaper reports, articles etc. were also used.

The methodology used in the study is inter-disciplinary and analytical and interpretative in nature. Geographical and sociological view points along with scientific and medical knowledge were also incorporated, as the study discussed the theories of disease and the scientific advancements that happened in the realm of health and medicine.

### **Period of the Study**

The period of the present study is from 1860 to 1947. The 1860's witnessed the introduction of sanitary reforms in colonial India as part of the healthcare policies adapted with an objective of annihilation of epidemics. The whole of colonial India, including Malabar, and especially the urban spaces of Calicut, began to experience sanitation with an institutionalised framework from that time onwards. Thus, the year 1860 is chosen as the starting point of the study. The year 1947 marked the culmination of colonial rule in India, and from a historic point of view, the year has a great significance. It is also having a closure to the present study as the year marked the culmination of colonial rule. Thus, the year is chosen as the concluding year of the study.

### **Relevance of the Study**

The medical and public health endeavours and the subsequent events that happened in the colonial period are fascinating areas of study, and many scholars have worked extensively on the public health measures adopted during the colonial regime. Sanitation as part of the public health policies also got its due credit in those works, even though an exclusive work on sanitation on a city in Kerala is rare and the majority of studies on this aspect of public health are about Bombay and Calcutta during its British occupation. The Malabar region and especially Calicut as an urban centre of

administration of the British period lacks significant studies on its history of health and sanitation, making this study a relevant one.

### **Review of Literature**

As the present study is on the history of sanitation in the colonial period, a historiographical review of similar kinds of studies may provide significant details of the problem. Sanitation was understood by the British as an important tool for the eradication of epidemic diseases, thereby making it an important subsidiary in the public health measures. Various historians who studied the medical and urban history of colonial India had contributed to the reconstruction of this aspect of sanitation. Anthony D King in his work, *Colonial Urban Development Culture, Social Power and Environment* (1976), tries to discuss how sanitary matters such as cleanliness, water supply etc. had a major role to play in the urban construction of colonial India. He writes, “the major environmental variables affecting rates of sickness and health were perceived as the nature, quality, and temperature of the local air and water, the presence of surrounding vegetation, and the relationship between these and the persons in the vicinity.”<sup>27</sup>

He further states that the increasing mortality rate of the European soldiers in India was also attributed to the climate prevalent here, and the elevation in the places chosen for residential purposes was to escape from these diseases. He also makes the point that the ethno-medical theories of the 1860’s also had a huge impact on this decision.<sup>28</sup>“From then on it was recommended that, subject to strategic consideration, one third of the establishment of European troops in India should preferably be permanently located in the hills. On similar criteria, cantonments in malaria-prone

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<sup>27</sup> Anthony D King, *Colonial Urban Development Culture, Social Power and Environment*, Routledge and Kegan Paul, London, 1976, p.108.

<sup>28</sup> Ibid., pp.108-109.

areas were to be moved to 'healthier' sites, defined according to their characteristics of air, water, and vegetation."<sup>29</sup>

The author also mentioned how the theory of poor and polluted air causing diseases was the reason they started to fear that the proximity of their settlement areas to the native town is enough for them to catch a disease without any closer contact as the disease can spread through air. This inspired them to keep their distance from the native population and chose a more 'healthier site', and this preferably healthier site was always far away from the native population, and instead of this escaping for their selfish and prejudiced notions regarding the natives, the authorities should have worked for the betterment of the living conditions of the 'unhealthier' sites also where the indigenous people lived.

David Arnold, in his article titled as 'Touching the Body: Perspectives on the Indian Plague 1896-1900'(1987), compares the western medical practices in colonial India to the analogy of Michael Foucault, where he compares hospitals and prisons as two coins of state power to coerce the subjects. He was of the opinion that the colonial public health policies, including sanitation in India, were mainly for the Europeans who resided here from the start, and in the later part of the nineteenth century, attention began to the native population only because of the new medical theories asking for a wholesome attitude in the activities of disease prevention. Arnold further mentions that the loss in the economic ambitions of the imperial power due to the continuous presence of epidemics was another reason behind the medical and sanitary interventions among the natives.<sup>30</sup>

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<sup>29</sup> Ibid., p.109.

<sup>30</sup> David Arnold, 'Touching the Body: Perspectives on the Indian Plague, 1896 - 1900' in, Ranajit Guha (ed.), *Subaltern Studies Writings on South Asian History and Society*, Vol. V, Oxford University Press, New Delhi, 1999 (1987), pp. 58-61.

Another important work that discusses the significance of sanitation is the work of Veena Talwar Oldenburg entitled, *The Making of Colonial Lucknow* (1989). The author has extensively written a chapter titled, 'The City Must be Clean', which discusses many facets of incidents that occurred in the city of Lucknow during the colonial period in the context of health and sanitation. She opines that, "while the battle against disease was fought on every front, there was a profound difference in the way the problems of ill health were handled in the metropolitan and colonial cities, even though the remedies applied appear similar on the surface. In Britain, pauperism and squalor were seen as the root causes of disease. The drive to make the physical environment more salubrious was supplemented by progressive legislation that eventually saw the emergence of the welfare state. Concern for the quality of life of the people was preponderant, and the state spent an ever increasing proportion of its revenue on systematic relief to the needy."<sup>31</sup>

As far as the author is concerned, the colonial regime never showed the same kind of treatment in the colonies and the areas outside the limit of the European settlement where one could reverse the idea of sanitation. Oldenburg says that the famous sanitarian in England, Chadwick, also wanted to expand the sanitary jurisdictions to be more than those of the municipal ones. All these sanitary rules and regulations with the municipal laws and bylaws were only having limited success in the cities, but they equipped the colonial regime to interfere and control even the private matters of the people.<sup>32</sup> She further states that, "To make the city conducive to colonial exploitation, the authorities through, the formation of municipal institutions, exercised a great measure of social control. Even the citizens customary ways of

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<sup>31</sup> Veena Talwar Oldenburg, *The Making of Colonial Lucknow 1856-1877*, Oxford University Press, Delhi, 1989, pp. 142-143.

<sup>32</sup> Ibid., p. 143.

defecating, associating with prostitutes, drinking, burying their dead, or building houses were not left untouched.”<sup>33</sup>

Poonam Bala, in her work, *Imperialism and Medicine in Bengal A Socio-Historical Perspective*, (1991), examines how the public health policies in Britain were hugely successful in the eradication of the epidemics there. Although Bala was not in favour of the work of the British administration in India on the same grounds, and as far as she is concerned, three major reasons were behind this failure. According to her, government objectives were narrower in their vision as the concern was the European population and the army. The protection of trade and commerce from the recurrent epidemics was also fueled by this. The second reason was the lack of sensitive policy making that was considerate of the prominent social and religious beliefs of the time. People were reluctant to join hands with the rulers in tackling diseases because of these insensitive policies. The third reason was the inability of the government to directly engage in the health situation due to the lack of limited knowledge regarding the cause of many diseases and the practical information regarding their cure and treatment.<sup>34</sup> She further moved on to the sanitary history of Britain, and the medical progress happened in the study of the causative factors behind diseases. She was of the opinion that the sanitary reforms of Britain were in connection with its urban growth of the town areas, and in the case of India, sanitation was for the army’s health in the initial years. The 1860’s witnessed the sanitary measures under the public health policies and legislation used in this field in Britain being introduced in India also with some changes.<sup>35</sup>

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<sup>33</sup> Ibid., pp. 143-144.

<sup>34</sup> Poonam Bala, *Imperialism and Medicine in Bengal A Socio-Historical Perspective*, Sage Publications, New Delhi, 1991, p.93.

<sup>35</sup> Ibid., pp. 95-103.

David Arnold, in one of the most celebrated works on the health and diseases of colonial India, *Colonizing the Body State Medicine and Epidemic Diseases in Nineteenth Century India* (1993), elaborates on how the 1860's saw the transformation of western medicine in colonial India to change its shape and form into public health, and in spite of being its roots in the European soil, as he writes, "western medicine rapidly assumed a position of clear authority over Indian medicines and Indian bodies."<sup>36</sup>The army was the first in an Indian context to experience the sanitary reforms, and in the course of time, jails were also viewed as an exceptional area to enforce sanitary provisions because of the confined nature of it under the regime. The army's improving health condition was seen as the result of sanitation, achieved through the exclusivity it kept from the native areas.<sup>37</sup>Arnold argues that the vaccination programme for the small pox epidemic in India was conflicting with the cultural belief of the people regarding the presence of a goddess or deity who was responsible for it and thus faced a rigid reaction from the native population.<sup>38</sup>As far as Arnold is concerned, in the context of colonial India, medicine was utilised in the colonization process, which facilitated colonialism and made western medicine as a part of their hegemonic project.<sup>39</sup>

Sumit Guha in his work, *Health and Population in South Asia From Earliest Times to the Present* (2001), discusses the relationship between sanitation, hygiene, and the mortality rate among the British army in India.<sup>40</sup>He surveys the food habits and the housing facilities of the European army personnel through a statistical analysis of the well-maintained data stored by the European administration on them and says

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<sup>36</sup> David Arnold, *Colonizing the Body State Medicine and Epidemic Disease in Nineteenth-Century India*, University of California Press, Berkeley, 1993, p. 59.

<sup>37</sup> *Ibid.*, pp. 113-114.

<sup>38</sup> *Ibid.*, p. 157.

<sup>39</sup> *Ibid.*, pp. 293-294.

<sup>40</sup> Sumit Guha, *Health and Population in South Asia From Earliest Times to the Present*, Permanent Black, Ranikhet, 2001, p. 110.

that these two aspects were very well taken care of by the administration. But still, the European mortality rate was in an alarming position, and there the introduction of sanitation programmes was started to ensure them a good disease free life in India. Guha opines that the work of Nightingale on army sanitation is also note worthy during this period.<sup>41</sup>He writes, “sanitation meant the removal of filth and refuse, the purification of water, and the provisions of ample ventilation in all dwelling places, so as to dilute the effects of lingering miasmata.<sup>42</sup>Sexually transmitted diseases were sought to be checked by giving cantonment magistrates the power to regulate prostitution, as well as to maintain the sanitary state of the area under their charge.”<sup>43</sup>The European soldiers’ contact with the native population was regulated with the Contagious Diseases Act in the coming years.

Mridula Ramanna, in her work on the public health conditions of colonial Bombay, titled *Western Medicine and Public Health in Colonial Bombay 1845-1895* (2002), elaborately discusses the sanitation policy that was put forward by the colonial administration in India. She explains the contributions of some of the colonial officers in Bombay and the work done by the municipal council on matters related to sanitation. She also gives credit to the vernacular press of the period for criticizing the colonial authorities on the partial treatment of introducing sanitation to the European areas of the town.<sup>44</sup>As far as Ramanna is concerned, an interventionist approach of the regime was visible only during the epidemic, and in the context of sanitation, European civilians and soldiers were the primary concern.<sup>45</sup>According to the author, “British policy makers had no doubt about the superiority and efficacy of western

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<sup>41</sup> Ibid., pp. 116-117.

<sup>42</sup> The term, miasma means pollution in ancient Greece.

<sup>43</sup> Sumit Guha, Op. Cit., p.117.

<sup>44</sup> Mridula Ramanna, *Western Medicine and Public Health in Colonial Bombay 1845-1895*, Orient Longman, Hyderabad, 2002, p. 83.

<sup>45</sup> Ibid., p.234.

medicine in dealing with diseases that they regarded as endemic and peculiar to India. While postulating various theories about the causes of disease, the authorities revealed their impatience with, what was seen as, apathy, superstition, fatalism, prejudice, and ignorance.”<sup>46</sup>The social and cultural life of the Indians was viewed with animosity, and their lifestyle was blamed for the presence of epidemics. The civilizing mission of the colonizers came from the superiority they assumed to the western medicinal practices and sanitation and thereby believed in the sanitising of the Indians.<sup>47</sup>She further argues that the the frequent presence of various diseases in the nineteenth century in India was attributed by the British regime to the lack of hygiene and sanitation of the Indians.<sup>48</sup>

According to Mark Harrison and Biswamoy Pati, the two important authorities on the public health history of colonial India, the first major initiative in sanitary reform<sup>49</sup>, urban planning, and the construction of hospitals and dispensaries happened in colonial Calcutta.<sup>50</sup>External pressure was attributed by them as the main driving forces behind the colonial machinery of sanitary advancement in colonial India as, “quarantine in the Red Sea, the Suez Canal and the Mediterranean damaged colonial trade, interrupted mail, and caused great inconvenience, whether for Europeans on leave or pilgrims on the Haj.”<sup>51</sup>According to them this stagnation of British trade activities due to the quarantine imposed on India on ground of its epidemic situation

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<sup>46</sup> Ibid., p. 235.

<sup>47</sup> Mridula Ramanna, ‘Perceptions of Sanitation and Medicine in Bombay, 1900-1914’ in, Harald Fischer Tine and Michael Mann (Ed.), *Colonialism as Civilizing Mission Cultural Ideology in British India*, Wimbledon Publishing Company, London, 2004, p. 204.

<sup>48</sup> Mridula Ramanna, *Healthcare in Bombay Presidency 1896-1930*, Primus Books, Delhi, 2012, p.39.

<sup>49</sup> Mark Harrison and Biswamoy Pati, ‘Social History of Health and Medicine: Colonial India’ in, Mark Harrison and Biswamoy Pati (Ed.), *The Social History of Health and Medicine in Colonial India*, Routledge, Oxon, 2009, p. 2.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

was the actual reason why “the government of India was forced to comply, often unwillingly, with international demands to regulate its shipping, clean up its cities, and establish domestic quarantine in ports under its control.”<sup>52</sup>

Laxman D Satya in his study titled, *Medicine, Disease and Ecology in Colonial India The Deccan Plateau in the Nineteenth Century* (2008), on the colonial public health condition of Deccan, especially in the Berar region, discusses how the British treatment of the epidemic in India revolved around the miasmatic theory, which advocated the role of pollution behind its occurrence. The Europeans were the first priority of western medicine, and it was heavily centred around the concept of racial superiority of the West and the idea of a ‘civilizing mission’. He also criticized the administration, saying that the major works of the sanitary department was in the towns and urban areas, even though the majority of the population was living in the villages.<sup>53</sup>

Tinni Goswami, in her study titled, *Sanitising Society : Public Health and Sanitation in Colonial Bengal 1880-1947*(2011), on sanitation in colonial Bengal, discusses how colonial medicine was used for the absolute subjugation and supremacy over the colonized subjects.<sup>54</sup> According to Goswamy, local government machineries played a major role in the propagation of sanitary reforms in the urban areas, and the duty to conduct these was placed under the municipal bodies.<sup>55</sup> Deepak Kumar in his work titled, *Medical Encounters in British India* (2013), observes that medical theories and debates in the colonial past of India functioned in many ways. He writes, “western medicine functioned as an instrument of control which would swing between

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<sup>52</sup> Ibid.

<sup>53</sup> Laxman D Satya, *Medicine, Disease and Ecology in Colonial India The Deccan Plateau in the Nineteenth Century*, Manohar Publishers, New Delhi, 2008, p. 72-74.

<sup>54</sup> Tinni Goswami, *Sanitising Society : Public Health and Sanitation in Colonial Bengal 1880-1947*, B R Publishing Corporation, Delhi, 2011, p.10.

<sup>55</sup> Ibid., p. 402.

coercion and persuasion, as the exigencies demanded, and as a site for interaction, and often resistance.”<sup>56</sup> According to him, “public health usually refers to organized efforts made under the direction of medical experts for preventing disease and improving the health of the people. Decades before the public health moved public opinion, socio-medical activities had called for strong sanitary measures, even a sanitary despotism. This gave birth to the concept of ‘sanitary engineering’, which gradually developed to denote ‘environmental health’. Environmental health included not only water, sewage, refuge, and so on, but also equally important subjects like ventilations, lighting, safety, housing, town-planning, and rural sanitation. Thus the concept of public health became virtually all-embracing.”<sup>57</sup> Kumar mentioned that in the early British period, public health policies were confined to the European houses and ventilations only, and later it limited only to the compilation of inaccurate vital statistics, vaccination, segregation, etc.<sup>58</sup>

V Sujatha, in her book, *Sociology of Health and Medicine New Perspectives* (2014), explores how far the, “expansion of industrialization and urbanization necessitated different kinds of civic and sanitary arrangements than were previously available in urban centres.”<sup>59</sup> She argues that the ravaging epidemics of the eighteenth and nineteenth centuries called for major interventions in sewage and garbage disposal, amenities for drinking water, and the cleaning of streets and public places.”<sup>60</sup> Sujatha refers to the involvement of colonial government, and its financial

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<sup>56</sup> Deepak Kumar, ‘Probing History of Medicine and Public Health in India A Study of Encounters at Multiple Sites’ in, Deepak Kumar and Raj Sekhar Basu (Ed.), *Medical Encounters in British India*, Oxford University Press, New Delhi, 2013, p. 28.

<sup>57</sup> Ibid., p. 33.

<sup>58</sup> Ibid., p. 35.

<sup>59</sup> V Sujatha, *Sociology of Health and Medicine New Perspectives*, Oxford University Press, New Delhi, 2014, p. 171.

<sup>60</sup> Ibid., p. 171.

aid given to the medical and public health sectors was inadequate and inefficient when compared with its European counterpart in Britain.<sup>61</sup>

As we have seen, the major studies focussing on sanitation and health policies are dedicated to the colonial cities of Calcutta and Bombay, and similar kinds of studies on colonial Malabar, especially the city of Calicut, are comparatively rare. One such work that has embarked on the health policies of colonial Malabar is the work titled, *State Failure and Human Miseries A Study with Special Focus on Famines in British Malabar* authored by M Raghavan. The work explores the deep rooted connection between famine and epidemic and the mortality accompanied in the context of Malabar.<sup>62</sup>It states that the British administration was pre-occupied with their ambition of colonial expansion, and that's why the healthcare advancements and social development issues were side lined. Deteriorated sanitary conditions was the reason for the presence of many diseases, and the allotted budget for health and sanitary programmes was not sufficient.<sup>63</sup>The author further states, "the advisories issued by top officials in the Madras Presidency would show that they had imposed the responsibility to keep the sewage and streets clean on the lower level staff in local administrations, but without funds, the staffs failed to discharge this duty....The poor sanitation in British India was reflected in the food the countrymen ate, houses they lived in, cloths they wore, unclean water they drank, their sewer system, and the human excrement lying scattered all over the ground."<sup>64</sup>

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<sup>61</sup> Ibid., p. 173.

<sup>62</sup> M Raghvan, *State Failure and Human Miseries A Study with Special Focus on Famines in British Malabar*, Kalpaz Publications, Delhi, 2016, p. 181.

<sup>63</sup> Ibid., p. 183.

<sup>64</sup> Ibid.

## **Organization of the Study**

The present study consists of five chapters apart from the introduction and conclusion. The first chapter, titled ‘Making of the City Space in Colonial India’, discusses the urbanization process and the making of the colonial city spaces during the materialization of the British imperialist project of India. The concept of the dual nature of the colonial urban formation and the clear cut demarcation of the native and the European settlement has been discussed. The introduction of the urban amenities and other initiatives in the urban sphere have been analysed in the chapter. The basic nature and characteristics of a colonial town and its design has also been mentioned.

The second chapter, titled ‘Sanitary Awareness: Origin and its Proliferation from Britain to Colonial Indian Urban Spaces’, elaborates on various scientific advancements and discoveries that happened in the field of health and medicine which contributed to the introduction of preventive medicine against epidemics and later how it became the foundation of sanitary reforms. The works of renowned scientists who had contributed in the field of microbiology and how their discoveries influenced the sanitary policies in Britain are analysed here, and the legacy of Edwin Chadwick in the sanitation history of Britain is also examined. The adaptation and the introduction of the British understanding of the sanitary works in the Indian urban spaces are also discussed and compares how it was different from the European counterpart.

The third chapter, titled ‘Colonial Sanitary Reforms as part of the Public Health Policies’ analyses the motives and vested interests behind the western public health policies introduced here by the colonial administration and the context and experiences that led to its inception. The major view points of the famous historians on the Indian experiences of western medical practices were also analysed. The municipal and public health legislation enacted in the context of sanitation and the machineries used to enforce it are discussed in the chapter. The new sanitary and

medical structures, official staffs, etc. which were introduced in an urban setting as part of the public health and sanitary undertakings like the civil dispensaries, hospitals, and sanitary inspectors, etc. were also discussed. All these were new to an Indian city and were part of the colonial urban space in the context of sanitation.

The fourth chapter, titled ‘Calicut: Emergence and Transformation of a Colonial City’, explores the European interventions in the city of Calicut, and also discusses the experiences of the city while the European powers like the Portuguese, Dutch, and French were vehemently trying to hold their position in the land. The engagement of those powers in the urban space of Calicut is explored in this chapter. The British occupation and the emergence of Calicut as a colonial city as the centre of the Malabar district are the main considerations of this chapter. The major difference in space utilization in colonial Calicut and its urban geography and how it was different from the earlier medieval city of Zamorin is also taken into consideration.

The fifth chapter, ‘Debates and Discourses on Sanitation in colonial Calicut’, examines the municipal system of administration that was responsible for the day-to-day affairs of the city of Calicut. The activities and works done by this administrative structure in the context of health and the sanitation of the city during the colonial period are discussed in detail. An important task of the municipal administration was the correct upkeep of conservancy policies and their maintenance. The various steps adopted to achieve this goal and the condition of the employees responsible for doing this job were also discussed in the chapter. The concluding chapter of the present study sums up the important findings of this research.

## CHAPTER I

### MAKING OF THE CITY SPACE IN COLONIAL INDIA

The urbanization process is closely linked to the Industrial Revolution in the European past. Indeed, the modern cities emerged as an outcome of the Industrial Revolution in Europe. As Ranjit Sen writes, “Attention to towns grew in Europe only when consequences of the Industrial Revolution were felt very acutely in the continent.”<sup>1</sup> India also shares its own history of urbanization and city life like any other part of the world, and the living condition of the people residing in the urban space with regard to their day-to-day chores is a fascinating aspect to look upon. India has a long standing history of urbanization from the Indus civilization itself. Thus the urban history of the land cannot be attributed solely to the the British imperialists and their rule, as Indians were well acquainted with town life way before colonial powers invaded the land.

The present chapter tries to analyze the British interference in the making of an urban milieu in the colonial period of our past, as it has its fair share of significance. However, the main question here is: is it so simple of a task to understand about the ‘colonial urbanity’ without considering the impact it had on every aspect of the lives of people who inhabited those spaces. The chapter attempts to understand how the colonial cities worked and how the people reciprocated with the changing canvas of their daily lives. It also examines whether the town administration and the amenities provided in a colonial town were implemented impartially between the native population and the European residents.

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<sup>1</sup> Ranjit Sen, *Birth of a Colonial City Calcutta*, Routledge, London, 2019, P.32.

The studies of Bipan Chandra regarding the colonial possession of India can be followed to get a very lucid understanding of the functioning of the British administration in their own mother country and the colonies and, the plain differentiation in both scenarios. Bipan Chandra points out that, colonialism turned the path for the colonies towards a kind of modernization, but it was not as similar to its counter part in the European world, and it is evident from the underdevelopment experienced by the colonies.<sup>2</sup> When “western institutions and urban forms were introduced, they were, from the start, ‘competing’ with a highly developed and integrated urban system, which itself was a fusion of Hindu and Muslim culture”<sup>3</sup> and were the predecessors to colonial urban development.

In the Indian context, her colonial past and the subsequent changes brought about by this new rule to the land may need a distinctive study without any influence from its pre-colonial past. Because, “initial conditions from which a newly liberated colony started its development process were not those of its pre-colonial past but those created during the colonial period. Colonialism is thus to be studied as a distinct stage in the history of the former colonial societies and as a distinct social structure”.<sup>4</sup> Thus, the old practices of modernity and urban life in the history of India were not continued when colonial power invaded, and the experiences of the colonial era must be considered to study in exclusion from the pre-colonial past. Whereas, when we study the colonial urban history of our country as a distinct phase, we should also bear in mind that the pre-colonial India was well aware of the urban characteristics of life and the cities were not simply a consequence of the British colonialism alone.

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<sup>2</sup> Bipan Chandra, *Essays on Colonialism*, Orient BlackSwan, Hyderabad, 2010 (1999), Preface, p. v.

<sup>3</sup> Anthony D King, *Colonial Urban Development Culture, Social Power and Environment*, Routledge and Kegan Paul, London, 1976, p.182.

<sup>4</sup> Bipan Chandra, Op.Cit., preface, p.vi.

Ranjit Sen, in his study on colonial Calcutta, ridicules the misconception that the reason for the growth of cities, as it is a prevalent notion that the cities are “outstanding gifts of British colonialism in India.”<sup>5</sup>In the context of Calcutta, he observes that, its growth as a situation demanded one because the British wanted a strong foothold to administer the land. He also refers to the lottery system and its introduction in Calcutta, and the money from the lottery was used for the development of the colonial town in the initial years, and the work was a corroborative endeavour between the native population and the British, and not singularly by the British.<sup>6</sup>He explores how Calcutta began its journey of prominence as a colonial town after the cities of Chandernagore and Hughli were destroyed in the Battle of Plassey. The British life, which was constrained interior to the fort, came outside of that, and the ‘White town’ grew promptly.<sup>7</sup>The common and prevalent idea that the cities were a constructive outcome of British colonialism cannot be seen here in the case of colonial Calcutta, as it was grown to prominence and developed in partnership with the natives, which can be seen in the lottery system.

The history of European urbanization in India was actually started with the establishment of the port town of Panaji by the Portuguese in 1510.<sup>8</sup> “It is only in the early 19<sup>th</sup> century that the British established a firm territorial hold in India, as India came under the British crown in 1858. From that time, until 1947, the British exercised unquestioned sway over the entire sub-continent.... The course of urbanization after 1800 in all parts of India was determined by British colonial economic policies and social attitudes.”<sup>9</sup>“Following the independence of the American colonies, India

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<sup>5</sup> Ranjit Sen, Op. Cit., Preface, p.xi.

<sup>6</sup> Ibid., p.xi.

<sup>7</sup> Ibid.

<sup>8</sup> R Ramachandran, *Urbanization and Urban Systems in India*, Oxford University Press, New Delhi, 2010 (1989), p.59.

<sup>9</sup> Ibid., pp.59-60.

became the first large society outside Europe to come under the impact of colonial urban development through the colonial process of western industrial capitalism of an indigenous urban tradition.”<sup>10</sup>

The Indian history writing was predominantly full of prejudices and ill-conceived notions as, “for many British historians writing for India with an imperial undertone seemed to be unavoidable.”<sup>11</sup>The writings of this group were the history of the conquest, and the establishment of the empire upon the colonial subjects was their moral burden. Thus the social history of the experiences of the urban population of the colonies received no seat when compared with the political history or the administrative history.<sup>12</sup>

Owing to this, the study of the Indian experiences during the colonial period of the land must “highlight the perceptions of the ruled, their cultural crises and social changes, their rebellion, their search for identity, and their attempts to negotiate with a modernity brought to them through a variety of colonial policies. How the Indian nation was gradually emerging, with all its contradictions and tensions, under the domineering presence of western.”<sup>13</sup>The people and their lived experiences must get the centre stage regarding the urban history of India, and when we study it that way, we may get a clear picture of duplicity from the British end, where the so called Victorian morality and justice preached by the rulers began to dwindle and their double face and hypocrisy reveal through their actions showing clear cut partiality towards the Indian natives and their European counterparts in an urban setup.

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<sup>10</sup> Anthony D King, Op. Cit., p.182.

<sup>11</sup> Ranjit Sen, Op. Cit., p.32.

<sup>12</sup> Ibid.

<sup>13</sup> Sekhar Bandyopadhyay, *From Plassey to Partition - A History of Modern India*, Orient Longman, Hyderabad, New Delhi, 2004, preface

In modern Indian scenario, “City is the place of colonial modern”<sup>14</sup> where there were not any programmes and initiatives for both the European and Indian city residents in sync with each other. City was “where the new Indian middle classes, through their encounter with colonial rule, created the institutions as well as modes of thought and practice that would characterise nationalist modernity. Still, the emergence of the colonial modern was also accompanied by a split in the urban public sphere. Unlike the earlier period, when there were many institutions and initiatives in which European and Indian residents of cities were partners, the second half of the nineteenth century saw the drawing of strong, socially enforced dividing lines between the British rulers and their Indian subjects.”<sup>15</sup>

Here we can clearly see that the modernity was not for the whole as there was a segregation between the British and the indigenous people. “It is important to stress, however, that these racial dividing lines between rulers and ruled were kept in place not by publicly declared rules of segregation. There was no apartheid system in the cities of colonial India. On the contrary, the civic regulations and urban institutional structures were based on what Patrick Joyce has called ‘the rule of freedom’, with the qualification that it was subject to another rule- the rule of colonial difference. The rule of freedom justified the deployment of the new, more liberal techniques put in place in British cities in order to govern urban populations, and make them more healthy, peaceful and productive. This is the liberal project that produced detailed urban censuses and maps, new systems of piped water supply, underground sewers, garbage removal and disposal of the dead, public libraries and publicly supervised school systems, avenues and parks, street lighting and public transports and elected municipal governments. All of these techniques were applied in the city of Calcutta

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<sup>14</sup> Partha Chatterjee, *The Black Hole of Empire- History of a Global Practice of Power*, Permanent Black, Ranikhet, 2012, p.225.

<sup>15</sup> Ibid.

in the second half of the nineteenth century. Yet the rule of colonial difference ensured that the difference between White Town and Native Town was known and observed by all residents, that official maps or directories specified the individual details of every house and its residents in the European wards and only large classes of population in the native wards, and that schools for European or Eurasian students and those for native students were supervised by different boards.”<sup>16</sup>The other urban initiatives like this were also, regularly confined only to the European side of town and were not helpful for the plight of the natives, and this is why Partha Chatterjee calls this as colonial modernity. An instance proving this claim is: when an underground sewerage system was announced in Calcutta, the White Town was the first place to get its benefit.<sup>17</sup>

Anthony D King in his discussion about the colonial Indian cities, refers to the following: “There was differences between the Indian cities and the western counterparts, these differences may be because of the technology, levels of living, capital available for urban improvement, caste and ethno-linguistic and religious diversity, and other cultural concomitants.”<sup>18</sup> Basic differences like culture and the spread of modern western technology were able to give rise to different urbanization processes in different parts of the globe and in the Indian canvas, but at the same time, we cannot give a clean chit to the British administration in the clearly visible different kind of treatment given to the white town areas and the black town areas in the colonial Indian urban spaces. We can easily assume the intentional negligence and prejudice shown while dealing with the areas of native population. The zeal and enthusiasm

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<sup>16</sup> Ibid.

<sup>17</sup> Ibid., p.226.

<sup>18</sup> A D King, ‘Colonialism and the Development of the Modern South Asian City: Some Theoretical Considerations’ in, Kenneth Ballhatchet and John Harrison (Ed.), *The City in South Asia Pre-Modern and Modern*, Curzon Press, London, 1980, p.1.

shown while allotting the developmental projects in the European areas are also visible as bright as the daylight.

Janaki Nair in her study on colonial Bangalore, mentions this vivid demarcation between the different sides of the city, and she mentions that the cantonment area of the British population was clean and beautiful. It had wide streets lined with trees, and every house had colourful gardens around them.<sup>19</sup>The English were not interested in matters related to the other side of the city.<sup>20</sup>Here the presence of a dual city inside a colonial city space is visible as the native town and the European side of the town were having clear cut differences in the amenities experienced by the residents. “The four largest cities in India from nineteenth century onwards was either been on coastal sites founded by foreign colonialists or owing the bulk of their growth to foreign enterprises or developed for political and administrative purposes by the colonial power. Morphologically, like many colonial cities in other non-western societies have developed historically as ‘dual cities,’ comprising a ‘modern’ or ‘western’ section and the ‘traditional’ indigenous town.”<sup>21</sup>

The colonial past in India has many such instances where this dual character of the city can be seen with two distinct sets of areas with different civic and social beneficiary situations existing in the same city space. The colonialism experienced by India had a contact situation between two different cultures, and in this scenario, the relationship that arose from this contact was of dominance and dependence, and the two cultures were representing “different forms or levels of economic, social, technological, and political organizations and development.”<sup>22</sup>“The first major urban

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<sup>19</sup> Janaki Nair, *The Promise of the Metropolis Bangalore's Twentieth Century*, Oxford University Press, New Delhi, 2005, p.23.

<sup>20</sup> Ibid.

<sup>21</sup> A D King, ‘Colonialism and the Development of the Modern South Asian City, p.4.

<sup>22</sup> Ibid., p.7.

centres of what was to become the colonized societies were those of the three ports, Madras, Bombay, and Calcutta. Each of these had reached an advanced state of economic maturity as centres of trading activity under the mercantile colonialism of the eighteenth and early nineteenth centuries, long prior to the formal absorption of India into the British colonial system. India as a colony of the British colonial system, the political and administrative machinery of an imperial state, both military and civil, was set up throughout the country. A system of strategic and administrative centres, including, in the 1860's, some 175 major 'cantonments', and increasingly linked after 1850 by a communication network of rail, road, and telegraph, was established."<sup>23</sup>

A standard framework of a colonial town included three parts, such as the native city where the local population of the land resided, and the two other significant functional regions of a city space were the cantonment and civil station.<sup>24</sup> In each of the strategic and administrative centres, which "located at the main foci of population, the basic apparatus of the colonial urban settlement was installed: the military 'cantonment', containing the army, and the 'civil station', providing accommodation for administrative and occasionally commercial activities. The basic pattern was to be found, on a large scale, in the provincial stations. In south India, the civil station was often incorporated in the cantonment."<sup>25</sup>

The standard mandatory officials found in a civil station were the chief civil authority, who was the deputy commissioner or a collector, and the other officials were his assistants, the medical officer, the engineer, etc.<sup>26</sup> "The medical officer is the one who has all the charges connected with the matters of health, and he has to visit

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<sup>23</sup> Ibid.

<sup>24</sup> Ibid., p.183.

<sup>25</sup> Ibid., p.182.

<sup>26</sup> A C Newcombe, *Village Town and Jungle Life in India*, Logos Press, New Delhi, 2011 (1905), p.169.

the the jail periodically for looking after the health of the prisoners and the sanitary arrangements generally.”<sup>27</sup>The importance given to the sanitary policies of urban spaces had a huge importance in every corner of the world, owing to the agglomeration of a large number of people in a confined and comparatively smaller geographical area and the possible problems with waste management.

Veena Talwar Oldenburg, in her study of colonial Lucknow, mentions that: “cleanliness was the Victorian shorthand for a variety of related concerns: morbidity, disease, sanitation, salubrity, drainage, conservancy, “social disease”, hospitals, water supply, vegetation, clean air, parks, gardens, density and overcrowding. Indian cities were notoriously “unhealthy” and disease had accounted for a greater number of European dead than had enemy action. These concerns were articulated in institutional form, but questions remain of whether the civic government was effective in making the entire city clean and what the financial and social cost of implementing these new policies were.”<sup>28</sup>

Like the above scenario witnessed in colonial Lucknow, safety, health, and hygiene were the most discussed and sought after factors in a colonial city, and utmost importance was given while selecting an area for the residential purposes of the English population in an Indian town, and for this, hills were considered the most appropriate place that would provide them with the much needed exclusivity from the native population.<sup>29</sup>

The ‘wisdom’ reached by the colonial administration on epidemics and its after effects and the causative factors behind them, also gave them the much crucial insight

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<sup>27</sup> Ibid.

<sup>28</sup> Veena Talwar Oldenburg, *The Making of Colonial Lucknow 1856 - 1877*, Oxford University Press, Delhi, 1989, p. preface xvi.

<sup>29</sup> Jidhu M U, ‘Upari Varga Jeevitham’ in Sivadasan P (Ed.)*Kozhikode Nagaravum Jeevithavum* (Mal.), Sahithya Pravarthaka Co- Operative Society Ltd, Kottayam, 2014, p.82.

that the distance and exclusivity they keep from the native population is not going to help them in decreasing the mortality rate among the British officials in India, and a complete sanitary reform for the whole area, including the native settlement areas with theirs is a must. “Modern town planning concepts were introduced and legislation were enacted to remove the insanitary conditions and the British town planning efforts started with the assumption that they had an inefficient structure to improve and a disease and crime infested area to control.”<sup>30</sup>

In the metropolitan cities like Bombay and Calcutta also, this fear can be seen. Mridula Ramanna, in her study of colonial Bombay, had extensively studied the urban health scares of that period and mentioned that, “the recognition that disease respected no barriers between the ‘native’ and European areas of Bombay city, and concern for the health of the British troops led to attempts to introduce public health measures. By the middle of the nineteenth century it had been accepted that improved sanitation and water supply could check diseases.”<sup>31</sup>

Colonial state in India during the above mentioned era, blamed that Indians’ lack of a sense of sanitation and hygiene as the root cause for the frequent presence of epidemics like cholera, smallpox and various kinds of fevers.<sup>32</sup> Here the colonial discourse on the Indian situation was purely based on the racial prejudice, as we can see that the pre-colonial urban life of India always had the most noteworthy innovations like bathrooms, covered drainage, etc. and a well developed town

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<sup>30</sup> A Srivathsan, ‘Ideology and Town Planning The Case of Madras’ in, K A Manikumar (Ed.), *History and Society : Essays in Honour of Professor S. Kadirvel*, Organizing Committee of Professor S. Kadirvel’s Sixtieth Birthday Celebrations, Madras, 1996, p.171.

<sup>31</sup> Mridula Ramanna, *Western Medicine and Public Health in Colonial Bombay 1845-1895*, Orient Longman, New Delhi, 2002, p.83.

<sup>32</sup> Mridula Ramanna, *Healthcare in Bombay Presidency 1896 - 1930*, Primus Books, Delhi, 2012, p.39.

planning skills.<sup>33</sup> There were books like *Silpasasthra* that dealt with the science of architecture and town planning in ancient India, and they all mention the framework to be followed in order to construct a structured city complex, and a text called as *Mayamata* mentions the presence of *chandalas*, who were the sweepers and scavengers of the town area.<sup>34</sup>

The European notion of introducing the sanitary provisions in the urban space of India as Indians were lacking the understanding of cleanliness to lead a healthy life has been destroyed here because the Indians were privy to it before hand, as we can see it through the employment of sweepers in the ancient Indian towns. It was also very clear from our understanding of the colonial history that the funds and other administrative freedom given to the indigenous people were very limited, and there was a clear cut difference between the civic amenities of the European side of the town and the native side. Therefore, lecturing the daily wage people who worked day and night and lived in the unfavourable conditions, only as the reason for the filthy condition of the town was not the proper way to address it. Instead, the British regime should have made the allocation of the same and equal funds as that of the European area for the municipal activities of the native town also.

Piped water supply, street lighting, domestic electricity supply, sewerage, and recreational areas like parks and playgrounds were some of the civic amenities introduced by British rule, but a majority of the areas were not having all these modernizations. In most cases, the residential areas of the Indian residents were exempted from these facilities, and the European counterpart areas enjoyed them. “Colonial urbanization including in Calcutta was driven by self preservation - the

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<sup>33</sup> R C Majumdar, *Ancient India*, Motilal Banarsidass, Delhi, 1968, p.54; D D Kosambi, *The Culture and Civilization of Ancient India in Historical Outline*, Routledge and Kegan Paul Ltd, London, 1956, p.54.

<sup>34</sup> K Rangachari, ‘Town Planning and House Building in Ancient India’, in Dr. Raj Kumar (Ed.), *Essays on Ancient India*, Discovery Publishing House, New Delhi, 2003, p.259.

preservation of British power and the safety of British lives, everything else was peripheral or contingent to this.”<sup>35</sup> Every initiative in the urban development in Colonial India and the relationship between the colonial politics and the urban reforms were conducted through the policy of difference.<sup>36</sup> A visible difference in policies towards the native regions when compared with the enclaves of the European inhabited areas.

The urban history of Calcutta during the colonial period also witnessed the moral side of the modernity project, and its seed was sown by the British, however, it was watered by the nationalist elite.<sup>37</sup> Sumanta Banerjee has described the process by which a vibrant popular street culture was suppressed and tamed in the Calcutta of this period to produce the genteel urban high culture of the new Bengali middle class.”<sup>38</sup>

All public sites were used as market places and for recreational purposes in the early decades, and the roads were always used for religious processions and other activities, as understood from the description of Calcutta city in 1810 by the Malay traveller Rijaluddin who writes, “streets of Calcutta is full of entertainers such as snake charmers, puppeteers, gymnasts, trapeze artists, and fakirs showing tricks with monkeys, goats and bears. Men of all races- English, Portuguese, French, Dutch,

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<sup>35</sup> Jayanta Bhattacharya, ‘The Genesis of Hospital Medicine in India: The Calcutta Medical College (CMC) and the Emergence of a New Medical Epistemology’ in, *The Indian Economic and Social History Review*, Vol LI, No.2, Sage Publications, New Delhi, April - June 2014, p.267.

<sup>36</sup> Raghav Kishore, ‘Urban ‘Failures’: Municipal Governance, Planning and Power in Colonial Delhi, 1863 - 1910’ in, *The Indian Economic and Social History Review*, Vol LII, No.4, Sage Publications, New Delhi, October - December 2015, p.439.

<sup>37</sup> Partha Chatterjee, *Op. Cit.*, p.227.

<sup>38</sup> *Ibid.*

Chinese, Bengali, Burmese, Tamil and Malay- frequented the brothels and drinking houses.”<sup>39</sup>

During the later decades of the nineteenth century, this inclusive nature of the urban spaces vanished, and the restrictions of segregation in the urban spaces became more and more evident. In the 1860s, the main campaign from the administrators was to cleanse the streets of these noisy, obscene, and allegedly barbaric forms of entertainment. “A guidebook published in 1886 warned rural visitors to the city that although the streets of Calcutta were open equally to all members of the public, those straying on the carriageway were liable to get a crack of the whip from the passing coach, and unsuspecting men relieving themselves on the roadside might have to spend the night in a police lockup.”<sup>40</sup>

Administration banned every religious activity from the streets and also the satirical singing, despite the colonial Indian government being ‘driven through the principle of civilizing mission’. In the context of Calcutta, the new Bengali middle class also began to show these moral policing in the streets.<sup>41</sup> The elite and this newly formed middle class were showing their apathy and discomfort towards the downtrodden sections of the society and vehemently promoting the moral policing of their minds, as Bengal was a highly demarcated society when dealing with the social life of different castes and communities on grounds of caste hierarchy.

When a colonial settlement in an urban space is concerned, a church, club, library, racecourse and museum were needed, and the European barracks of the cantonment had working class housing arrangements. On the other hand, the colonial urban settlement did not have any provisions like that for the working classes, because

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<sup>39</sup> Ibid., pp.227-228.

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

they were never regarded as a class having certain rights as such in those times. They were never treated like how they are treated in the present urban-industrial sense, and the functions of that working class population were done by the residents of the native towns.<sup>42</sup>

The control and subjugation of these ‘working classes’ and the other inhabitants of the urban milieu were done through the introduction of new organizational initiatives, and “as far as organization is concerned, this meant new institutions (local governments), new methods of social control (police), new technologies (transport, communications, energy systems), new occupational roles (civil engineers, sanitary inspectors), and new systems for promoting and organizing knowledge (institutionalized research, professional associations, scientific journals).”<sup>43</sup>

These developments, like new organizational setups that were initiated, such as police, local governments etc., can be seen in the framework of every colonial city formation, and in the context of an indigenous city in India, it is evident from the construction of a town hall, police station, public works department offices, and waterworks as all these are common in every colonial city space.<sup>44</sup>“These institutions became a pervasive force that shaped the urban environment, the habits of life, and even the aesthetic perception of the ordinary citizen. The emergent civic institutions were charged with duties ranging from sanitation, collection of taxes, and construction of public works, to determining ratios of window- to-wall space in new buildings. Municipal regulations now controlled and dictated the location of burial grounds and burning ghats, the manner of disposing of the dead, religious procession routes and fairs, and even the scale of a religious event, the design of houses, latrines, and shops,

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<sup>42</sup> A D King, Op. Cit., pp.11-12.

<sup>43</sup> Ibid., p.12.

<sup>44</sup> Ibid., p.12.

the licensing of all trades, and the manufacture and consumption of liquor, opium, and drugs.”<sup>45</sup>

Building a colonial city was not merely an act comprised of examining a city map and imposing upon roads, streets, barracks, and bungalows.<sup>46</sup> The role played by the police force on the creation of a colonial city is noteworthy, and “apart from being responsible for law and order, the police aided the municipality in its multifarious tasks of collecting local taxes, supervising conservancy and sanitary arrangements, helping in the execution of the public works (such as demolitions and road building), and generally ‘improving’ the city. The chief burden of civic cleanliness was borne jointly by the police and the municipality under the executive direction of the city commissioner.”<sup>47</sup>

One of the most important colonial towns was Delhi, and the European influence on Delhi started with the seizure of it from the Mahratti invaders in 1803 and it served as a strategic and military post for the protection of the trading interests of the English East India company in its early colonial development as a city.<sup>48</sup> Before the invasion of the colonial regime also, Delhi had lived its fair share of the urbanity during the reign of many previous rulers who adorned Delhi as their seat of power, and the city was an important centre of trade and commerce. During the British possession of Delhi and its journey to become one of the colonial urban spaces, “a more detailed indigenous plan of the city produced under European supervision about the mid nineteenth century, and it indicates that as the small military colony became more established and separate bungalows were provided for the accommodation of

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<sup>45</sup> Veena Talwar Oldenburg, *Op.Cit.*, p.preface xx.

<sup>46</sup> *Ibid.*, p.62.

<sup>47</sup> *Ibid.*, p.65.

<sup>48</sup> Anthony D King, *Colonial Urban Development Culture, Social Power and Environment*, *Op.Cit.*, p.189.

the officers. These were located opposite of the residences of the local *nawabs*. Two hospitals were also built, as well as a small church. Military requirements also led to the modification of the fortifications.”<sup>49</sup>

Like every colonial city planning framework, cantonment was an important place and used for the military purposes. The camp area was in a way safer when compared to the health grounds, and the native town areas were viewed as places having numerous plagues, dust, nuisances, smells, etc. The cantonment provided residential areas for the officers and their families, and the soldiers were accommodated in huts laid out in the lanes, and the European burial ground and their bazaar were also provided without fail. Recreational places like gardens were another important characteristic of the European side of the towns.<sup>50</sup>“Of more significance, physical space in the colonial settlement and between it and the indigenous city, is organized according to mid and late nineteenth century scientific and especially medical theories which, in brief, assume a casual connection between aerial distance and bacterial infection.”<sup>51</sup>In the colonial perception, India’s social and physical environment was seen as injurious to bodily and moral well being, constituting both the cause and context of crime and disease.<sup>52</sup>

Climatic and miasmatic<sup>53</sup> theories of disease causation were viewed by the British in India more religiously, and it may be the reason behind the antipathy they showed towards the physical and social environment of the

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<sup>49</sup> Ibid., p.191.

<sup>50</sup> Ibid., p.193.

<sup>51</sup> A D King, Op.Cit., pp.12-13.

<sup>52</sup> David Arnold, ‘Touching the Body: Perspectives on Indian Plaque, 1896- 1900’ in, Ranajit Guha (Ed.), *Subaltern Studies*, Vol.V, Oxford University Press, New Delhi, 1999 (1987), p.61.

<sup>53</sup> Theory which attribute that diseases are caused by pollution.

land.<sup>54</sup>“The accounts of plague compiled by the Brigadier General Gatacre as chairman of Bombay’s Plague Committee in 1897, and by R. Nathan for the Government of India in 1898, placed particular emphasis upon the ‘insanitary and filthy condition’ to be found in Indian towns and villages as predisposing causes of the diseases.”<sup>55</sup>“In the mid-nineteenth century, when Bombay’s urban growth and commercial expansion had already begun, conditions of hygiene and sanitary provision remained extremely rudimentary. The needs of Bombay’s inhabitants were served by one main drain built at the end of the eighteenth century, which began as an open *nala*<sup>56</sup> into the sea.”<sup>57</sup> This absence of sufficient sewers led to the use of *halalkhore*<sup>58</sup> people for the removal of the night soil from the houses.<sup>59</sup> “In order to achieve this, houses were built slightly apart, leaving a gully running between them. This was meant to act as a drain for the slops and waste water from the houses, and more crucially to provide access to *halalkhores*.”<sup>60</sup>

Water supply provisions in the Bombay town were also very rudimentary, and during a water scarcity time in 1854, water was brought to the city through boats and rails. When some plans were made for quenching the thirst of the city through some plans, the influx of migrant labourers to Bombay during the 1860’s increased the amount of water demand.<sup>61</sup>“In the early twentieth century, city’s water supply depended upon a ‘regularly recurring monsoons’ and, in addition, it was unevenly and selectively distributed to the town- firstly to commercial needs and to serve best the

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<sup>54</sup> David Arnold, Op.Cit., p.61.

<sup>55</sup> Ibid.

<sup>56</sup> Hindi word for the flowing sewer.

<sup>57</sup> Rajnarayan Chandavarkar, *History, Culture and the Indian City*, Cambridge University Press, New York, 2019, p.36.

<sup>58</sup> Scavengers.

<sup>59</sup> Rajnarayan Chandavarkar, Op.Cit., p.36.

<sup>60</sup> Ibid., p.37.

<sup>61</sup> Ibid.

residential areas of the city's elites. Most people continued to rely upon wells and tanks, although the contents of 'nearly everyone ought to be pronounced unfit for drinking purposes'. When water supplies dried up, the inhabitants of the poorer quarters were sometimes compelled to drink the water of those filth-sodden wells and tanks."<sup>62</sup>

Pollution, the term had different meanings in the urban context of colonial India apart from its present environmental aspect. "It signified the unwanted and almost certainly unhealthy, contamination of air, water, and soil by human waste and animal detritus, and by the dust, smoke, sludge, and effluvia that issued from chimneys, drains, and sewers or emanated from slums, stables, cowsheds, workshops, and factories. One illustration of this sanitary notion of pollution, and its continuity with ideas of urban 'nuisance' and miasmatic 'poison', concerns disposal of the human (rather than animal) dead."<sup>63</sup>

In the 1850's, Bombay had many cemeteries, precisely 60, and other cremation grounds, but then also the general public mainly used their backyard for the disposal of the dead bodies, especially the stillborn children of the family, who were cremated in the backside premises of the house. This was viewed by the governing bodies as a jeopardizing situation for the general health and convenience of the community as a whole, and it also arose the suspicion of infanticide.<sup>64</sup> Bombay's health authorities thought that, parts of the dead bodies that were not fully decomposed could, "generate 'poisonous gases' and pollute the air of nearby dwellings, one indication among many

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<sup>62</sup> Ibid.

<sup>63</sup> David Arnold, *Toxic Histories - Poison and Pollution in Modern India*, Cambridge University Press, Delhi, 2017 (2016), p.182.

<sup>64</sup> Ibid.

of how frequently ideas of poison and pollution overlapped and intersected in contemporary sanitary discourse.”<sup>65</sup>

Bombay’s recurrent encounter with the epidemics also created a decline in its urban growth as many ships from Bombay was denied access to European ports because of the presence of plague, which deteriorated the city’s export trade and caused a halt to its economic possibilities.<sup>66</sup> As far as Mark Harrison is concerned, colonial intervention towards the public health of India and its activities towards the municipal activities and the cleaning up of the urban spaces was due to the existence of an external pressure.<sup>67</sup> Because of the prevalence of many infectious diseases in the many commercial towns of India, the ships commenced their mercantile journey from the Indian ports, faced many restrictions to travel, and the crew members were also quarantined at the destination at the arrival. These situations were working against the business interests of the British administration in India, and this external pressure was also one of the driving forces behind the ‘cleansing’ of the Indian cities.<sup>68</sup>

In the Madras experience of the town planning processes, Lanchester, the consulting town planner to the government of Madras, said that “the traditional Indian city was built on ‘imaginative caprice’ where as the European city was based on logic and hence stable.”<sup>69</sup> “The major concern of the British was the sanitary conditions of the native areas. In fact, town planning efforts in Madras till end were obsessed with sanitation with no attempt to formulate a policy for town expansion and growth. The concept of typical design emanated from the idea to centralize control and the imperial

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<sup>65</sup> Ibid.

<sup>66</sup> Sandip Hazaree Singh, *The Colonial City and the Challenge of Modernity Urban Hegemonies and Civic Contestations in Bombay City 1900- 1925*, Orient Longman, Hyderabad, 2007, p.26.

<sup>67</sup> Mark Harrison and Biswamoy Pati (Eds.), *The Social History of Health and Medicine in Colonial India*, Routledge, London, 2009, p.2.

<sup>68</sup> Ibid.

<sup>69</sup> A Srivathsan, Op.Cit., p.171.

motivation to replace indigenous building types ‘culturally superior’ built forms. In the native settlements nothing except sanitation merited attention. If there was any reference to the native settlements or its social life it was only the caste system. Lanchester’s 1918 report identified caste as the essence of the native social structure and recommended that they should not be distributed while introducing new town planning concepts.”<sup>70</sup>

Indian society was highly caste prejudiced, and the seclusion from each other due to their caste was observed in the ancient Indian cities,<sup>71</sup> but the European civilization always boosted their ‘Victorian morality and seeing mankind as one’, regardless of all these claims, their town planning efforts in the Indian subcontinent always showed traces of their mentality, which was highly influenced by the concept of racial superiority. The Indian side of the town was always looked upon as a breeding ground for diseases, and the British stayed away from there. Although in the last part of the eighteenth century, colonizers tried to ‘civilize’ them with the new policies of sanitation, this sentimental approach towards the proper health and sanitation of the Black town was neither due to humanitarian concern nor part of the good administration they promised as part of their ‘civilizing mission’. It started only after the realisation that their neglect of the social issues and other urban amenities of the native town area was causing danger to the European health and their life span.

The starting point of the policy formation of the state was about the municipal and health activities, and collectors and magistrates were assigned the duty of informing the government about their perceptions and taking on any issues related to

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<sup>70</sup> Ibid., p.171.

<sup>71</sup> K Rangachari, ‘Town Planning and House Building in Ancient India’ in, in Dr.Raj Kumar(Ed.), *Essays on Ancient India*, Discovery Publishing House, New Delhi, 2003, p.259.

health and the general good of the society.<sup>72</sup>“Urban administrative bodies were established to look after the civic amenities in a number of cities, and these municipalities were primarily concerned with the collection of local taxes, the maintenance of roads, the removal of garbage and night soil, primary education, and public health.”<sup>73</sup>

In the town administration process, “local committees control the expenditure of the municipal and other local funds, and see that the communications, sanitary arrangements, water supply, and such important matters are properly attended to. There are native members on these committees, and some of them take much interest in the work....In some of the largest towns the committees are almost wholly of natives, especially in Bengal, where the *Baboos*<sup>74</sup> were well educated and took interest in the local affairs.”<sup>75</sup>But some rotten fruits were also there in the basket as some of the committee members worked with strong caste prejudices in their minds and some worked towards the goal of material prospect as the expenditure and the work done were having disparities. Corruption was there and the condition of the roads and insanitary conditions endorse that claim.<sup>76</sup>

This partial success rate of the municipal governance in the town was not only because of the corruption and antipathy of some of the municipal committee members, but also “owing to the dislike of the masses of the necessary changes, especially when inspection of their private premises is to be made in the interests of sanitation. The British employed people from the lower castes for the inspection duties, and Indian society was highly a caste-prejudiced one and it was a case of great misery to a high

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<sup>72</sup> Poonam Bala, *Imperialism and Medicine in Bengal - A Socio-Historical Perspective*, Sage Publications, New Delhi, p.100.

<sup>73</sup> R Ramachandran, Op.Cit., p.68.

<sup>74</sup> A term used in the Bengali language to refer to a person or individual.

<sup>75</sup> A C Newcombe, Op.Cit., p.172.

<sup>76</sup> Ibid.

caste person to permit a lower caste official to enter their home.<sup>77</sup> It was viewed as 'pollution' not in the environmental aspect of it, but by the caste based interpretation of 'pollution' specific to the Indian societies. Thus all these activities in the urban milieu were irking the higher caste public and were not co-operative towards these endeavours. The isolation huts established in the urban regions were also against these caste practices, as people from different caste backgrounds were allotted in the same room. Some epidemic huts in Bombay were even based on caste to tackle this issue as separate huts were provided according to the caste. The forceful nature in which the infected patients were taken away from their homes was also a reason why people were against all these reforms in the urban milieu.

People were ignorant of the process through which a disease spreads, and in the case of Mumbai, a large number of people fled the city when plague appeared there in 1896, and the same happened when the disease appeared in Calcutta in 1898. Nearly a quarter of the inhabitants of the Calcutta city fled during this time.<sup>78</sup> "Much loss of trade was caused, and of the means of the livelihood of clerks, shop keepers and employees. The people could not first understand the necessity for segregation and disinfectants, and they moved about to prevent domiciliary visits and to conceal their sickness. The house to house visit was necessary because the people used to keep their plague stricken relations among them and so caused the disease to spread. They hid not only cases of illness but those of death, and would bury the dead just outside their houses, at the back or even under floors. The available workers were few and the British soldiers were used in search parties. They accompanied by officer and some medical staff of men and women. They make good nurses but their rough direct practical action astonishes the natives, and frightens those who live in, and rarely

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<sup>77</sup> Ibid., pp.172-173.

<sup>78</sup> Ibid., pp.378-379.

leave, the *bazaars*.”<sup>79</sup> This kind of a reaction from the public was due to the way in which these measures were implemented. The state failed to make people understand the gravity of the disease situation, and the forceful implementation further alienated the public. The ignorance of the people was from the confusion and fear of segregation they experienced due to the steps adopted by the colonial machinery in the urban space.

Some nationalist leaders also came under the spell of the British administration that the indigenous population inherently lacks the gene of cleanliness, and Sardar Vallabhai Patel was one of them. Howard Spodek, in his study about the colonial Ahmedabad city, mentions an incident when Patel, who was the then administrator of the municipality, openly talked about the indifference shown by the general population regarding the measures of town planning and the sanitary reforms. Sardar Vallabhai Patel was a prominent figure in the politics of the Ahmedabad municipality and its governing; he made many revolutionary changes in the living standards of the people residing in those urban spaces.<sup>80</sup>

Spodek refers to Patel as a revolutionary figure who worked and propagated for the implementation of the civic amenities of the British standard on the Indian soil and, at the same time, motivated and called out the Indians for the need to change their attitude towards these matters, as it is also the collective responsibility of the people to have basic civic duties towards their town.<sup>81</sup> “Our cities are neither cities nor villages. Though living in cities, many of our people behave as they would amidst rural conditions. Half the buildings have no latrines, and there is no place even to throw the garbage from the houses. Although they live in houses in narrow streets and

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<sup>79</sup> A C Newcombe, *Op.Cit.*, p.379.

<sup>80</sup> Howard Spodek, *Ahmedabad Shock City of Twentieth - Century India*, Orient Blackswan, Hyderabad, 2011, pp.70-71.

<sup>81</sup> *Ibid.*

in thickly populated areas, they do not hesitate to keep cattle. Large numbers of apparently unowned cattle are left to wander about in the streets. Ordinarily, people are very lax in observing even the most ordinary rules of health and cleanliness, and indeed in such matters they neither appreciate what their duties is to themselves nor their duty to their neighbours. They do not consider it wrong to throw the rubbish from their own houses in front of the doorsteps of their neighbours. They do not hesitate to throw from the windows of upper storeys of their houses dirt and other rubbish or dirty water. People spit where they like, they ease themselves where they feel like, and generally consider themselves free to cause nuisance, irrespective of time or place.”<sup>82</sup>

self awareness is a very important pre-requisite for the well being of the urban population, as they have the right to avail themselves of the facilities they deserve from the urban administrative machineries, and at the same time, they have some duties to fulfill as a social animal living in the vicinity and the congested environment of a town. But it was also very clear from our understanding of the colonial history that the funds and other civic amenities provided to the native section of the city space were limited. There was a clear cut difference between the European side of the town and the native side. Therefore, lecturing the daily wage people who worked day and night and lived in the unfavourable conditions only as the reason for the filthy condition of the town was not the proper way to address it. Sardar Vallabhai Patel should have pressurized the British regime for the allocation of the same and equal funds as those of the European area for the municipal activities of the native town also.

The implementation of health and sanitary reforms in urban spaces was not an easy task to make. The local bodies assigned with the task was not able to complete

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<sup>82</sup> Ibid.

many projects because of the financial constraints. The response people shown to the sanitary policies were also sceptical. The implementation of the sanitary works on the native side of the town area was also not on the humanitarian ground by the regime. It was only from the understanding that the mere seclusion from the native population will not save the European lives in India from the clutches of epidemic. The antipathy shown in the Indian way of living as filthy and insanitary can be seen vividly in the portrayal, like the Indians as a people of no understanding regarding a 'clean life'.

The general perception regarding the cities in India is that the starting point of city formation in India is a by-product of the colonization process witnessed by us. But Indians were well acquainted with a well-structured urban planning from the Indus civilization itself. Colonial cities formed as port cities, administrative cities etc. and a clear demarcation line was laid between the two areas of the colonial towns. The 'white town' was inhabited by the European population, and the other side was earmarked for the native population. These two areas in the same city were having different amenities and other facilities. With the discovery of disease causing organisms, the urban areas witnessed many reformatory policies by the British administration, and only during this time they provided the much-needed attention to the conditions of the urban space inhabited by the Indians. But the people viewed all these reforms with apprehensions and doubt. Because, several laws and regulations were introduced to curb the freedom associated with the daily lives of the people residing in an urban milieu. The free spirit of the streets and the mobility of the people were restricted in the name of cleansing the streets. The regressive concept of caste-based purity and pollution also worked in urban spaces, and indeed, which was one of the main reasons of the upper castes' opposition against the new reforms. However, the construction of colonial power attributing Indian people as mere bodies, which can be carriers of diseases, and the curtailment of the freedom of mobility by the introduction of new institutions of power was to be addressed and discussed.

## CHAPTER 2

### **SANITARY AWARENESS: ORIGIN AND IT'S PROLIFERATION FROM BRITAIN TO COLONIAL INDIAN URBAN SPACES**

The study of Public health issues and the human experiences of every day life related to them in the social science research has been gaining momentum in the recent past, and the human encounter with the concepts such as sickness, health, hygiene, medicinal knowledge and practices, which were a neglected field of study as part of medical history is creating the much deserved buzz. This chapter tries to understand the way through which the sanitary policies as a part and parcel of public health policies shaped in the Europe as a preventive measure against the spread of many fatal diseases and how which were made way to India and other colonial urban spaces.

Sanitary improvements as a mode of combating epidemics gained momentum because of the many advances made in the scientific milieu. The discovery of micro organisms and other associated inventions provided knowledge regarding the cause factor that was behind the formation and subsequent spread of many epidemics. Science of Bacteriology and the discoveries of Louis Pasteur were the notable ones that worked as the scientific base for the successful epidemic prevention with the help of sanitary reforms.

Pasteur is recognized as the scientist who discovered the presence of micro-organisms and constructed the theory that these tiny organisms are behind diseases and also was credited with the introduction of vaccination. He developed the vaccinations against Anthrax and Rabies and so that is rightly regarded as the 'father of Microbiology'. His Germ Theory proved the presence of invisible bacteria that cannot be viewed with the naked eye and established without doubt that, they are the

prime cause of many diseases among humans. This discovery gave the sanitary reforms much-needed scientific and logical reasoning, and in the later years, it assisted in the curbing of many infectious diseases which were killing millions of people worldwide. “Medical bacteriology forms a part of the science of medical microbiology which is concerned with the study of causative agents of infectious diseases, how the human body reacts towards these parasites and the exploitation of the knowledge gained in the diagnosis, treatment and prevention of this group of diseases.”<sup>1</sup>The invention of the microscope and its use were the important stepping stones that paved the way for the discovery of disease causing invisible lives.

Further studies on these micro organisms were the foundation stone of the introduction of preventive medicine in the context of epidemic disease control. “Pasteur’s experiments not only killed the medieval theory that living organisms were created spontaneously out of matters (flies, for instance, from decaying meat), but suggested a theory of the origin of disease.”<sup>2</sup> In one of his lectures conducted in Paris, Pasteur shot a beam of light through a darkened hall and said, “observe the thousands of dancing specks of dust in the path of this ray, the air of this hall is filled with these specks of dust, these thousands of little nothings that you should not despise, for sometimes they carry diseases and death; the Typhus, the Cholera, the Yellow Fever, and many other pestilences.”<sup>3</sup> The work of Louis Pasteur and Robert Koch during the later half of the nineteenth century accelerated the study of micro-organism to great hiatus.

Robert Koch is considered to be one of the greatest bacteriologists of all time and credited with the discovery of the causative organisms behind Cholera and

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<sup>1</sup> W D Foster, *A History of Medical Bacteriology and Immunology*, Cox and Wyman Ltd, London, 1970, p.1.

<sup>2</sup> Denis Richards and Anthony Quick, *Britain 1851-1945*, Longmans, London, 1967, p.206.

<sup>3</sup> Ibid.

Tuberculosis.<sup>4</sup> Tuberculosis was one of the most dangerous issues faced by the public health department, and statistics showed that about one seventh of humans in civilized parts of the world died due to this single disease. It was an infectious disease, and the studies by Koch on the disease and its cure became so successful in the later time, which helped humanity in its fight against this infectious sickness and their spread.<sup>5</sup> His studies on disinfectants and its power to kill germs were the basis after Pasteur, for future epidemic controls in many countries through the application of sanitary reforms.

Like every country facing the horrors of epidemics, Britain was also not an exception to this, and the new knowledge regarding the cause and spread of diseases in the scientific and medical fields inspired people to come in the forefront for the annihilation of infectious diseases by manifesting the prevailing data regarding the matter. Edwin Chadwick is considered as the pioneer of sanitary reforms and the person who actively discussed the health and the connection it has with sound living conditions in British history. He was associated with the Poor Law Commission, and its report submitted in 1838, who put forward his views regarding the high cost of sums used by the government on sickness and death.<sup>6</sup> He emphasized that the “squalid living conditions”<sup>7</sup> of the poor are the actual reason for the aggravated disease conditions and the subsequent deaths. It got the much needed attention because of the cholera epidemic of 1832 and the experiences faced due to it, and Chadwick was commissioned to conduct a thorough investigation on the Public health concerns and

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<sup>4</sup> W D Foster, Op. Cit., p.38.

<sup>5</sup> Ibid., p.51.

<sup>6</sup> Ibid.

<sup>7</sup> Maurice Bruce (Ed.), *The Rise of the Welfare State English Social Policy, 1601-1797*, Weidenfeld and Nicolson, London, 1973, p.10.

it led to the publication of his most celebrated work titled, *Report on the Sanitary Condition of the Labouring Population of Great Britain* in 1842.<sup>8</sup>

This celebrated work of his was the starting point of the sanitary reform in Britain, and it also helped in the grave situation of higher mortality caused by epidemics. “The diseases that imperilled European lives were numerous and recurrent, ranging from small, everyday treacheries on the gastrointestinal tracts to sweeping epidemics of cholera, typhoid, smallpox, and the plague. Knowledge about the nature and cure of communicable diseases was still primitive, and medical men worked with a jumble of conflicting theories.”<sup>9</sup> One of the unchallenged theories of that time was the ‘miasmatic theory’<sup>10</sup> of Dr. John Pringle, who was the physician general of the British forces, and the theory was illustrated in his eighteenth century classic titled, *Diseases of the Army*.<sup>11</sup> Pringle understood the processes behind many disease formations and he theorised his findings based on his inspections of many residential buildings in London and “found them unventilated, dark, and damp.”<sup>12</sup>

“If Pringle had supplied the most widely held theory of disease at the time, Sir Edwin Chadwick formulated the most commonly used model for combating disease in the built environment in Britain. An indefatigable sanitarian, he served as an assistant Poor Law Commissioner and devoted a lifetime to improving working -class health conditions.”<sup>13</sup> Chadwick was an avid believer of the miasmatic theory like Pringle, and his work on the conditions of the working class was written after

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<sup>8</sup> Ibid.

<sup>9</sup> Veena Talwar Oldenburg, *The Making of Colonial Lucknow 1856 - 1877*, Oxford University Press, Delhi, 1989, p. 97.

<sup>10</sup> Medical theory that sickness such as cholera, plague etc. were caused by a miasma or pollution. Miasma means pollution in ancient Greek.

<sup>11</sup> Veena Talwar Oldenburg, Op.Cit., p.98.

<sup>12</sup> Ibid., p.97.

<sup>13</sup> Ibid., p.98.

conducting many studies and fieldworks in the grass-roots level. “The forcefulness of his style and the precision with which he documented his facts made his report the model for civil surgeons, sanitary officers, and municipal bodies both in Britain and its colonies.”<sup>14</sup>

The most important aspect of the activities of Chadwick on the sanitary reform was his empathy towards the destitute and their living conditions which were making them prone to many infections and that was not their fault. “Chadwick’s battle cry for a cleaner, healthier England echoed in all corners of the empire. His remedial for the unhealthy environment of England’s cities was in sum, better physical conditions for the poor. Destitution and disease for him were inseparable: destitution (because the poor were weak and sickly) led to disease, and disease (because the sick could not work) compounded destitution. He proposed proper ventilated houses, a plentiful supply of water, a good drainage system, better disposal of refuse and sewage, and the removal of slaughter houses, leather and gas factories, and burial grounds away from residential areas.”<sup>15</sup>

In 1843, Sir Robert Peel appointed a Royal Commission, which submitted report in 1844-45. A national Health of Towns Association formed, and the members included Lord Ashley, the evangelical reformer, and Disraeli, Dickens etc. Lord Morpeth, who battled for sanitary reform in the Lord John Russell’s government was also a member of this association, and Chadwick was active in the background.<sup>16</sup>“Despite the efforts of the Association, there was much resistance to government interference in local affairs, even in such matters as public health. Lord Morpeth introduced a Public Health Bill in 1847, but was able to carry it only in a modified form in the following year, though aided then by the alarm at the second,

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<sup>14</sup> Ibid.

<sup>15</sup> Ibid., pp.98-99.

<sup>16</sup> Maurice Bruce, Op.Cit., p.10.

and more virulent, cholera epidemic, which killed eighty thousand people. Under the terms of the act, a General Board of Health was established, with Morpeth himself as chairman and Ashley and Chadwick as the other members. In the six years of the Board's life much local activity for the improvement of sanitary conditions was stimulated. But the Board came to an end in 1854 and was converted into a minor department with a political head."<sup>17</sup>

The Board had the power to create local boards and issue directions, but the cause of its end was due to its decision to takeover London's private water companies and the burial system. The private water companies were making huge profits from these endeavours without checking for quality service and they vehemently criticized the Board on fear of losing their business, and Chadwick became the most hated person in the public eye, because of the notion that he is trying to curb every personal liberties of the population. During that time, 'The Times' newspaper wrote, " We prefer to take our chances of cholera and the rest, than to be bullied into health."<sup>18</sup>Dr. John Simon, the medical officer of the London city since 1848, was another important person after Chadwick, who made some progress in the sanitary reforms. His appointment in the national administration gave him the much needed power and authority regarding health aspects during the 1855-1875 period.<sup>19</sup>

After the breakup of the earlier General Board of Health, its duties were divided between the Home Office and the Privy Council, and Dr. John Simon was assigned to advise these two bodies on matters connected with general health policy. "These followed a long series of investigations by Simon, who presented his findings year by year in a series of pungent reports that prepared opinion for the next legislative moves. In 1866, hastened by another attack of cholera - fortunately the last

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<sup>17</sup> Ibid., pp.10-11.

<sup>18</sup> Denis Richards and Anthony Quick, Op.Cit., p.78.

<sup>19</sup> Maurice Bruce, Op. Cit., p.11.

which the country has to suffer - Parliament passed a Sanitary Act, which for the first time required authorities to improve conditions and a major investigation. The Royal Sanitary Commission followed. The Commission's report in 1871 led at last to definitive public health measures in 1872 and 1875. The first established two sets of sanitary authorities - in towns, councils, and elsewhere, the guardians - all of them with the duty of appointing medical staff. The final step was the consolidating Act of 1875 which was to remain the basis of sanitary legislation until 1936."<sup>20</sup>

Before 1871, there was no strong litigation towards sanitation and public health; however, during the prime minister-ship of Gladstone, a supervisory Local Government Board set up was initiated.<sup>21</sup> "This Board took over the Poor Law Board, the local government sections of the home office, and the medical department of the the privy council; and in so doing it became the supreme authority in sanitary matters and the forerunner of the Ministry of Health. Its president was normally a cabinet minister, and though it took a rather narrow view of its functions, it was able to insist on widespread improvements. By the close of 1875, when the Public Health Act was passed, the whole country was divided into recognized districts for sanitary control, the appointment of a 'medical officer of health' for each district was compulsory, power had been given to the magistrates to punish the landlords who left their property in a filthy condition, and every house built in the future was by law to have proper sanitation and a water supply. Measures of this kind proper sanitation and water supply, together with improved medical knowledge and training, that lie behind the rapid improvement in public health."<sup>22</sup> Improved sanitation and medicine were bringing a steady decline in the death rate of the towns.<sup>23</sup>

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<sup>20</sup> Ibid.

<sup>21</sup> Denis Richards and Anthony Quick, *Op. Cit.*, p.78.

<sup>22</sup> Ibid.

<sup>23</sup> Ibid., p.240.

England, before the sanitary reforms, was not different from any other alleged filthy areas in Colonial India in matters related to sanitation, yet during their reign, India was seen as a breeding ground for diseases and a potential threat for the English. “England was not set apart from India by its smell, or its drains. For the early nineteenth century Englishman, what made India pestilential was its climate, not the sewage in its streets. By the middle decades of the century, however, as Edwin Chadwick’s sanitary movement took hold with the coming of the Victorian administrative state, filth, and the epidemic diseases linked to it, were increasingly brought under control in Britain. Despite much popular resistance to such government interference, in 1848 the first Public Health Act began the process of cleaning the cities and rivers of Britain, providing safe drinking water, and establishing compulsory vaccination. Similar measures, only fitfully enacted and rarely imposed, were less successful in India, so that as time went on the difference between Britain and India grew ever more palpable. In a process similar to that which brought the English working classes into the constitution after 1867, and so definitively marked off the British from colonial people politically, by the 1890’s, apart from a few exceptional areas such as Glasgow, Britain was set apart from its Indian dependency as decisively in its health and sanitation.”<sup>24</sup>“Sanitary condition of the London city and its suburbs was deplorable. All drinking water came from the Thames river or the shallow wells, until the new river company brought a wholesome supply of running water from the streams. The streets were badly paved, dirty, and ill lighted.”<sup>25</sup>

Many diseases were there, and the “death rate from diseases like tuberculosis was high, and the cholera epidemic swept the country in 1848-49 and again in

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<sup>24</sup> Thomas R Metcalf, *Ideologies of the Raj*, Cambridge University Press, New Delhi, 1995, p.173.

<sup>25</sup> T F Tout, *An Advanced History of Great Britain From 1485 to 1714*, Part II, Longmans, London, 1961 (1902), p.525.

1854.”<sup>26</sup>“By the beginning of the 1850’s, a number of reports had brought out the shocking state of the nation’s health. They made some impact on the public mind, but not nearly as much as the cholera that, after appearing in the 1840’s, returned in 1854 and again in 1865-66. It was not difficult to guess some connection between this and the all prevalent filth and lack of drains. In many towns, water supply was a scandal and in many areas of London, the water was turned on only three days a week, for an hour or two, to the standpipes from which much of the population drew their water.”<sup>27</sup>

The water supply and its distribution were deplorable, and a quarterly magazine in 1850 heavily criticized it as follows, “London Water Companies were an irresponsible monopoly who used their control of water ‘to distribute it of such noisome impurity and at such exorbitant price, as might satisfy their unscrupulous cupidity; to squander, in a greedy struggle for lucrative territory, sums that should have been laid out in piping the poorer districts of the town’. When a source of epidemic was found to be a well, the inhabitants were not ready to abandon its use, and the only way for the concerned inspector was to remove the water pump handle.”<sup>28</sup>All these instances refer to the fact that the sanitary condition of Britain was very deplorable, but the vested interests of the colonial administration in India placed this fact under the rug and, on the other hand, portrayed India as a filthy place that was the breeding ground of illness.

As part of the British-administered territory as its colony, colonial India witnessed the first attempt at sanitary understanding with the 1859 Royal Commission, and the report was submitted in 1863.<sup>29</sup>The report suggested serious

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<sup>26</sup> Denis Richards and Anthony Quick, Op.Cit., p.14.

<sup>27</sup> Ibid., p.76.

<sup>28</sup> Ibid.

<sup>29</sup> Haseena V M, *Encountering Epidemics : Colonial State and Public Health Strategy in Malabar*, Unpublished M.Phil Dissertation, Department of History, University of Calicut, 2015, p. 58.

attention towards sanitation as it is the prime factor which is going to help in the annihilation of epidemics. “Financial as well as political constraints discouraged the colonial state from a greater degree of medical intervention. There was, however, a substantial shift in state attitude in the late 19<sup>th</sup> century. European health in India, it was increasingly argued, could only be assured through wider medical and sanitary measures. Epidemics frequently allied with famines were an unwelcome tax on the profitability of the empire. Sanitary reform and the curbing of epidemics of smallpox and cholera in Britain created pressure for similar campaigns in India, while the advances made by Pasteur, Koch, and others in the new science of Bacteriology created confidence among British medical men in India that epidemic diseases could be ‘conquered’ through the application of western scientific knowledge and reason.”<sup>30</sup>

Research in bacteriology was inevitable for the fight against epidemics, and the advancements made in this field in England were an inspiration in the Indian context also. “There was no centralized or co-ordinated effort, though chemical examiners attached to some provincial governments were making some effort.”<sup>31</sup> But the work undertaken in this regard was not satisfactory, as E H Hankin was provided with a small laboratory in Agra and was to take care of the whole north India. Likewise, Dr.Lingard was given the position of Imperial Bacteriologist when a bacteriological department was commenced at Poona College of Science in 1891. His duty was to inquire upon the diseases of the domesticated animals in whole India. He was also commissioned to go to the regions of disease outbreak and to find ways through which the outbreak can be prevented before further spreading.<sup>32</sup>

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<sup>30</sup> David Arnold, ‘Touching the Body: Perspectives on the Indian Plague, 1896 - 1900’ in, Ranajit Guha (ed.), *Subaltern Studies Writings on South Asian History and Society*, Vol. V, Oxford University Press, New Delhi, 1999 (1987), p.58

<sup>31</sup> Deepak Kumar, *Science and the Raj A Study of British India*, Oxford University Press, New Delhi, 2011 (1995), p.91.

<sup>32</sup> Ibid.

Vaccination programmes were started in India as a part of the sanitary reforms and became the milestone in the sanitary history of the country. “In 1893, Haffkine was sent by Pasteur to India to try out his remedy for cholera by vaccination. He was an instant success. The municipalities of Calcutta and Madras invited him to visit their cities and introduce his system. In 1896, he set up a Plague Research Laboratory in Bombay under the control of the General Department of the Bombay government. Apart from the preparation of anti-plague serums and anti-cholera vaccinations, his institute also undertook the diagnosis of obscure diseases in men and animals, examination of pathological specimens, instruction in bacteriological work, research work, etc.”<sup>33</sup>

The health of a specific geographical area is dependent on many factors, such as the climate and the way of life of the residents of the locality. A thorough understanding of the climate, various natural phenomena, availability of the herbal plants, and the awareness about their medicinal properties and its effective use, practice of hygiene and cleanliness, and sanitary well being etc. may have influenced the health of a population. “From the time of the ancient Greeks onwards, health was perceived to be linked widely to an array of topographical and environmental factors. The elevation of the ground, the condition of the soil, the humidity of the atmosphere, and above all the extent of marshes and wet ground, determined the occurrence of epidemic diseases. This environmental theory of disease marked out India, with its unfamiliar plant and animal life, its excessive heat, and numerous ‘miasmatic’<sup>34</sup> fluxes, as an exotic and dangerous space.”<sup>35</sup>

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<sup>33</sup> Ibid., p.92.

<sup>34</sup> Medical theory that sickness such as cholera, plague etc. were caused by a miasma or pollution. Miasma means pollution in ancient Greek.

<sup>35</sup> Thomas R Metcalf, *Ideologies of the Raj*, Cambridge University Press, New Delhi, 1995, p.171

“There are some well known theories regarding the introduction of western medical practices in India in this regard. Some scholars argue that the main concern of the British authorities was to protect the health of the British in India. The climatic condition of India was very distinct from Britain. Thus the main problem faced by the British in their initial years of administration was to tackle the deaths and the health deterioration of the British People in India and the humid climate in India was not at all suitable for them”.<sup>36</sup>

“The other view point is that the British government in India was a reformist state and public health is the responsibility of that reformist state: the Introduction of the western medical system in India during the British rule may be a part and parcel of a reformist state that was working hard for the well being of an alien population because of their high standards of morality and to ease the ‘white man’s burden’ from their shoulders, and this claim was propagated mainly by the pro-British scholars. The sanitary works in British India got a level of acceptance and foundation through the Royal commission of 1859 and its report highlighting the worst sanitary conditions prevailing in the provinces and it began the formulation of sanitary policies by the governing authorities”.<sup>37</sup>

Before the British introduction of western medicine, India witnessed and experienced it with the Portuguese arrival in the fifteenth century, and the establishment of a hospital in 1498.<sup>38</sup> The year 1607 witnessed the opening of a medical school by them and the native Indian rulers were availing of the service of western medical professionals from the seventeenth century onwards. Western

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<sup>36</sup> Jasriya Yoosof U V, ‘Epidemics and the City : A Study of Colonial Calicut’, in *Proceedings of the Indian History Congress, 78<sup>th</sup> Session*, Jadavpur University, Kolkatha, 2017, p. 549.

<sup>37</sup> Ibid.

<sup>38</sup> Dr. P Vinayachandran, *Kerala Chikilsa Charithram* (Mal.), Current Books, Kottayam, 2001, p.21.

medicinal practice continued during the later years through the colonizers, French and English.<sup>39</sup> Indian experience with western medicine in the true sense with a strong institutionalised framework started with the British expansion of its colonial authority towards the land, and the first few years of the colonial regime in India were trying to gather information and knowledge about the land and its people whom they were going to rule. For this purpose, many gazetteers and survey reports were prepared and it was to tackle the process of administration of an unknown territory completely alien to them. They were clueless about the culture, history, living conditions, customs, practices, lifestyle and other details of the people of this territory. “The political ambition of the East India Company was, perhaps, largely responsible for organizing extensive survey works with a view to gaining a thorough geographical knowledge of the subcontinent.”<sup>40</sup> When the crown took over the control of India from the company, they made use of the available sources for their administrative convenience, and these were also used in public health and sanitary affairs.

As a byproduct of the new public health measures introduced in India, western medicine in India was not useful to a greater extent of the indigenous population, and they viewed it as a failure that only showed sympathy and attention towards the western<sup>41</sup> and the early western medicine introduced here was solely for the well being of the Europeans residing here for the official duties and the soldiers stationed here. The army cantonment and the areas adjacent to it were given more importance than the native town. This approach was changed in the middle of the 19<sup>th</sup> century, and the reason for this was the new understanding that the sole care given to the European population cannot help the eradication of diseases. These influences can be seen in

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<sup>39</sup> Ibid.

<sup>40</sup> D M Bose (Ed.), *A Concise History of Science in India*, Indian National Science Academy, New Delhi, 1971, p.493.

<sup>41</sup> Roger Jeffery, *The Politics of Health in India*, University of California Press, Berkeley, 1988, p.98.

matters related to health, as the status of health determines the quality and quantity of human resources residing in a geographical area and is influenced by many geographical factors like location and climate.

British people residing in India were the prime concern of western medicine introduced here, and it is evident through the Contagious Diseases Act. This act was introduced to curtail the spread of venereal diseases between Indian prostitutes and European soldiers. It was repealed in 1886.<sup>42</sup> The act advises the soldiers of European origin not to take part in any kind of intimacy with the Indian prostitutes, as they are carriers of sexually transmitted diseases. “As this latter example suggests, the primary responsibility of western medicine in India until late in the century was still to minister to the health of the colonizers, not the colonized, except in so far as Indian soldiers, servants, plantation labourers, and prostitutes constituted an apparent danger to the European well being.”<sup>43</sup>

The question of sanitation and hygiene acquired prime importance during the 1860's because of the deteriorating health conditions in the cantonments. In an 1863 report, it was mentioned that, each soldier cost the government of India an annual sum of 97 pounds, and 388,000 pounds per annum were spent upon illness.<sup>44</sup> This was a huge amount of money, and sanitary improvement was viewed as a measure to prevent the loss of European lives in India caused by the high mortality followed by the epidemics. “The death rate in the cantonment at Bombay was higher than every other town in the presidency. Apart from Surat. It was noted that there were only a few wells, and these contained very ‘indifferent water’. Water for the troops was brought

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<sup>42</sup> David Arnold, Op. Cit., p.58.

<sup>43</sup> Ibid.

<sup>44</sup> Rajnarayan Chandavarkar, *History, Culture and the Indian City*, Cambridge University Press, New York, 2009, p.39.

from the well on the Esplanade<sup>45</sup>, by bullocks at first, later by Iron pipes.”<sup>46</sup>“Sanitary reform is in itself a police improvement for crime, dirt, and a high rate of mortality.”<sup>47</sup>The main views or arguments that came to the forefront during these times were that genuine concern and execution of the sanitary reforms would save more lives of the labour force, which would be far more in number than the loss of life and productive labour caused by the riots in the past 30 years. The health of the labourer was linked to his efficiency as a factor of production and took references from the sanitary commissioners and health inquiries of Britain.<sup>48</sup>

This understanding had nothing to do with a humanitarian concern or the so called ‘civilizing mission’; it was purely based on the economic and business concerns of a firm. The civilizing mission was an important aspect of the ideological framework used by the pro-British scholars in defending the British sway over the colonies, and it was part of Evangelicalism, which was one of the important religious developments that happened in British history.

The main motive behind Evangelicals’ work was propagation of the gospel, and they reached the colonies with the colonizers and, through the work of preachers, Bible women, and Christian missionaries, who tried their very best for the fulfilment of their hidden motives, which was actually religious conversion.<sup>49</sup>“Evangelicalism exerted a strong civilizing and educational effort aimed at transforming people’s personal lives.”<sup>50</sup>and “the mixture of liberal and evangelical ideas lead to a quite general emphasis on the moral character of the English people and their duty to lead

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<sup>45</sup> A place name in Bombay.

<sup>46</sup> Rajnarayan Chandavarkar, Op.Cit., p.39.

<sup>47</sup> Ibid., p.42.

<sup>48</sup> Ibid.

<sup>49</sup> Peter Van Der Veer, *Imperial Encounters Religion and Modernity in India and Britain*, Permanent Black, Delhi, 2006 (2001), p.34.

<sup>50</sup> Ibid.

the world. These views of progress and grace for all were not confined to the British isles but included the ‘white man’s burden’ to bring the gospel to the colonies.”<sup>51</sup>

The racial superiority complex of the white people and their perception of the colonized societies as barbaric were masqueraded behind the universal oneness and morality propagated through the civilizing mission. But the actual reason behind the understanding of the sanitary reforms in India was neither humanitarian nor civilizing: the reason was their understanding that “full utilization of the potential capital was incompatible with the neglect of social conditions or the wastage of human lives. More immediately, what motivated British administration and Indian magnates was neither commercial nor humanitarian, but the fear of epidemics.”<sup>52</sup>

In the land of Kerala, the western medical knowledge came to the city spaces as a part of the colonial possession of the land, and the understanding regarding the science of health and sanitation was diverse in various parts, owing to the fact that the land was ruled as three different states: Travancore, Kochi were the princely states, whereas Malabar was under direct British control.

The royal families of Cochin and Travancore were keen on introducing western medicine in their concerned princely states. Before 1876, in the capital of Travancore itself, no ample importance was given to sanitation . There were some sweepers employed for the cleaning of streets. The sweepers employed by the Thahasildar only cleaned inside *Kizhakke Kotta* (East Fort). In the year 1880-1881, a committee was formed to submit suggestions regarding the cleaning activities of the capital town. Thus a new system of town cleaning was created, and later the small pox and cholera outbreak in Thiruvananthapuram during the period 1890 paved way for the cleaning of the town more vigorously. The places like Alappuzha, Kottar had

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<sup>51</sup> Ibid., p.38.

<sup>52</sup> Rajnarayan Chandavarkar, Op.Cit., p.42.

some provisions for the sanitary works, but the outskirt villages had nothing of this sort. In 1887, Kottayam, Alappuzha, Kottar, and Nagerkoil had a system to look after the sanitary works, and it was done by the Local Committee, which worked under the chief magistrate. A small amount of money has been provided by the government to this committee for undertaking the sanitary work.<sup>53</sup>

In travancore, the Town Conservancy and Improvement Regulation was amended in 1909, and a new law modelled on the Municipal Act of British India was formulated. As part of the new law, many municipalities were formed in the Travancore and the major municipalities had Health Officers and Sanitary Inspectors while the minor municipalities were under the control of qualified Sanitary Inspectors.<sup>54</sup>

Film exhibitions, publication of articles in journals, printing and distribution of pamphlets etc. were conducted to enhance awareness among the public on matters related to health from 1936 onwards. The main topics exhibited through films were malaria, cholera, small pox, tuberculosis, intestinal worm diseases, leprosy, plague, cleanliness, and the mother and newborn care. These film exhibitions were for increasing the knowledge of the populace regarding these affairs and there by decreasing the presence of these diseases. This type of film exhibition was conducted by the health department at definite intervals, and a museum was working under the public health department. Many committees also began to work for propagating information regarding health, and they also conducted cleaning programs. Awareness classes on cleanliness of surroundings and health matters were performed by them.<sup>55</sup>

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<sup>53</sup> Dr. P Vinayachandran, *Op.Cit.*, pp. 48-49.

<sup>54</sup> *Ibid.*

<sup>55</sup> *Ibid.*

The right to announce a place as ‘plague-infected’ was assigned to division peshkar, or the Devikulam Sanitary Commissioner. The announcement was done through the publication of the news in the government gazette. If a place was infected with plague, the peshkar or the Sanitary commissioner, while accepting the suggestion of the sanitary inspector of that region, may have the right to order the lockdown of the commercial enterprises of the area.<sup>56</sup>

Under King Rama Varma and the Diwanship of M P Madhava Rao, “the organisation of a sanitary department including vaccination, vital statistics, rural sanitation, and itinerant medical relief happened.”<sup>57</sup>The sanitary department came to prominence in 1895 August, and they were given the legal validity to collect and store the details of birth, death, etc. and the Town Improvement Committee assigned the workers under them for the collection of birth and death details of the population like a census, and the report was submitted to the sanitary commissioner. The collection and analysis of these details is one of the most important aspects of public health. A group consisting of six sanitary inspectors and a sub assistant surgeon conducted a survey of every home by visiting the place personally, and collected extensive details related to birth, death, and the presence of epidemics.<sup>58</sup>

The formation of the sanitary department gave the necessary systematic approach for the cleaning of the city. Cleaning and the maintenance fund came under the sanitary department and was from the revenue officers. The department increased the number of sweepers in the villages, and the salaries of the low-level employees were increased. The responsibility to install street lamps in some of the cities was given to the sanitary department in 1913. When the sanitary commissioner suggested

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<sup>56</sup> Ibid., pp. 49- 50.

<sup>57</sup> V Nagam Aiya, *Travancore State Manual*, Vol.I, Kerala Gazetteers Department, Thiruvananthapuram, 1906, p.645.

<sup>58</sup> Dr. P Vinayachandran, *Op.Cit.*, p.51.

to the government that cholera is a contagious disease spread through water, the government increased 5000 more to the amount used for the distribution of drinking water in the cities. New wells were dug, the old ones were chlorinated, and new types of toilets were built by the government. Chlorination of the wells was done without fail during the outbreak of waterborne diseases like cholera.<sup>59</sup>

The royal family has shown interest regarding matters related to sanitation, such as the cleaning of the towns and the drinking water distribution. During the time of Marthanda Varma, under the guidance of his minister Ramayyan Dalawa, many dams, water storage facilities, *thodu* (water streams), etc. were constructed, and all these helped in the drinking water distribution of people in Padmanabhapuram and the adjacent regions.<sup>60</sup>

In 1877, Diwan Nanu Pillai was appointed during the reign of king Ayilyam Tirunal, and several buildings like government offices, inns, and a number of roads, bridges etc. were constructed. He introduced several measures for the cleaning and protection of Thiruvananthapuram town. King Sri Mulam Tirunal made the cities like Nagercoil, Thiruvananthapuram, Kollam, Alappuzha, and Kottayam as protected cities, and the sanitary power of these places was vested upon the Division Peshkars.<sup>61</sup>

Town roads and its maintenance and lighting were done, and “the lighting of the capital city was under the management of the Public Works Department. Mofussil stations were in charge of the Town Improvement committees corresponding to the municipalities of British India but without the power of levying any municipal cesses, while the village road lighting is looked after by the sanitary department. The Thiruvananthapuram town gets the largest share of the amount spent upon street

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<sup>59</sup> Ibid., p.48.

<sup>60</sup> Prof. A Sreedhara Menon, *Kerala Charithram* (Mal.), D C Books, Kottayam, 2014 (1967), pp. 278-279.

<sup>61</sup> Ibid., pp. 328-329.

lighting maintained by the government. All the main roads are lighted, and a portion of which is lit up by gas.”<sup>62</sup>

When Rani Lakshmi Bai ascended the throne of Travancore, one of the first decision of her act was the removal of the Dewan Ummini Thampi, and the appointment of Colonel Munro, as the resident of Travancore.<sup>63</sup> Under his supervision, a vaccination department was established and a European physician was appointed as the darbar physician for the royal household. During the prevalence of small pox epidemic in the Travancore state, Munro also requested the Rani to accept the small pox vaccination and sent a medical person to conduct the above, but she found it unnecessary to vaccinate herself because she formerly had an experience of the disease herself and the possibility of the presence of antibodies naturally in her body, although she agreed to perform the vaccination on her husband and the two young *Thamburattis* and some other members of the royal family.<sup>64</sup> From this incident, we can assume the support received to western medicine from the Travancore rulers. The ruler herself was given permission to vaccinate her husband and kin against life threatening epidemics. It was also a time when the native population was in utter confusion regarding the benefits of the vaccination programme, and an affirmation such as this from the ruler may have boosted in the vaccination drive.

In the princely state of Cochin, there were no specific programmes for town sanitation and maintenance till 1890. Sanitation in the towns came under the Public Works Department, and they have not made any note-worthy contributions in this regard. In the year 1890, A committee including officials and non- officials was appointed for the town sanitation works of Eranakulam and Thrissur town, and they

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<sup>62</sup> V Nagam Aiya, *Travancore State Manual*, Vol.III, Kerala Gazetteers Department, Thiruvananthapuram, 1906, p.231.

<sup>63</sup> *Ibid.*, p.378.

<sup>64</sup> *Ibid.*, p.381.

were provided with monetary assistance from the government. In 1896, separate ruling boards were formulated for the purpose of town sanitation in the cities of Eranakulam, Thrissur, Mattancheri, etc. Later, the boards were introduced in places like Kunnankulam, Irinjalakkuda, Thrippunithura, Nenmara, and Nelliambathi. The main purpose of these boards was the clean upkeep of the main roads, cleaning of the drainage, installation and lighting of street lamps, etc.<sup>65</sup>

In 1908, the sanitary department was re-structured and it came under the public health department, and the department of public health was under the charge Chief medical officer. Qualified sanitary officers were also appointed. In the later years, the sanitary works in the villages were also taken care of, and the state was divided into two divisions under two sanitary inspectors for the better and more efficient cleaning and other sanitation works in the villages. Vaccination, prevention of contagious diseases, and the supervision of fairs and festivals came under the power of sanitary inspectors. Every market place in the state was under the jurisdiction of the public health department, and special sanitary inspectors were appointed to inspect the market periodically. They made sure that the market premises were maintained by the vendors in a neat and clean manner. A new bill called Municipal and Sanitary Improvement Regulation also came into prominence. This bill got its inspiration from the Madras District Municipalities Act.<sup>66</sup>

In the Malabar region, a share from the municipality fund was used for the sanitary works to be undertaken, but financial constraints from the municipality made the work impossible. “In the municipal towns, a certain proportion of the municipal council’s<sup>67</sup> income has always been set apart for sanitary purposes, but the real reforms that are so urgently required are at present far beyond their limited financial resources.

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<sup>65</sup> Dr. P Vinayachandran, *op.cit.*, pp. 54- 55.

<sup>66</sup> *Ibid.*

<sup>67</sup> Governing body of the municipality during that time.

Conservancy systems have been established and a staff of qualified inspectors entertained, but the towns are still without effective systems of drainage and water supply, and their sanitary establishments are usually inadequate.”<sup>68</sup>

Innes and Evans, in their gazetteer of the Malabar district, assert that “sanitation in the true sense of the term was non-existent in Malabar.”<sup>69</sup> The experiences of sanitation in Malabar was different from the native states of Travancore and Cochin. First form of preventive medicine introduced in Malabar by the British was vaccination against smallpox.<sup>70</sup> “Absence of any other agencies, as it was there in Travancore, other than the British to patronize western medicine in Malabar culminated in a totally different experience in the life of the natives of Malabar.”<sup>71</sup> Malabar was directly under the control of British and they were able to implement the new rules and regulations without the approval any king. But in the case of Travancore and Ccohin, a direct sanitary policy making was unable to execute.

Modern medicine and its spread in a wider canvas happened in Malabar, “when the Public Health Department was organized in 1925, the practice of collecting vital statistics and sending health visitors for vaccination purposes began in a more systematic way”<sup>72</sup> and the collection of vital statistics was an important aspect of the public health and sanitary understanding of a region. It provides detailed information regarding birth, death, prevalent epidemics of the region and its pattern, etc. and the data collected were used for the creation and implementation of many policies

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<sup>68</sup> C A Innes I C S and F B Evans I C S (ed.), *Madras District Gazetteers Malabar*, Vol I, Madras Government Press, 1951, p.291.

<sup>69</sup> Ibid.

<sup>70</sup> Dr.Satheesh Palanki, ‘Smallpox Encounter and the Indigenous Response in Colonial Malabar, 1800-1860’ in, Ajith K Sreedhar (Ed.), *Proceedings of the Kerala History Conference*, Sahithya Pravarthaka Co-Operative Society Ltd, Kottayam, 2016, p.293.

<sup>71</sup> Ibid.

<sup>72</sup> K N Ganesh, *Locality and Culture in Kerala History The case of Tirurangadi*, Publication Division, University of Calicut, 2010, p.220.

regarding the many aspect of health. As Malabar was under direct colonial regime, no native rulers as in the case of Travancore and Cochin, involved in the administrative machineries of the state.

The history of sanitation in the British context of Europe is highly associated with the human experiences of diseases and the scientific studies related to the cause and effect of them. The advancements happened in microbiology, and the hard work of many scientists in this branch of study helped in the recognition of many causative factors behind infectious diseases and their remedies. The discovery of the contagious nature of the epidemics and the procedure through which they spread in a locality was the foundation stone laid in the future endeavours towards the sanitary reforms. Indians were familiar with the knowledge of sanitation from the Harappan period itself. But the prejudiced minds colonizers viewed the Indian population as a bunch of people lacking the basic sanitary understanding. The sanitary reforms in modern India were experienced through the institutionalised works of the Colonial power structure. The notion of hygiene and cleanliness of the Victorian state had slowly proliferated, and the newly created institutions and machineries helped the state in the sanitary reform. But it was not sufficient for the Indian situation and the reformatory policies were the not the same for the 'white' and the 'black' areas of the city.

## CHAPTER 3

# COLONIAL SANITARY REFORMS AS PART OF THE PUBLIC HEALTH POLICIES

Sanitising the streets, homes, and even the body of the colonial subject was the norm of the period that witnessed the British occupation of India. India had an ancient practice of health and well being called *Ayurveda*, and every other philosophical doctrine in this land also advocated a life of hygiene without dirt; even the removal of dirt from the inner thoughts of the human beings was asked for. However, the British came to a land of these great thoughts and philosophical understanding and began to portray the people as mere ‘barbarians’ of no morale who could not lead a ‘clean life’. The major setback or challenge faced by the British administration in India was the diseases. Illness was the main hindrance to their imperial project here, and the easiest step for them was to point fingers at the people for having no understanding of cleaning, and the continuous presence of many health hazards in the form of epidemics was attributed to the unhygienic living of the Indian population. This chapter tries to analyse the sanitary works of British administration in India as part of the Public health policies and also tries to evaluate various municipal and health laws introduced in the period that constituted the provisions related to sanitation.

During their early administrative years, several surveys were conducted about Indian situations: many geographical, botanical, zoological, ethnographic and cartographic surveys were conducted by the British officials and documented well. All these surveys helped them in understanding the subjects they are going to rule and assisted them in defending imperialism through the chanting of the Civilizing Mission. They used medicine as a tool to defend colonialism in India, but the main

framework of any scientific or technological development and its study was not imparted to the Indian natives as technical and medical education was in the backseat. The colonial educational system was meant only to create the people to have an understanding to assist their colonial masters as clerks and servants. As part of the Public health policies in India, many policies and decisions were made in connection with the curbing of epidemics. Introduction of vaccination, opening of hospitals and dispensaries, segregation huts for the infectious disease patients etc. were among the main steps taken. As a part and parcel of these public health measures, attention was given to drinking water facilities, waste management, toilets and disposal of excretory materials, and drainage.

The earliest work done by British in the public health sector was to ensure the safety and goodwill of the British officials stationed in India. The efforts to improve the health of the Indian population were attempted only in later times. Sanitary improvements as part of the medical practice were primarily for the eradication of the recurrent diseases and some of the acts were also passed during the times in accordance with this goal in mind. Sanitary works were conducted as part of the preventive measures towards the curbing of epidemics as “hygiene or preventive and social medicine imparts us knowledge on, how to fight out the general and epidemic diseases. It also teaches us to ascertain the causes and conditions of maintaining the good health of the individual and the society at large.”<sup>1</sup>

The secret behind the cause of the disease was always a curious case, and different reasons were attributed by the people at various levels of progress of humankind. Some of the causes believed by the people, such as the effect of planets on humans, anger of the deities or goddesses etc.<sup>2</sup>were still prevalent in the traditional

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<sup>1</sup> Dr. Balaram Jana, *Preventive and Social Medicine*, Jain Publishers Pvt. Ltd., New Delhi, 2006, p.2.

<sup>2</sup> Ibid.

minds of the people. For instance, chickenpox is still attached to a specific goddess in some parts of the country even today. The same was the case with the smallpox epidemic, as it was associated with the wrath of the goddess, and it was believed that with the appeasement of the goddess, the village or the affected area would be free from it. The Malayalam movie *Nirmalyam*<sup>3</sup> is based on this belief of the people regarding the presence of epidemics due to the punishment of the goddess and it can be cured after offering prayers to the goddess.

The discoveries in the realm of microbiology were the major turning point that laid the strong foundation for the preventive medical theories, and it proved that, “most of the diseases are caused by environmental pollution, and germs, bacteria, and viruses of such diseases are carried mainly either by air, water or insects. In any scheme of preventive medicine, individual man is to be educated to know the value of sanitation for the benefit of the community and for his own self.”<sup>4</sup> Preventive medicine “aims at the well-being of society as a whole. Eradication and control of communicable and epidemic diseases resulting from an unhygienic environment are its main aim. Thus, removal of an unhygienic environment, and control of pollution of air, water, and earth are its main tasks. Its other major work is the production and administration of artificial immunity for cholera, smallpox etc. Another important sphere of preventive medicine is the control and subjugation of the infected people for the welfare of the family and the community.”<sup>5</sup>

All the above mentioned principles of preventive medicine were the basement of the sanitary policy formulated by the British government in India. But the question is whether the treatment of the whole society as a big family and doing everything for

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<sup>3</sup> *Nirmalayam*, Malayalam movie was directed by M T Vasudevan Nair released in 1973 and P J Antony acted as the main protagonist who performed the role of an oracle at the temple of the goddess.

<sup>4</sup> Dr. Balaram Jana, *Op. Cit.*, pp.2-3.

<sup>5</sup> *Ibid.*, p.3.

the consolidated well-being of that big family mentioned above were like that in the practical application of the colonial regime also, or the family included only a 'class of people who were British in blood and colour.'

The history of medicine is a recent development in the field of history, and it includes everything under the bigger canopy of subjects that is related to the health of the population. In the context of health and sanitation, the colonial experiences of India and the way through which she travelled her journey is a spectacular field of study, and many prominent scholars analysed it with utmost zeal and curiosity. One of the most important historians in this category is David Arnold, and his contributions to the medical history of colonial India are extraordinary.

David Arnold compares the medical interference of colonial rule in India using the theory of Michael Foucault and says, "The Foucaultesque<sup>6</sup> analogy between the prison and the hospital, between penology and medicine, was most evident in the recourse to hospitalization and segregation."<sup>7</sup> and the "reform or cure could, it was believed best be effected by removing the individual from his customary environment and placing him with a 'rational' and orderly prison or hospital regime. In penology, this attitude gave rise not only to the prison but also to the reformatories for former thugs and to the settlements for 'criminal tribes'. In medicine, there was a preference for hospitals over dispensaries in the belief that the former offered better opportunities for isolation, observation, and control."<sup>8</sup>

The British understanding of India in matters connected with the presence of epidemics here was always rooted in their prejudiced view of India as a filthy place.

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<sup>6</sup> Term used by David Arnold.

<sup>7</sup> David Arnold, 'Touching the Body: Perspectives on the Indian Plague, 1896 - 1900' in, Ranajit Guha (ed.), *Subaltern Studies Writings on South Asian History and Society*, Vol. V, Oxford University Press, New Delhi, 1999 (1987), pp.60-61.

<sup>8</sup> Ibid., p.61.

David Arnold calls it as ‘Western antipathy to India’s physical and social environment.’<sup>9</sup>He writes about western medicine in India as follows: “it had remained too closely identified with the requirements of the colonial state and so was remote from the needs of the people. It had failed to make the transition from state medicine to public health.”<sup>10</sup>From this statement itself, the drawback of the introduction and practice of western medicine in India can be seen, as it was never for the betterment of the native population. Sanitation was also considered part of the public health policies, and the functioning of the sanitary policies was also not different from the above. European soldiers were the most significant among the primary beneficiaries of the sanitary reforms introduced by the colonial regime here, and their safety was of paramount importance.

Veena Talwar Oldenburg refers to the revelation regarding the serious condition of the epidemics and the deaths happening due to them, which began to be noticed by the British government in India only after the revolt of 1857. The revolt made it very clear that the mortality of the European soldiers from the epidemic was far more than from the mutiny. She says, “more men died of disease than in combat.”<sup>11</sup>As far as she is concerned, “these revelations made the cleanliness of the city as imperative as its strategic security. The problem of eliminating disease from the urban environment had no simple solution, however, the diseases that imperilled European lives were numerous and recurrent, ranging from small, everyday treacheries on the gastrointestinal tract, to sweeping epidemics of cholera, typhoid, smallpox, and the plague.”<sup>12</sup>

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<sup>9</sup> Ibid.

<sup>10</sup> David Arnold, *Colonizing the Body State Medicine and Epidemic Disease in Nineteenth -Century India*, University of California Press, London, 1993, p.3.

<sup>11</sup> Veena Talwar Oldenburg, *The Making of Colonial Lucknow 1856-1877*, Oxford University Press, Delhi, 1989, p.96.

<sup>12</sup> Ibid., pp.96-97.

The serious question of the colonizers here was about the unchanging habit of the ‘unclean’ life of the natives and how they are a threat to the sought-after good health of the British. The major allegation was against the natives, as that, their lifestyle was causing the frequent breakout of epidemics in India. The first step for this was the segregation of the native and the European sides of the city as much as possible. The more the distance, the merrier the well-being of the colonizers. Another viewpoint from the colonizer side was that the inherent nature of the Indian climate and its environment naturally was detrimental to the western people, as they were originally from a more temperate climate zone. Home leave was a remedy used to tackle this situation, and a two-month or longer leave was granted to many officials of the empire in India to recuperate in their home country, Britain, after the endured pain and hardship they faced in the colony.<sup>13</sup> The use of hills as a place of residence or settlement was also practiced to keep the exclusivity and to stay away from the native population. “The origin of these settlements, and the motivation for them is, complex, ostensibly, they began as ‘health sanatoria’, functioning as part of a British colonial ecosystem. According to this view, they were the product of European cultural perceptions, which held that expected states of health could be attained more satisfactorily at higher elevations in the hills.”<sup>14</sup>

Sanitary Department had its proper origin in the year 1864.<sup>15</sup> “During the first occupation of India by the English, the necessities of war usually determined the site of military encampments. These, in course of time, became permanent military cantonments, with little consideration of the sanitary questions arising out of the locality. Attention was drawn to the fact that the mortality at these stations among the military and other officials far exceeded that of the community residing beyond

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<sup>13</sup> Ibid., pp.100-101.

<sup>14</sup> Anthony D King, *Colonial Urban Development Culture, Social Power and Environment*, Routledge and Kegan Paul, London, 1976, p.157.

<sup>15</sup> *Administration- Madras Presidency*, Tamil Nadu State Archives, Egmore.

military limits, and it was, moreover observed that an epidemic once established had a special attraction for such localities, often maintaining an existence in them for a period exceeding their course elsewhere.”<sup>16</sup>

“These circumstances induced the British parliament in 1859 to nominate a Royal Commission to inquire: 1) into the classes of diseases and the rate of sickness, mortality among the European and native troops in India, 2) into the causes giving rise to diseases like climate, locality, faultiness in barracks, drainage, water supply, diet, drink, dress, duties or habits of troops etc., 3) into existing unhealthy military cantonments and the remedies to improve their sanitary condition, also into the subjects of healthy positions, sanitarium and hill stations generally with a view to future occupation, 4) into the best construction of barracks, huts, hospitals and tents for India, and into the best means of enforcing medical and sanitary police.”<sup>17</sup> These were all the guiding objectives behind the inquiry of the Royal Commission of 1859 and the commission ended its inquiry in 1863, and the main observation was that the mean lifetime of Europeans living in India is shortened by 21.8 years.<sup>18</sup> “The commission submitted certain recommendations based on their inquiries, and urged the appointment of local commissioners of public health in order to ensure the gradual introduction of sanitary improvement. Sanitary commissions were accordingly appointed in the three presidencies: Bengal, Bombay, and Madras, in 1864., and were so constituted as to represent the various points of view from which the subject should be considered- civil, military, medical, and engineering. Their duties were partially consultative and partially administrative. They were to give advice and assistance in all matters relating to public health, such as selection of new stations, sanitary improvement of the existing stations and *bazars*, examination of new places, barracks,

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<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

and hospitals, to advice on the sanitary improvement of the native towns, prevention and mitigation of epidemic diseases, and to generally exercise a constant oversight on the sanitary condition of the European and native population.”<sup>19</sup>The major point put forward by the report of the commission submitted in 1863 was that, “it is impossible to separate the question of health, as it relates to troops, from the sanitary condition of the native population, especially as regards the occurrence of epidemics.”<sup>20</sup>

During these times, Florence Nightingale began to draw her attention to the Indian sanitary situation; even though she never visited India, she actively participated in the sanitation policies of the Indian soil for nearly forty years through writing letters to the British officers and administrators in India. Florence Nightingale, popularly known as ‘the lady with the lamp’, was a British reformer who got immense popularity during her work in the Crimean War for attending the wounded soldiers and is regarded today as the founder of modern nursing. Her birthday on May 12 is also observed as International Nurses Day. Nightingale engaged almost forty years of her life in the works concerned with the health and sanitation of colonial India. Initial interest of her in the Indian scene was the health of the British soldiers after the revolt of 1857, and later it changed to long term measures and their applications regarding the famine and sanitary condition of the country. As far as she is concerned, the mortality rate can be curtailed through measures of sanitation.<sup>21</sup>

She conducted all her inquiries on the Indian condition from her room by sending correspondence to different officers in India, and the reason behind her stay at home was that, after coming back from the Crimean war, she was facing some illness that prevented her from going out. She was involved with the Sanitary

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<sup>19</sup> Ibid.

<sup>20</sup> Veena Talwar Oldenburg, Op. Cit., p.99.

<sup>21</sup> Gerard Vallee (Ed.), *Florence Nightingale on Health in India Vol. 9 of the collected works of Florence Nightingale*, Wilfrid Laurier University Press, Ontario, 2006, p.1.

Commission of 1857 in Colonial India to study the condition of the army sanitation. This was the starting point of her interference with the sanitary works of colonial India.<sup>22</sup>The Sanitary Commission and the revolt of 1857 were the triggering events that made her look upon the sanitary condition and health of colonial India for nearly forty years from 1857 to 1897.<sup>23</sup>

Nightingale advised the government in India to establish a central sanitary executive for the whole of India, but it never materialised, even though the Sanitary Commission was established in 1864. Later, sanitary commissioners were appointed, and “the role of the sanitary commissioners was to coordinate sanitary work in their capacity as advisors and administrators. Nightingale’s correspondence in this section helps to relate the development of the work of sanitary officers from 1864 on and highlights the works of two eminent sanitary commissioners in India: J Pattison Walker in Bengal and T Gillham in Bombay.”<sup>24</sup>She called them the real “health missionaries.”<sup>25</sup>She maintained close contact with them through correspondence, and they also sent her various data on the sanitary situation of India during the time.

Nightingale advocated that a proper sanitary policy will only safeguard the population from epidemic diseases and she believed in the role to play by the women of India in this regard. She was of the opinion that the active participation of women will only help to achieve a greater degree of sound public health.<sup>26</sup>She advocated that this process should be at the elementary school level to reach the girls and women and to start the process of spreading sanitary awareness from the level of elementary

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<sup>22</sup> Jharna Gourlay, *Florence Nightingale and the Health of the Raj*, Ashgate Publishing Limited, Aldershot, 2003, pp.7-8.

<sup>23</sup> Ibid.

<sup>24</sup> Gerard Vallee (Ed.), *Florence Nightingale on Social Change in India Vol. 10 of the collected works of Florence Nightingale*, Wilfrid Laurier University Press, Ontario, 2007, p.37.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid., p.717.

hygiene onwards. She was also in support regarding the inspection and executive powers of the sanitary commissions and local authorities in matters connected with hygiene and sanitation.<sup>27</sup> All these recommendations of Nightingale may have a similar imperial undertone of a superior race trying to educate an inferior one who does not know anything about hygiene and a life of cleanliness. Thus they must be ‘educated’ about elementary hygiene itself because they are at that level of ignorance in this context. But the contradiction was that she herself was coming from a place of epidemics: only after the sanitary movement of Chadwick, the relationship between filth and epidemics was understood and taken into serious consideration in Britain itself by the government. “Despite much popular resistance to such government interference, in 1848 the first Public Health Act began the process of cleaning the cities and rivers of Britain, providing safe drinking water, and establishing compulsory vaccination.”<sup>28</sup>

This remark highlights that the sanitary condition of Britain before the sanitary developments of Edwin Chadwick was the same as that of the Indian scene. But the blame put on the Indian population as ignorant creatures, who lack basic understanding of hygiene and cleanliness, and thereby jeopardizing the health of the European population stationed here was not constructed in the British context in Europe. The cry of concern to educate about hygiene and sanitation to the British population was not carried out there as they had already privy to it, and the overcrowding of the towns after the industrial revolution was viewed only as a situational problem that was causing the insanitary conditions in the towns. The British population was not viewed as a morally inferior group of people in the context of the unhygienic conditions prevailed in their urban spaces. Although in the same

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<sup>27</sup> Gerard Vallee (Ed.), *Florence Nightingale on Health in India Vol. 9 of the collected works of Florence Nightingale*, Op. Cit., p.862.

<sup>28</sup> Thomas R Metcalf, *Ideologies of the Raj*, Cambridge University Press, New Delhi, 1995, p.173.

context, the Indian scene was driven through the racial antipathy of the colonizers to the colonized.

The clear-cut demarcation and the dual nature of the Indian cities in the context of the sanitary situation came from this racial superiority imbibed on the European minds. The colonial city having these two facets, like the 'modern' area where the colonizers lived and the old town where the natives lived, had its roots in the fear and racism, the former had in their understanding of the Indian situation.<sup>29</sup> "This concern with the disorder of old urban centres confronted Europeans at home at the same time, where it was stimulated by rapid urban growth, breakdown in sanitation, and alarming epidemics. Disease was attributed to the 'miasmatic' theory of atmospheric impurities produced by decomposing matter and damp in overcrowded settlements. The theory was specious; the remedies- drainage, removal of refuse, a safe water supply, and ideally, less crowding -were sound."<sup>30</sup> The description of the condition of people mentioned by Chadwick, celebrated sanitary reformer of Britain who studied on the sanitary condition and was responsible for the sanitary reform there, can be rightly used to the people of the native towns of India also, but in India the situation was judged on by the context of race.<sup>31</sup>

The early years of the British occupation of India were only to maintain a law and order and administrative setup, and the medical interest and health came to this picture later when the health of the army was in danger. "Mortality, sickness, and invalidity among the European population in British India can be seen as the major force guiding the British administrators to introduce public health measures in India. These were caused mainly by fevers, dysentery, diarrhoea, liver diseases, and most

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<sup>29</sup> Thomas R Metcalf and Barbara D Metcalf, *A Concise History of Modern India*, Cambridge University Press, Delhi, 2012 (2001), p. 108.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

important of all, cholera. Since the European population was concentrated in the three towns of the presidencies of India, namely Calcutta, Bombay, and Madras, all attempts were made to protect the British population from the epidemics ravaging these towns. Regular reports on the sanitary conditions prevalent in the barracks, hospitals, and transport ships formed the basis for sanitary improvements in these areas.”<sup>32</sup>After the mutiny of 1857 and the take over of India by the British crown from the hands of the East India company, the number of the military employed here was raised upto sixty percent after the report of the first Royal Commission. The second Royal commission assembled in the year 1859, analysed the health statistics of the military.<sup>33</sup>“However, it was not until 1864 that the first Presidency Sanitary Commission was setup based on the high mortality rate in the army. Their prime concern was to assist in all matters relating to the health of the army and to supervise the gradual introduction of sanitary improvements in barracks, hospitals, and stations on a continuing basis. Collection of vital statistics was an important task of the Sanitary Commission’s public health policy.”<sup>34</sup>

The period of the 1860’s was very alarming for the British administration in India due to the high mortality rate of European lives, and the period witnessed the appointment of provincial sanitary commissioners to look into this matter. But the early works were not satisfactory as the main study was on the number and reason of deaths from a statistical point of view rather than the prevention methods. Although the report highlighted the tie-up between various diseases and climatic and geographical factors. In the British scene in the European soil, there was a conscious attempt of their ‘welfare state’ to combat disease in its social and environmental sphere under the sanitary reform policies of the government. Even though in India, a

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<sup>32</sup> Poonam Bala, *Imperialism and Medicine in Bengal A Socio-Historical Perspective*, Sage Publications, New Delhi, 1991, pp. 101-102.

<sup>33</sup> Ibid., p.102.

<sup>34</sup> Ibid.

similar kind of mechanism was not visible before the 1860's and after that also, as the health and medical field here was only to treat diseases in hospitals, unlike Britain, where there were conscious efforts from the state to eradicate the social and environmental factors that were the root cause behind the gravity of the situation. The period of the 1860's in colonial India saw a difference in the earlier attempt to exclusively improve the military sanitation only and had a newer attitude to impart the sanitary works on the grounds of public health, measures and legislations that addressed the issues of public health and sanitation began to be passed during the time.<sup>35</sup>

The colonial point of view of attributing inferior status to the Indians combined with their vested interests can be seen in the laws and regulations that they had issued in India, and especially the laws that include provisions regarding sanitation. Various legislation came into effect regarding the working of the local bodies and municipalities from time to time, and these were the guidelines through which the policies of sanitation happened in the town areas. Public health-related legalisation also introduced, which included provisions for sanitary concerns. One such law was the Contagious Diseases Act of 1864, which, without any doubt, highlighted the colonial antipathy towards the Indian subjects, and they viewed Indians as a threat to the European soldiers' well-being here. It was also an alarming point, which erased the treasured distance they maintained from the native population. Bodies and the premises lived by the Indians were seen as breeding grounds for the spreading of venereal diseases, and the act was primarily to protect and safeguard the European soldiers here.

Oldenburg invites our attention to the case of European soldiers and the growing concern of the regime on their contact with Indian prostitutes and the use of

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<sup>35</sup> Ibid., p.103.

native liquor. This immoral contact was a headache for the administration, and it erased the safe distance the European population always maintained by keeping the natives a hand distance away. “The European garrison, around whose health and efficient functioning the urban environment had been largely redesigned, was susceptible to “social diseases”, which the authorities, both civil and military, tried in vain to control. Drunkenness and venereal diseases were the scourge of the British soldiery and the unavoidable result of the nature and quality of military life itself. The soldier was frequently a man from the working class in Britain, doomed to live in sterile barracks in the cantonments, forced by his very role in the colonial state and empire to remain alien and aloof. Submitting to a strict military regimen, he found relief from the frustrations and loneliness of cantonment life in the unsparing use of alcohol and native prostitutes.”<sup>36</sup>

The perception that the contact with Indian soldiers, servants, plantation labourers and prostitutes was a danger to the well being of the European population<sup>37</sup> was already prevalent, and when the European garrison started to have intimate contact with the native prostitutes, the authorities took serious interest in the matter. “The only direct personal contact the ruled had with the rulers was in the homes of the colonial elite, where they functioned as household servants, and lived in the servants quarters in the compounds of the colonial bungalows or in separate shacks near the European barracks. The servant-master relationship was a paradox: it was both intimate and remote at the same time. The ‘bearer’ (valet) helped to clothe, feed, and supply the personal needs of the master, but there was very little communication between them beyond the giving and obeying of commands.”<sup>38</sup> But in the incidence of the contact with the native prostitutes, this treasured distance the regime practiced to

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<sup>36</sup> Veena Talwar Oldenburg, *Op. Cit.*, p.125.

<sup>37</sup> David Arnold, ‘Touching the Body: Perspectives on the Indian Plague, 1896 - 1900’, *Op. Cit.*, p.58.

<sup>38</sup> Veena Talwar Oldenburg, *Op. Cit.*, pp. 133-134.

maintain was dwindled, causing a serious concern. “This left no choice but to tackle the the problem with a series of interesting, though less effective, remedies, one of these being the incorporation into the comprehensive Act XXII of 1864 in India of the provisions of Britain’s Contagious Diseases Act of 1864. The latter required the registration and medical inspection of prostitutes in English ports and garrison towns, and these same rules were now applied to India’s cantonments.”<sup>39</sup>The Act intended to reduce the cases of venereal diseases caused by contact with the native prostitutes, and for the purpose of isolating and quarantining the affected people, special hospitals called Lock Hospitals were formed.<sup>40</sup>The Indian Contagious Diseases Act was more rigorous in its way of treating of the native prostitutes. This law instructed them to accept regular inspections of their bodies and homes to check the venereal diseases.<sup>41</sup>The new act made it mandatory for the prostitutes to register their details and to accept medical examination and treatment if needed to work in the cantonment areas.<sup>42</sup>

The main area of European occupation in many important Indian cities was the cantonment, and the Cantonment Act of 1889 was to legalise the various rules and regulations followed there by the residents. The Act defines cantonment as follows: “The Local Government, with the previous sanction of the Governor General in council may by notification in the official Gazette, declare any place in which any of Her Majesty’s regular forces are quartered within the territories administered by such Government to be a cantonment for the purposes of this Act and of all other enactments for the time being in force, and may withdraw any such declaration.”<sup>43</sup>The

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<sup>39</sup> Ibid., p.132.

<sup>40</sup> Ibid.

<sup>41</sup> Ibid., p.140.

<sup>42</sup> Jharna Gourlay, Op. Cit., p.231.

<sup>43</sup> *The Cantonment Act, 1899 and the Cantonment Code 1899*, Kerala State Revenue Reference Library, Thalassery.

act provides detailed instructions in the context of the sanitary provisions of the cantonment also. Chapter four of the Act titled 'Nuisances and Sanitation', lists out the activities that are considered offences in roads or public places. Drunk and disorderly walking in the road, threatening, use of abusive language, insulting, being engaged in the removal of night-soil or other offensive matter or rubbish, neglects to sweep away or otherwise effectively remove any portion of rubbish that may spill or fall on to such street or public place, carries a corpse, or causes the same to be carried, without keeping it decently covered, or without taking due precaution to prevent risk of infection or injury to the public health or annoyance to passers-by or to persons dwelling in the neighbourhood, deposits or permits his servant to deposit any offensive matter or rubbish in any place not intended for the purpose on any street or public place or waste or unoccupied land under the management of the cantonment authority, having charge of a corpse fails to bury, burn or otherwise lawfully dispose of the same within twenty-four hours after death, makes any grave or buries or burns any corpse, at an unauthorized place etc. were some of the offences mentioned in the Act in the sanitation context.<sup>44</sup>

The important officer associated with the responsibility of sanitation in a cantonment was the commanding officer, who looked after his regimental lanes, bazars, and the latrines used by the troops. The executive engineer was in charge of all the yards, workshops, and other places under his charge and executive officer of the commissariat department was to look upon all the transport lanes, cattle yards, slaughter houses and other places used by the establishment. Head of the department had the responsibility of all blocks of buildings, and the cantonment magistrate, who was in charge of all the roads and all the other areas of the cantonment, which do not come under any other officers. These officers should submit a weekly sanitary report by inspecting areas that came under their jurisdiction, and if he notices any insanitary

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<sup>44</sup> Ibid.

situation, he should mention the steps to be taken to make it good. The sanitary officer should conduct general sanitary supervision over the whole cantonment and shall report every insanitary practice and every insanitary condition of things, and his recommendations for the remedy of the same should also be attached with the report.<sup>45</sup>

The Towns Nuisance Act of 1889 or the Madras Act No. III of 1889, was for the prevention and control of nuisance in the towns of the Madras presidency. Under the provisions of the act, it was mentioned that the depositing of rubbish, or waste in the streets of the town area is an offence. “Whoever without reasonable excuse throws or lays down any dirt, filth, rubbish or any stones or building materials in the public street, roads, or any other places of public resort shall be liable to a fine not exceeding fifty rupees or to imprisonment of either description not exceeding eight days.”<sup>46</sup>The act also prohibited open defecation in the streets, and if any child under seven years of age did the above-mentioned activity, it was the parent’s or guardian’s duty to prevent and educate them from doing it. The negligence shown by the private property owners in fencing their well, tank, etc. was also termed an offence. It was also their duty to prevent the flow of any offensive matter to the street from their houses, factories, etc. and failing to do so was liable to a fine not exceeding fifty rupees or imprisonment, which may not exceed one month.<sup>47</sup>The act also gave the instruction for the removal and destroying of stray dogs from the streets, and the power to notify the above was bestowed upon the district or sub-divisional magistrate.<sup>48</sup>

Another important act that discusses sanitation in colonial India is the Epidemic Diseases Act of 1897. The Act was for the better prevention of the epidemic diseases, and it gives the government the power to inspect any ship or vessel leaving

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<sup>45</sup> Ibid.

<sup>46</sup> *The Towns Nuisance Act of 1889*, Kerala State Revenue Reference Library, Thalassery.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

or arriving at any port of colonial India and its detention, inspect people travelling by railway or otherwise, and the power to segregate individuals in hospitals or in temporary accommodation if the person is suspected by the inspecting officer of being infected with any epidemics.<sup>49</sup>“The act came into force at once, when at any time the Governor General in council is satisfied that India or any part thereof is visited by, or threatened with, an outbreak of any dangerous epidemic disease, the Governor General in council, if he thinks that the ordinary provisions of the law for the time being in force are not for the purpose, may take or require or empower any person such measures and, and by public notice, prescribe such temporary actions to be observed by the public or by any person or class to be done to prevent the outbreak.”<sup>50</sup>

The Act also offered provisions to the local government authorities to exercise the same power when they understood that the province is in a dangerous situation with the presence of the epidemics and they were convinced that the ordinary provisions of the time were insufficient and incapable of preventing the outbreak and spread of the epidemic. The act also conferred the local government the authoritative and disciplinary power to punish the person who is disobeying the provisions of the rules and regulations envisioned by the local government during an outbreak situation under the Epidemic Diseases Act.<sup>51</sup>The recent reversion of this act can be seen during the Covid19 pandemic situation in India. This colonial law called the Epidemic Diseases Act of 1897 which was aimed at curbing the spread of the disease. This Act is the primary legislation followed still in India to curb a large-level epidemic situation, and the law was enacted originally in colonial India to prevent and control

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<sup>49</sup> *The Epidemic Diseases Act of 1897*, Kerala State Revenue Reference Library, Thalassery.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

the Bubonic plague in Bombay.<sup>52</sup> “As the covid 19 pandemic engulfed the country, this 123-year-old act was invoked, along with provisions of the Disaster Management Act, to control the spread of the virus. Most Indian states, such as Delhi, Uttar Pradesh, Maharashtra and Bihar, notified regulations under the act authorising the government officials to admit, isolate and quarantine people in certain situations. Drawing from the act, many states took measures, such as the closing of schools, malls, gyms, and institutional and home quarantines, in order to mitigate the crisis.”<sup>53</sup>The section two of the Epidemic Diseases Act provides for the government to ensure and enact such measures on a temporary period of time to prevent the spread of the disease.<sup>54</sup>This section of the act was used by the government of India during the COVID outbreak, and then Health Secretary, Preeti Sudan issued an order on 11<sup>th</sup> March 2020 that all states and union territories of India should implement and invoke the provisions of Section 2 of the Epidemic Diseases Act of 1897 to control the epidemic situation in the nation.<sup>55</sup>The Act was amended during the COVID period, and the main change after the amendment was that it provided the provisions of security for the health care and medical professionals who are engaged in the treatment of patients. If any person attacks a healthcare employee or damages any property, they are punishable up to a five-year imprisonment and a fine up to two lakhs. This revised Epidemic Diseases

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<sup>52</sup> Parikshit Goyal, ‘The Epidemic Disease Act, 1897 Needs an Urgent Overhaul’ in, *Economic and Political Weekly*, Vol. 55, Issue No. 45, November 2020. <http://www.epw.in/engage/article/epidemic-diseases-act-1897-needs-urgent-overhaul>

<sup>53</sup> Ibid.

<sup>54</sup> *The Epidemic Diseases Act of 1897*, Op. Cit.

<sup>55</sup> [https://www-thehindu-com.cdn.ampproject.org/v/s/www.thehindu.com/news/national/coronavirus-states-to-be-asked-to-invoke-epidemic-disease-act-centre/article31043653.ece/amp/?amp\\_gsa=1&amp\\_js\\_v=a9&usqp=mq331AQIUAKwASCAAgM%3D#amp\\_tf=From%20%251%24s&aoh=16996428994249...](https://www-thehindu-com.cdn.ampproject.org/v/s/www.thehindu.com/news/national/coronavirus-states-to-be-asked-to-invoke-epidemic-disease-act-centre/article31043653.ece/amp/?amp_gsa=1&amp_js_v=a9&usqp=mq331AQIUAKwASCAAgM%3D#amp_tf=From%20%251%24s&aoh=16996428994249...)

(Amendment) Act was passed on 28 September 2020.<sup>56</sup> Thus, the act has proved its contemporary relevance even in the context of India apart from its colonial history.

One of the important acts related to the local self government machinery, which also consisted of provisions such as public health and sanitation, was the Madras Local Boards Act of 1920, which was used in the Madras presidency. The act instructed to constitute a district board for each district, a taluk board for each taluk, and a panchayath board for each village.<sup>57</sup> Part four of this act is entitled, 'Public Health, Safety, and Convenience', which extensively discusses the roles and responsibilities of the above-mentioned three local self machineries in the context of health policies. The act discusses topics such as closing and cleaning of wells, filling in of pools that are a nuisance or may prove dangerous to public health, cleansing of latrines, construction, maintenance, and closing of drainages, power of entry into epidemic-suspect places and disinfection of buildings, articles, etc., banning epidemic infected people from carrying on their job, ordering the infected people to not become a public nuisance, power to order closure of places of public entertainment, prohibition on infected children attending school, compulsory vaccination, rules regarding the disposal of dead bodies, etc.<sup>58</sup>

The act also gave power to the local board to enter any place or building in order to make any inquiry, inspection, test, examination, and survey. A authorization of power through this Act was beneficial for the purpose of sanitary works<sup>59</sup> such as the construction and maintenance of all public roads, choultries or inns, lighting of the public roads and places, construction of drains, disposal of drainage and sullage or

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<sup>56</sup> Parikshit Goyal, Op. Cit.

<sup>57</sup> *The Madras Local Boards Act of 1920*, Kerala State Revenue Reference Library, Thalassery.

<sup>58</sup> Ibid.

<sup>59</sup> Ibid.

sewage, cleaning of streets, removal of rubbish, filling in of disused water sources like insanitary ponds, pools, ditches, pits or hollows, the responsibility of cleansing and the construction of latrines, opening and maintenance of burning and burial grounds, the sinking and repair of wells, repair and maintenance of ponds or tanks for supply of water for drinking, washing and bathing purposes, opening and looking after of public slaughter houses, markets, parks, control of fairs and festivals, construction of hospitals and dispensaries, appointment of vaccinators, training of nurses, midwives, and vaccinators. Apart from that, preventive and remedial measures connected with epidemics, protected water supply for the inhabitants for drinking purposes, all other measures of public utility calculated to promote the safety, health, comfort, or convenience of the residents, and other sanitary improvement activities were the sanitary duties entitled upon the Local Boards.<sup>60</sup>

In the Madras presidency, a large grant in aid was made for sanitation by the British regime since 1908, and the amount used by the local bodies for the purpose of sanitary activities doubled. The second of the three All India Sanitary Conferences was held in Madras in the year 1912, and the focus was on pure water, efficient drainage, and other sanitary works came to the forefront.<sup>61</sup> The laws and legislations that assured the provisions of public health and sanitation were the Local Boards Act, Municipalities Act, Towns Nuisance Act, The Epidemic Diseases Act etc. “These provide for the construction and maintenance of major sanitary works, such as water supply and drainage, for all minor works such as markets, and slaughter houses, for conservancy and lighting arrangements, for the training and employment of medical and sanitary officers and vaccinators, for the control of epidemics, for the accurate registration of vital statistics, and in short for all the numerous matters that go to make

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<sup>60</sup> Ibid.

<sup>61</sup> *Notes on Recent Sanitary Developments*, Kerala State Revenue Reference Library, Thalassery.

up sanitary administration in the country. The health administration of the province is thus almost entirely vested in the various local bodies. The progress of sanitary improvement is necessarily limited by the financial resources of these local bodies, which even when supplemented by the provincial grants were limited.”<sup>62</sup>

Vaccination, practical sanitation, and vital statistics come under the sanitation department. The vaccine virus was first brought to India via Persia and Bombay and was introduced in Madras and Calcutta. Prior to that year, smallpox inoculation had been encouraged. The British believed that the position of cows as holy animals among the Hindus would encourage them to accept vaccination as the vaccine was developed from cow lymphs.<sup>63</sup>

A depot was established in a central station in the presidency under a surgeon, and his main responsibility was to maintain and supply the vaccine lymph. A medical officer was appointed to encourage and practice vaccination. They received a salary of ten pagodas for every hundred successful vaccinations. Native medical practitioners were also in charge and were employed in revenue districts. Edward Jenner, who was credited with the invention of the world’s first vaccine, which was for the control of smallpox, and his works in this regard were published in the vernacular languages and circulated among the public at the expense of the government to spread awareness on the benefits of vaccination among the public. In 1875, the vaccine staff in the several districts was transferred to the Local Fund Boards and were paid from the local funds after that. The vaccination department was merged with the sanitary department by changing the post of Superintendent General of

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<sup>62</sup> Ibid.

<sup>63</sup> *Manual of the Administration of the Madras Presidency*, Kerala State Revenue Reference Library, Thalassery.

vaccination to Inspector of Vaccination or Deputy Sanitary Commissioner and making a subordinate to the Sanitary Commissioner.<sup>64</sup>

The Sanitary department, started in 1864, was headed by a Sanitary Commissioner, holding the power to conduct direct communication with the government. He is assisted first by the Deputy Sanitary Commissioner, who is in charge of vaccination. Next in the hierarchy were the District Civil Surgeons in their districts as District Sanitary Officers, and the lower section included the subordinates of different classes. The Sanitary commissioner is the advisor of the government, municipalities, and local boards in topics related to local expenditure for drainage, water supply, conservancy, vaccination, and questions connected with the prevention of diseases. He also conducts periodic inspections of the municipal towns, jails, and lunatic asylums and examines the sanitary condition of the above-mentioned areas or places. The notes of his inspection of the municipal towns and all, and his suggestions regarding the possible improvement policies that should be adopted there to tackle the insanitary condition were forwarded to the government and the municipal authorities.<sup>65</sup>

The administrative and executive set up of the sanitary machinery in the presidency was that, every municipality had a certain number of trained sanitary inspectors, each of whom is placed in charge of well-defined circles or wards. Under their control and supervision is generally a more or less well-disciplined staff of scavengers and sweepers, directly controlled by *maistries* or overseers, who perform the role of the non-commissioned officers in the sanitary system. Above the circle inspectors, there is a chief inspector, and it was a norm that all these staff should be guided and advised by the chief medical officer of a municipality. Larger

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<sup>64</sup> Ibid.

<sup>65</sup> Ibid.

municipalities also had an additional health officer. The health officers were having the designations first class and second class. Deputy sanitary commissioners acted as an intermediary between these health officers and the sanitary commissioner of a presidency.<sup>66</sup>

The qualification to become an officer in charge of sanitation was also laid down by the regime, as the first-class health officers were holders of a diploma in public health from the recognised institutions of Britain or graduates in sanitary science of the Madras University. These courses provided them practical training. Second-class officers should undergo a training course of six months duration, which includes topics like minor sanitary engineering, vaccination, malaria, hygiene, and bacteriology. Special courses like this were also there for the post of sanitary inspectors, and they will be sent to assist the specially selected sanitary offices of the health department to attain practical knowledge in the municipal work related to sanitation. They were also required to attend exams happening every five years in this regard to update their knowledge on the recent developments in their sphere of work.<sup>67</sup>

In the context of the appointment of this sanitary staff, an archival record shed light to the colonial Calicut city which mentions the additional staff employed on temporary mode. There was a first-class vaccinator who received thirty rupees a month as salary in addition to a cycle allowance of three rupees. There were two additional sanitary inspectors working under the Anti-Malaria staff unit, with the same pay and benefits. Three maistries earning fifteen rupees a month and twenty one coolies receiving ten rupees a month as salary were also part of this anti-Malaria squad. The anti-Malaria staff also included nine additional coolies with a ten rupee salary for extending the anti-mosquito campaign to more areas of the city space.

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<sup>66</sup> *Notes on Recent Sanitary Developments*, Op. Cit.

<sup>67</sup> *Ibid.*

Another section of sanitary staff came under the maternity and child welfare stream and it included one woman medical officer with a salary of eighty five rupees per month and an allowance of five rupees. Five midwives were also employed with a salary of twenty five and an allowance of five rupees simultaneously.<sup>68</sup> Eight ayahs with a salary of rupees five per month and a peon for the medical officer with a salary of ten rupees were also part of this maternity and childcare section. Two maistries and eight coolies came under the plague staff with a salary of twenty five and fifteen simultaneously.<sup>69</sup>

The sanitary inspectors of Calicut municipality formed an association called, “The Calicut Municipal Qualified Sanitary Inspectors Association” on October 31, 1945.<sup>70</sup> One of the important objectives of the association was to promote the public health of the town and to develop civic conscience in the people through propaganda, persuasion, and demonstration. Other objectives included, such as to consider and discuss questions affecting public health and to work for the improvement of sanitation and health in the town.<sup>71</sup> For the above discussed propagation and persuasion of sanitary awareness among the public, education was considered as the most effective tool of instruction.

As mentioned earlier, one of the important recommendations laid down by Florence Nightingale to improve the sanitary situation of India was to start teaching hygiene at an elementary level. It was accepted by the colonial government. As we can see, for the propagation of sanitary awareness, elementary schools in the Madras presidency had hygiene as part of the syllabus taught there, and the aspirants who wanted to become teachers or mistresses also had to study those during their training

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<sup>68</sup> Education and Public Health Department Files 1941, Regional Archives, Kozhikode.

<sup>69</sup> Ibid.

<sup>70</sup> Education and Public Health Department Files 1946, Regional Archives, Kozhikode.

<sup>71</sup> Ibid.

period. “instruction in elementary hygiene was a part of the regular curriculum of all elementary schools, and teachers are specially trained in the subject at the training schools. A specially selected officer of the Indian Medical Service lectures every year to the students of the Teacher’s college on physiology and school hygiene, while in the training schools for mistresses, a special instruction is given in health and house management. Proposal to engage lady doctors to deliver a course of lectures to the mistresses under training on first aid and hygiene was also there.”<sup>72</sup> There was an inspection of the sanitary officer in the schools under the public management on medical grounds, and the officer should report on issues such as the existing condition of the school, the physical condition of the students, including cleanliness and clothing, the space utilised to make the classroom, lighting, ventilation, water supply, and other sanitary arrangements, etc. Moving dispensaries for the purpose of imparting simple sanitary instruction to boys were also carried out in some parts. It was also decided to make simple lectures on topics such as air, light, water, malaria, plague, cholera, etc. and demonstrate them along with magic lantern slides to draw the attention of the students and demonstrate them during the visit of the sanitary officer to the schools for inspection.<sup>73</sup>

The incorporation of sanitation in the syllabus can be seen from the archival records about the Fisheries Institute at Calicut. A government order number 790 dated 1<sup>st</sup> May 1929 is about the inclusion of lessons on sanitation and first aid at the institute, and it was mandatory for a qualified medical person to impart these lessons. The lessons were not only for the students but also for the teachers who are employed in the institute. The record also mentions that the above-mentioned course, including sanitation, would give the pupils and teachers necessary information and practical training which will be very useful to them later on in their work among school children

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<sup>72</sup> *Notes on Recent Sanitary Developments*, Op. Cit.

<sup>73</sup> *Ibid.*

as well as among the ordinary villagers.<sup>74</sup>The syllabus of sanitation included topics such as importance of sanitation, climate and meteorology, houses and buildings, collection and disposal of excreta and other waste materials, personal hygiene with a special focus on school children, food, disposal of the dead, parasites, insects, and diseases, bacteria and infectious diseases, prevention of communicable diseases, air , water, soil, and drainage, disinfection, special diseases, vital statistics, and sanitary law.<sup>75</sup>

The sanitary reforms as part of the public health policies of the administration also contributed to the alteration of the urban space to certain extent. New structures, establishments, and institutions became part of the urban space, like the dispensaries and hospitals. The indigenous population was familiar with the use of locally available herbs as home remedies. Ayurveda was also practiced mainly, and Yunani medicine was also in practice due to the influence of Arabs. The earlier medicinal practices were mainly an out patient kind of situation, and the treatment by residing in an enclosure or building called a hospital was a new development. The indigenous knowledge system regarding some of the epidemics, such as smallpox was part of the inherent belief system of religion. Many regions and the people of those places believed that the presence of smallpox like disease was due to the wrath of goddesses. When a foreign system of medicine established epidemic huts for their disease situation and segregated them from their homes, it caused a state of resentment among the natives. They viewed it as an interference by a foreign master on their religious and cultural beliefs. Exclusive epidemic huts and sheds and the other medical establishments in the urban space contributed to its transformation as a colonial city, which was different from its predecessor in its structure.

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<sup>74</sup> Development Department Files 1929, Regional Archives, Kozhikode.

<sup>75</sup> Ibid.

To conclude, the Royal Commission of 1859 on the sanitary condition of the European army and its report was the first extensive analysis that happened in colonial India on sanitation. But with the new studies and inventions in the medical field that were gaining momentum in Europe, like the miasmatic theory which states that diseases and its spread can be caused by external factors like pollution, the so-called ‘civilizers’ began to draw their attention to the health of the colonized subjects also. It was only from the new revelations that the health measures introduced in the colonial enclaves won’t help them in reducing the mortality among British people that they began to draw their attention to the natives. Only then they decide to extend the canopy of public health to natives. Indeed, there were many other reasons for disease causation in a humid country like India, but the only reason for which the colonial regime pointed its fingers was to the lack of hygiene and sanitation of the Indian people.

The sanitary policies were following the principles of preventive medicine, and the main objective behind which was the curbing of the epidemic diseases. The Indian climate and the so-called insanitary condition and lifestyle of the population were blamed for the appearance of diseases. Florence Nightingale, the British social reformer, showed her interest in the sanitary scene of colonial India, which is very evident from her correspondence to the officers and administrators appointed here. The early advances or reforms related to sanitation happened to the land, and its prime concern was to decrease the mortality rate among the European citizens and the ‘white towns’ only. Sometime only after that, the native towns began to experience sanitary reforms; municipal acts and health acts passed during the period discussed the matters connected with the sanitation works. Many other pieces of legislation were also passed for the purpose, and the main works related to it were on the urban spaces, especially in the context of Malabar, as the rural sanitation campaign was established in the

Malabar district in the year 1938 only.<sup>76</sup>The programme came to Malabar when it was transferred from Tirunelveli district, and the work done in Malabar was on the construction of private latrines in the rural areas. The programme expired after a year, and three successive extensions were done for the rural sanitation programme in Malabar. It expired in the year 1941, and in a letter to the then Secretary to Government on Education and Public Health at Madras, the Director of Public Health requested for its extension for one more year, and a report was submitted on the works done so far. The report mentions the importance of the conduct of anti-hookworm measures in view of the high endemicity of the infection, the ample facilities for carrying on the work, and the cooperation of the District Board. It has also pointed out that there was an urgent public health problem such as the spread of typhoid in Malabar district, and the region is notorious for the presence of such endemic diseases.<sup>77</sup>These were the reasons put forward for the extension of the validity of the rural sanitation programme in Malabar district, and from all these instances, we can assume that the main work done in this regard was on the curbing of the epidemics and the establishment of private latrines. Materialization of sanitation reforms in the urban context was much more complex than this, and the coming chapters will discuss the same in the context of urban space of colonial Calicut.

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<sup>76</sup> Govt. Order No. 1824 PH dated 2-5-1941, Education and Public Health Department Files 1941, Regional Archives, Kozhikode.

<sup>77</sup> Ibid.

## CHAPTER 4

### CALICUT: EMERGENCE AND TRANSFORMATION OF A COLONIAL CITY

The origin of the land, Calicut is obscure and shrouded in mystery, even though many scholars have studied about the origin of Calicut and also scrutinised the place name and its history of prevalence. As far as Elamkulam Kunjan Pillai is concerned, he pointed out that Calicut may had its importance as a city only in the later part of the thirteenth century.<sup>1</sup> He made this remark in his analysis of ‘*Unniyachi Charitham*’, one of the ancient Manipravala *champu kavya*, and he mentions that the work refers about many places of importance during the time of its writing but fails to acknowledge Calicut. He also made the analysis that the accounts of foreign travellers began to mention about Calicut only during the period mentioned above which is later part of the thirteenth century.<sup>2</sup>

Calicut had its elaborate stories to tell to the world from the twelfth or thirteenth centuries onwards because of this, and before that, the land did not at all hold any significant position in the history of Kerala. The above mentioned aspect of Calicut mentioned by Elamkulam Kunjan Pillai, is the prominent viewpoint put forward by the majority of the scholars who studied the history of Calicut.<sup>3</sup> The

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<sup>1</sup> Elamkulam P N Kunjan Pillai, *Bhashayum Sahithyavum Noottandukalil* (Mal.), Sahithya Pravarthaka Co-Operative Society, Kottayam, 1968 (1956), p.52.

<sup>2</sup> Ibid.

<sup>3</sup> K V Krishna Ayyar, *The Zamorins of Calicut (From the Earliest Times Down to A.D 1806)*, Publication Division, University of Calicut, 1999 (1938), p.38; A Sreedhara Menon, *A Survey of Kerala History*, D C Books, Kottayam, 2017 (1967), p.152; K Balakrishna Kurup, *Kozhikkodinte Charithram* (Mal.), Mathrubhumi Books, 2006 (2000), p.133; M G S Naraynan, *Kozhikkodinte Katha* (Mal.), Mathrubhumi Books, Kozhikkode, 2017 (2001), p.13; M G S Narayanan, *Calicut The City of Truth Revisited*, Mathrubhumi Books, Kozhikkode, 2018 (2006), p. 51.

majority of historians also accepted that the growth of the city after the ascendancy of the Zamorin happened mainly because of the brisk trade it had with the major trading countries of that period. All works that deal with the history of the city without doubt establish the fact that Calicut is not a place that had its origin from time immemorial. The origin and growth of the town were an outcome of the supremacy of Zamorin after the Chera rule in Kerala history. The place began to expand and rode to glory under the Zamorins, and the extensive and elaborate trade it conducted with the outside world was the most significant catalyst in its popularity and growth. Extensive details can be collected from the itinerary records of the foreign travellers who visited Calicut during all these periods and they stand as the main sources that help in the reconstruction of the history of Calicut. The *Keralolpathi* chronicle and the *Kozhikkoden grandhavari* also portray details regarding the origin of Calicut under the Zamorins.

Portuguese, the first European power come to the land of Calicut, paved the way for other European powers to try their luck here. Other European powers to come to the land through this newly discovered sea route after Portugal, were Holland, Britain, France, etc. The last one was the British, and under their colonial regime, Calicut witnessed its transformation as a colonial city. This chapter tries to examine the interaction of Calicut with the European powers that arrived prior to the British, and attempts a detailed analysis of the transformation of Calicut as a colonial city under the British occupation.

One momentous phase in the history of Calicut heralded with the arrival of Portuguese under the leadership of Vasco da Gama in 1498. This marked one of the most important epochs in the history of Calicut, and historians like, K M Panikkar

called the incident the “birth of a new era in the map of world history”.<sup>4</sup> Though this concept of Panikkar is challenged by historians, we can imagine the importance of this stage in the history of Calicut and how its after-effects shaped the city. The arrival of Europeans was not only detrimental to Calicut alone, but also was the major turning point in the colonization history of the eastern world by the west; thus, it holds a supreme position in the world history perspective as well.

The arrival of the Portuguese in 1498 at Calicut paved the way for a European power to directly procuring the spices without any intermediaries, and later elevated their profits in the western markets. The first attempt of the Portuguese in Calicut was to get permission for establishing factory from Zamorin. The Chinese traders already had a settlement in Calicut prior to the Portuguese and they never tried to turn it into an imperialist kind of machinery.<sup>5</sup> The Portuguese settlements in Calicut were at the northern stretch or continuation of the Chinese street. In the context of contemporary cityscape, the places up to the present-day Corporation office were under Portuguese and on its southern side remained the Chinese settlement.<sup>6</sup> This adjacent areas of settlement were detrimental in their animosity towards each other. A Chinese street called silk street was at the north-west side of the town, and the street got its name from the Chinese silk traders as the region was a specific trading area.<sup>7</sup> Many place names in Calicut still throw light on this Chinese contact it had, and one such place is

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<sup>4</sup> K M Panikkar, *Malabar and the Portuguese*, D B Taraporewala Sons and Co., Bombay, 1929, p.31. and K M Panikkar, *A History of Kerala 1498-1801*, The Annamalai University, Annamalainagar, 1960, p. iv.

<sup>5</sup> Dr. N M Namboodiri, *Malabar Patanangal Samoothirinadu*, State Institute of Languages, Thiruvananthapuram, 2013 (2008), p.140.

<sup>6</sup> *Ibid.*, p.141.

<sup>7</sup> Abbas Panakkal, ‘Transformation of Admiral to the Sainthood and Sacred Stories of Chinese Sanctum Sanctorum from Malaabr Coast’, in David W Kim (Ed.), *Sacred Sites and Sacred Stories Across Cultures Transmission of Oral Tradition, Myth and Religiosity*, Palgrave Macmillan, Lodon, 2021, p.363.

*Chinakkotta*, meaning the Chinese fort, which and is near to the silk street.<sup>8</sup> By the arrival of Cabral as the successor to Gama, Calicut witnessed the establishment of a Portuguese fort, and they were vehemently trying hard to sabotage the Chinese trade and were asking for the stepback of Zamorin as an intermediary force in trade affairs. As these demands were going to directly thwart the economic stability of the ruler, Zamorin seized the Portuguese fort in 1525.<sup>9</sup>

For the portuguese, “Trade and religion (Catholic faith) were given equal importance; to them, one was complementary to the other. Once they settled and consolidated their position in Kerala, they began to exert their influence in the religious front, making friends and foes alike.”<sup>10</sup>This religious fanaticism of the Portuguese towards the Arabs was very visible in the city of Calicut, and the Zamorin was against them mainly because he didn’t want to disappoint his Arab friends with whom Calicut had a very good relationship for a long time, which was one of the main reasons for the prosperity of Calicut under the Zamorin.

The Portuguese had some political ambitions and wanted to “check the dominance of the Zamorins towards the petty kings and kingdoms, and in the course of this attempt they spoiled the unity and peace of all the princes in the land. In that way, they together with the Raja of Cannanore, Quilon, and Purakkad, were fighting against Zamorin for almost a period of 150 years under the pretext of liberating the princes from the overlordship of the Zamorin.”<sup>11</sup>“The Portuguese erected a fort in 1513, designed by Thomas Fernandez, the engineer of Fort St. Angelo at Cannanore,

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<sup>8</sup> M R Raghava Varier, ‘The Rise and Growth of Calicut’ in, *South Indian History Congress Souvenir*, University of Calicut, 1991, p.29.

<sup>9</sup> Dr. N M Namboodiri, Op.Cit., p.141.

<sup>10</sup> Louis E Roche, ‘Portuguese Impact on Kerala’ in, Dr. K K Kusuman (Ed.), *Journal of Kerala Studies*, Vol.XVII, Department of History, University of Kerala, Thiruvananthapuram, 1990, p.105.

<sup>11</sup> Ibid., p.112.

and it was situated on the north bank of the Kallai river at its entrance to the sea, and was square in shape with flanking bastions at the corners facing the sea. Twelve years later it was abandoned after a long siege successfully withstood; and for many years the Portuguese were content with their coign of vantage or fort at Chaliyam on the Beypore river.”<sup>12</sup>This Chaliyam fort was established in 1531 with the help of the ruler of Chaliyam.<sup>13</sup>

The fort at Chaliyam was at a “strategic site at the mouth of the Beypore river and lay only ten kilo metres south of Calicut.”<sup>14</sup>Because of this strategic position of the fort, it was popularly referred to as ‘the gun or pistol pointed at the throat of the Zamorin’. One of the most important events in the Portuguese period in the history of Calicut was the siege of this Chaliyam fort under the leadership of Pattu Marakkar, or the Kunjali III, who was the naval commander of the Zamorin, and the Portuguese garrison surrendered to him on September 1571 after a four-month siege by the Kunjali.<sup>15</sup>The victory was very beneficial for the Zamorin, as the fort was a threat to the travel of the king via road or waterways to the port of Ponnani and was also helpful in the re-strengthening of the Chinese trade of Calicut.<sup>16</sup>

Religious intolerance, corruption, etc. were important reasons for the deterioration of Portuguese and that led to ruin the power dynamics because of the continuous battles it had to fight against other provincial rulers from different parts of Kerala who were supported by the Portuguese. Another detrimental effect created by the Portuguese was on the rich trade contact of Calicut with the Arabs, as many of

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<sup>12</sup> Dr. V Kunhali (Ed.), *Calicut in History*, Publication Division, University of Calicut, 2004, p. 122.

<sup>13</sup> Dr. N M Namboodiri, Op. Cit., p.141.

<sup>14</sup> Philip Macdougall, *Naval Resistance to Britain’s Growing Power in India 1660-1800 The Saffron Banner and the Tiger of Mysore*, The Boydell Press, Woodbridge, 2014, p.19.

<sup>15</sup> Ibid., pp.18-19.

<sup>16</sup> Dr. N M Namboodiri, Op. Cit., p.141.

their ships were plundered in the Indian Ocean by the former. “The arrival of Portuguese in 1498 and their interference with Moorish trade dealt a great blow to Calicut. Under the influence of the Portuguese and Dutch, Cochin gradually became the trade-centre on the coast and owing to its less favourable situation, Calicut has never recovered its former predominance.”<sup>17</sup>

Dutch, French, and English were important European powers that turned their attention towards India after the Portuguese discovery of the sea route. The primary concern of all these countries was trade with the East, or merely mercantile in nature, but eventually they had plans to establish power also. The contact these European powers had with Calicut and the way in which their presence effected the growth of the city cannot be ignored. Indeed, “the Zamorin of Calicut was the most powerful potentate at the time of the Dutch arrival in Kerala.”<sup>18</sup>

The Dutch contact with Calicut started after the arrival of Admiral Steven Van der Hagen to the city, and his signing of a treaty with the Zamorin on 11 November 1604.<sup>19</sup> The first Dutch factory was erected in Calicut in the same year, and the Dutch regions were situated north of the present Corporation office and north side of the present Beach hospital.<sup>20</sup> The Dutch and the Zamorin had one thing in common between them, and that was the animosity towards the Portuguese. The alliance between them mainly happened because of this, but the Dutch failed to do much in this regard in the coming years as they were not really in much need of a strong bond with Calicut as they were vehemently trying to maintain their hold in the Coromandel

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<sup>17</sup> Dr. V Kunhali (Ed.), Op. Cit., p.122.

<sup>18</sup> M O Koshy, *The Dutch Power in Kerala (1729-1758)*, Mittal Publications, New Delhi, 1989, p.113.

<sup>19</sup> M O Koshi, ‘The Dutch Possessions in Kerala’ in, Dr. K K Kusuman (Ed.), *Journal of Kerala Studies*, Vol. XVII, The Department of History, University of Kerala, Trivandrum, 1990, P.97.

<sup>20</sup> Dr. N M Namboodiri, Op. Cit., p.141.

region. In the case of pepper also, they had other places like Bantam for its procurement. Another reason for their least level of interest in the trade of Calicut was their lack of strength to oppose the Portuguese in a place somewhat nearer to Goa in distance, which was the strong foothold of the Portuguese power in the Indian subcontinent.<sup>21</sup> “After some time the Zamorin got disappointed with the Dutch on account of their lukewarmness to give him efficient aid against the Portuguese and their ally, the raja of Cochin, and their indifference to avail themselves of his offers of trade at Calicut.”<sup>22</sup>

The French also had settled in Calicut though it held a comparatively lower position of importance when compared with the other prominent European powers. In the Calicut city such a French territory was there, which was called the French Loge. William Logan refers to the meaning of the term as, “Loge or comptoir is given to factories or isolated establishments comprehending one house with the adjacent grounds where France had the right to have her flag flying and to form factories.”<sup>23</sup> He states that the, “Loge consists of six acres on the seashore about half a mile north of the Calicut Light House and adjoins the old District Jail.”<sup>24</sup> This French territory in Calicut was situated on the south side of the present-day Beach Hospital.<sup>25</sup> “The French were established in the town when Hamilton came in 1703, but they were not prospering and were not in a condition to carry on trade. The French Loge to the north of the Native club on the sea front was the site of their factory. It was restored to them in 1819.”<sup>26</sup> The original facts related to the establishment of a French territory at

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<sup>21</sup> Jan Van Lohuizen, *The Dutch East India Company and Mysore 1762-1790*, Springer, Dordrecht, 1961, p.9.

<sup>22</sup> *Ibid.*, pp. 9-10.

<sup>23</sup> William Logan, *Malabar*, Vol.II, Charithram Publications, Thiruvananthapuram, 1981, p. ccxlvii.

<sup>24</sup> *Ibid.*

<sup>25</sup> Dr. N M Namboodiri, *Op. Cit.*, p.141.

<sup>26</sup> Dr. V Kunhali (Ed.), *Op. Cit.*, pp.122-123.

Calicut and whether Zamorin provided any other privileges to them other than the commercial powers within this loge are obscure.<sup>27</sup>

The French factory in Calicut was a small one, and there was no political consequence, and the trade conducted there was also negligible.<sup>28</sup>In the year 1767, a single French employee was in the factory, and during the year 1774, because of the activities of the French official Dupart and his war with Hyder Ali, the French factory in Calicut fell into complete insignificance. During the British period also, the territory was in a position of negligence, and it can be understood from the writings of Logan that, “beyond the fact that the landed property and houses are untaxed, there is nothing to distinguish loge from the rest of the Calicut.”<sup>29</sup>This ‘loge’ in Calicut continued up to independence till 1947.<sup>30</sup>The French lost their supremacy in India to the British after the end of the Seven Years’ War, and the defeat in the war was the main reason “which ended the dreams of a French India for them.”<sup>31</sup>

The French loge consisted of the regions surrounding present-day All India Radio building and the baby marine ground etc. and the most significant aspect of this stretch of land was that, other than this area, the whole regions Calicut city was under the jurisdiction of the British power. Due to its location within the boundaries of colonial Calicut, numerous disputes arose over the land throughout the colonial period. One interesting incident occurred when a lady named Kappiriparambil Kotha, who was a native of Mahe, reached Calicut and started to sell fish in the area near the French loge. Police arrested her claiming that she violated the territorial boundaries, entered and sold the fish on the British side. As she was from the French territory of

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<sup>27</sup> William Logan, Op. Cit., p. cccxlvi.

<sup>28</sup> Dr. S M Mohamed Koya, ‘Calicut: The Changed Fortunes’ in, *South Indian History Congress Souvenir*, University of Calicut, 1991, p.37.

<sup>29</sup> William Logan, Op. Cit., p. cccxlvi.

<sup>30</sup> Dr. S M Mohamed Koya, Op.Cit., p.37.

<sup>31</sup> Jan Van Lohuizen, Op.Cit., p.1.

Mahe, she was presented to the court as a French citizen who conducted business without permission and the one who violated the territory of the British. The court asked her to pay a fine of five rupees, actually a huge amount during those times. She paid the fine and returned to Mahe. After some months, another resident of Mahe whose name was Kanaran came to Calicut and started to sell fish from the same disputed area of the earlier case. Police came and destroyed the shed where he sold fish. The second incident shot up a dispute between the French and the English, as both of them claimed the right to the disputed land.<sup>32</sup>

The situation started a continuous correspondence between the English and the French on the ownership of the land. The municipal council chairman, in his letter to the Malabar collector, insisted that the proposed land is situated inside British territory and requested his prompt decision in this matter. On the other hand, Mahe administrator asserted it very firmly in his letter that the place where Kotha and Kanaran sold fish was inside the French territory, and as a native of French Mahe, they have the right to do their business there. He also accused that the Calicut municipality has no right to disturb their business and to demolish their shed by entering into the French land. The letter also says that the land has proper stone markings to detect the boundaries. The conflict was settled when the Malabar collector wrote to the Governor of Madras to send a map, to get a clear picture of boundaries which was accepted by both countries.<sup>33</sup>

The French loge in Calicut again found appeared in the municipal proceedings of the Calicut municipality owing to its insanitary conditions. One such instance is when the collector sent a letter to the chairman of the Calicut municipal council asking about the measures he undertook to remove the insanitary condition of the loge and

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<sup>32</sup> T B Seluraj, *Kozhikkodinte Paithrukam* (Mal.), Mathrubhumi Printing and Publishing Co. Ltd., Kozhikode, 2011, pp. 55-57.

<sup>33</sup> Ibid.

inquired about the slaughtering of cattle in the premise, causing a threat to public health in the city. The letter was sent on 31<sup>st</sup> January 1932.<sup>34</sup> The chairman of the municipal council, in his response, gave a detailed report on the insanitary condition of the French loge and mentioned that the cattle slaughter is happening in the loge without a license from the municipality. Other than this unlicensed and unauthorized slaughter of animals and the sale of meat, the keeping of coconut husks and firewood, etc. on the roadside is also creating a nuisance to the traffic and public. Through this letter, the chairman also asked the permission of the collector to take action under the District Municipalities Act against the practices happening in the French loge.<sup>35</sup>

The letter of the chairman also attached a copy of the report submitted by the Health officer of the Calicut city dated 16<sup>th</sup> February 1932 on the above-mentioned slaughtering incident and requested the collector to take effective steps to stop this kind of nuisance as it is extremely undesirable in the interests of sanitation and public health. The report of the Health officer refers to a Kaliyatt Parambil Moidin Koya who was found slaughtering a cow in the French area, and then the beef was taken over for sale into the stall in the French market. He also mentioned that the animal was weak and was not passed and verified by the Veterinary assistant. From this remark about the inspection by the veterinary assistant, we can assume that the norm of the time was that the supposed slaughter should have been only after the inspection of the cattle by the government authorized body in the licensed slaughter houses of the municipality. The health officer also refers to the fact that this practice has become a great nuisance to the sanitary staff owing to the fact that the waste and other unnecessary parts after the slaughter are thrown away, causing nuisance, and it is difficult for the sweepers and scavengers to clean this.<sup>36</sup> From the above instance,

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<sup>34</sup> Revenue Folded Files, Bundle No. 383, 1932, Regional Archives, Kozhikode.

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

throwing light on the insanitary situation of the French loge in Calicut, we can assume that the short stretch of this land inside the city was a headache for the municipal administration.

India witnesses many struggles between the European mercantile countries for the monopoly of Indian trade, as they understood in the long run that power and control are also needed for the protection of their mercantile interests. The final victory in this struggle was with the British, and the base of their control over the land was laid through the battle of Plassey, and the last nail in the coffin was done by the battle of Buxar, and the latter was the turning point that made the British monopoly over the land. Infact, the French and Portuguese possession were limited to some places only, after the British ascendancy to the monopoly ladder.

It was during the Stuart period in the royal history of England that it grew bigger and bigger in terms of its colonizing nature and commercial endeavour. “She established colonies in North America and the West Indies and trading stations in Africa and India, which spread English commerce and influence over distant lands. While the Stuarts were still on the throne, England made up for the lateness with which she had entered in these fields by superior energy and vigour, with which she outdistanced Portugal and beat Holland after a severe struggle.”<sup>37</sup>

The English East India Company was founded on 31 December 1600 and “chartered by Queen Elizabeth, the English Company was one among several European trading ventures that sought to tap the riches of the ‘East’.”<sup>38</sup> Unlike the Portuguese, the British crown was not ready to spend much on an uncertain endeavour like this, and individuals were unable to trade on their own this far away from Europe.

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<sup>37</sup> T F Tout, *An Advanced History of Great Britain Part II*, Longmans, London, 1923, p.524.

<sup>38</sup> Barbara D. Metcalf and Thomas R. Metcalf, *A Concise History of Modern India*, Cambridge University Press, Delhi, 2012 (2001), p.44.

“The joint stock organization allowed merchants to share the risk of trade and enabled them to raise further funds as needed....The Company gained further strength from its possession of centralized direction through a 24- member Court of Directors, the stability of an archive, and a staff recruited for their specialized skills.”<sup>39</sup>

Britain’s Asian trade was the monopoly of the Company and they were given the right to store ammunition in the ship to ward off the trespassers. The first interest of the Company was to conduct a spice trade with the islands of the East Indies, but the already well organized Dutch East India Company was not welcoming to them. Thus they decided to centre their trading operations in India.<sup>40</sup>“The English in seventeenth- century India confronted the Mughal empire at its height. Hence there could be no thought of conquest. Only as humble petitioners for favour could the English hope to gain access to the Indian market.”<sup>41</sup>The foremost important item of export from India was the Malabar pepper for the Company, but over the time, new markets were developed for items like saltpetre, indigo, and Indian textiles. Chintz, calico, and muslin were some of the Indian origin varieties of clothing material that were in a great demand in the European market.<sup>42</sup>

The first interaction of the English with Calicut was when the representative of the English East India Company, Capt. Keeling, came and asking for permission to trade. Zamorin signed a treaty with the British, hoping for their assistance in his war against the Portuguese. The English started their work to open warehouses at Calicut for the trade activities after the signing of the treaty. In 1664, Zamorin gave permission for the English to set up a factory at Calicut.<sup>43</sup>The Anglo-Mysore war and the

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<sup>39</sup> Ibid.

<sup>40</sup> Ibid., p.45.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

<sup>43</sup> Dr. S M Mohamed Koya, Op. Cit., p. 39.

subsequent treaty of 1792, marked the end of the Mysore invasion of Malabar, and the British became the custodians of the Malabar region. The region came under the direct control of the British with this Srirangapattanam treaty of 1792, and Calicut became one of the major towns in the British Malabar. Malabar province, including Calicut, became part of the Bombay presidency in 1792. Later on the date of May 20<sup>th</sup>, 1800, Malabar province was transferred to the Madras presidency from Bombay, and Calicut was the headquarter of the new British district, which came into being in 1801 under the British principal collector, Major Macleod.<sup>44</sup>

There was no metropolitan city life in the Calicut town during the early British period, but there were some features of urban life there.<sup>45</sup>The British occupation in Calicut transformed many facets of the traditional city envisaged by the creators of this city, who were the Zamorins. Being the centre of Malabar district under the British administration, the traditional city structure witnessed the introduction of new structures as a colonial city space. A new chapter in the history of Calicut as a colonial city was started under the British regime.

The extent of the city space of colonial Calicut can be marked as Conolly canal on the east, sea on the west, varakkal temple on the north and Kallai river in the south in the year 1858.<sup>46</sup>With the Town Improvement Act X of 1865, the municipality of Calicut was formed on 2<sup>nd</sup> July 1866, and the limits of the town premise were the sea at the west, Karaparambu at the north, Panniyankara in the south, and the Beypore river in the east.<sup>47</sup>In the year 1884, the extent of the municipal town of Calicut was

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<sup>44</sup> Ibid.

<sup>45</sup> Sivadasan P (Ed.), *Kozhikode Nagaravum Jeevithavum* (Mal.), Sahithya Pravarthaka Co-Operative Society Ltd, Kottayam, 2014, p.7.

<sup>46</sup> Revenue Files, Serial No. 6, Bundle No. 98, 1858, Regional Archives, Kozhikode.

<sup>47</sup> C Kunhikkannan, 'Short Description of the Town' in, V Kunhali (Ed.), *Calicut in History*, Publication Division, University of Calicut, Thenjippalam, 2004, p. 104.

thirteen square miles.<sup>48</sup>The amsams included in this municipal limit were a portion of Panniyankra, Valayanad, Edakkad, and Kottuli and the whole of Nagaram, Kasaba, and Kachcheri amsams.<sup>49</sup>Nagaram amsam was the main centre and circle of the city of Calicut, as it included all the main landmarks in the city such as the market, town hall, railway station, etc.<sup>50</sup>“The restructuring of the city of Calicut happened during the colonial times in a ring pattern, and it began from two central parts: one around Mananchira and the other encircling Valiyangadi. The city then grew northwards to the cantonment area of West Hill and then south to Panniyankara.”<sup>51</sup>Panniyankara and West Hill were thus situated on the southern and northern extremes of the limits of Calicut municipality. The extension of the town limit to these new areas during this period was due to the overcrowding and congestion experienced by the town area due to the population influx. Many regions that were not part of the city limit of Zamorin found their place in the urban fold of colonial rule, and the West and East hill areas were such places that held this place in the new extended urban structure, especially as the residential areas of the European population in Calicut.

Safety, health, and hygiene were of primary concern while selecting an area for the residential purposes by the English population in an Indian town, and for this, hills were considered the most appropriate place, which would provide them with the much needed exclusivity from natives. This is an important aspect of every other colonial towns of British India, and in the context of Calicut, also under the British occupation, we can see this segregation from the native population.

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<sup>48</sup> Ibid., p.105.

<sup>49</sup> Ibid.

<sup>50</sup> Shinoy Jesinth, ‘Urbanity and Spatial Processes: A Study on the Colonial City of Calicut’, Unpublished Ph.D Thesis, Department of History, Sree Sankaracharya University of Sanskrit, Kalady, 2013, p.126.

<sup>51</sup> Ibid., p.129.

The officers of the state were mainly concentrated on areas like West Hill and East Hill in Calicut, as they were keen on selecting places of habitation that were away from the settlement areas of the native population.<sup>52</sup>“Elevated portions of the West Hill - East Hill area in the northern side of the city served as a Cantonment area with various military offices and barracks and accommodated the bungalow of the then Malabar collectors. Towards its west, the beach side was restricted to the public since the space was reserved by the English army for rifle-shooting and sea-bathing.”<sup>53</sup>British preferred places away from the general population, and thus their barracks were established on the West Hill, and these barracks had a good view of the sea and the adjacent areas. The collector and the other soldiers were used to staying in this region, although later the collector’s bungalow was shifted to East Hill.<sup>54</sup>The British residential quarter of the city was equipped with wide roads, bungalows with lawns and gardens, a church, a park, and a club etc. Hygiene and sanitation was one of the most important features that were taken into consideration while selecting a place of residence for the European population<sup>55</sup>and in Calicut also it was practiced.

As mentioned, Hilly areas were selected for the residential purpose, and also as the centre of administration of the Malabar district, where many buildings were constructed as part and parcel of the administrative machinery in Calicut, that too in the centre of the city, which was majorly adjacent to the Mnanchira area. This new centres of colonial rule established in the urban space of Calicut was different from its former self in its purpose and also in architecture. The traditional city of Calicut

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<sup>52</sup> Jasriya Yoosof U V, ‘Epidemics and the City : A Study of Colonial Calicut’ in, *Proceedings of the Indian History Congress*, 78<sup>th</sup> Session, Jadavpur University, Kolktha, 2017, p. 551.

<sup>53</sup> Shinoy Jesinth, Op. Cit., pp. 206-207.

<sup>54</sup> William Logan, *Malabar Manual*, Vol.II, Kerala Gazetteers Department, Thiruvananthapuram, 2000, p. ccxlv.

<sup>55</sup> Anthony D King, ‘The Colonial Bungalow Compound Complex in India: A Study in the Cultural Use of Space’ in, Sujata Patel and Kushal Deb (Eds.), *Urban Studies*, Oxford University Press, New Delhi, 2011, pp. 47-49.

under the Zamorin was modelled and designed completely on the Hindu *Vastu Shastra* or *silpa sastra*, as is evident even from the etymology of the traditional name Kozhikode.<sup>56</sup>M.G.S Narayanan also points out a similar opinion regarding the origin of the place name Kozhikode that the name had derived from the term *Koyil-kodu*.<sup>57</sup>M.G.S Narayanan credits the Arab traders for the alteration of the term *Koyil-kodu* to Kozhikode as they changed the face and future of the city with the establishment of new markets and goods depot to a place where there was only a situated a *koyil* (temple) earlier.<sup>58</sup>

The growth of the traditional city surrounding a temple can be seen in this instance of the study on the place name Kozhikode. This view is clear as a crystal when we look at the “existing old structures of the city, especially the Thali temple, Brahmin settlements around it, the traditional temple pond, etc.”<sup>59</sup>The centre of this old city was in a circle that included the royal palace and temple.<sup>60</sup> “All the houses of the lords and the Brahmans were in the streets around the centre. All of them were inside a large walled area. Hence the city is called in Malayalam as *Mathilakam* or *Kotta*. The area where the old Zamorin palace was situated is still known as Kottapparambu (from Palayam to Mananchira in modern Calicut). The Palayam, or cantonment, was surrounding this area.”<sup>61</sup> Tali temple and the Brahmin houses are included in this complex, and the old *sala*, which was a centre of vedic learning (present Chalappuram), and *Ambadi kovilakam* (the residential palace of the women

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<sup>56</sup> Abbas Panakkal, Op. Cit., p. 363.

<sup>57</sup> M G S Narayanan, *Kozhikkodinte Katha* (Mal.), Mathrubhumi Books, Kozhikode, 2017 (2001), p.25.

<sup>58</sup> Ibid., p.45.

<sup>59</sup> Abbas Panakkal, Op. Cit., p. 363.

<sup>60</sup> M G S Narayanan, ‘The City of Honesty’ in, V Kunhali (Ed.), *Calicut in History*, Publication Division, University of Calicut, Thenjippalam, 2004, p. 38.

<sup>61</sup> Ibid., p.38.

of the Zamorin family) were situated near the temple.<sup>62</sup>In the present scenario, any remains of this old city structure are not in existence other than the Mananchira.<sup>63</sup>Mananchira was the swimming pool of the royal family and was extended until the Tali temple in those times. The ground adjacent to it was used by the military of the ruler for practice purpose.<sup>64</sup>Other important landmarks and buildings of the old city are now replaced by new structures. “The hospital stands in the space once occupied by the office of the Zamorins. The corporation bus stand was once the main gateway (*Padippura*) of the ruler.”<sup>65</sup>Muthalakkulam of the present period was the royal kitchen.<sup>66</sup>

The relics of the old town and its royal palace are not visible in present time, and an excavation for this objective is not possible because of the crowded situation of Calicut city now. But some field names from the settlement records help us to understand the position of the fort and palace at the centre of the city.<sup>67</sup>Kottaram parambu, Kottapparambu, etc. can be understood as the places of the fort and palace structure from the name itself. By applying the *vasthu sasthanra* doctrines to these positions, Dr. N.M Namboothiri, in his study on medieval Calicut city, opines that the concept of Rajadhani was there in the medieval city of Calicut, and the principles of *vasthu sasthanra* were applied while creating this town from scratch. He argues that according to the *vasthu sasthanra* principles, the town was divided into four equal parts, and the south-eastern section was used for the palace complexes and residential

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<sup>62</sup> Ibid.

<sup>63</sup> M G S Narayanan, ‘The Growth of a City’ in, V Kunhali (Ed.), *Calicut in History*, Publication Division, University of Calicut, Thenjippalam, 2004, p. 41.

<sup>64</sup> Ibid., p.45.

<sup>65</sup> Ibid., p.42.

<sup>66</sup> Ibid.

<sup>67</sup> Dr. N M Namboodiri, ‘The Medieval City Complex of Calicut- A Toponymical Reconstruction’ in, Dr. V Kunhali (Ed.), *Calicut in History*, Publication Division, University of Calicut, Thenjippalam, 2004, p. 31.

purposes of the royal families. Tali temple is also in this quarter. The south-western division of the traditional city was allotted for residential purposes of the people associated with commerce. Muslims lived in this quarter, and also the minister of Zamorin, shah bandar koya, lived here.<sup>68</sup> Shah bandar koya, or Kozhikode koya, was a muslim officer appointed by the Zamorin to supervise the trade activities in the ports, and he, along with another officer called Farakan, must list out the goods and fix the prices of the goods. They were very efficient, and they don't need any instruments for calculation.<sup>69</sup>

The north-western corner of the city was the settlement area of the outcastes and foreigners. Chinese, Portuguese, and other foreigners were settled in this quarter.<sup>70</sup> "The eastern and southern parts of the city formed the centre of upper class Hindus, and the western and northern parts formed the centre of foreign merchants. There were two zones in the city of Calicut. The people in these two zones lived in mutual co-operation, and friendship and which served as the foundation for the success of the Zamorin, though the Portuguese tried to destroy this unity."<sup>71</sup>

Zamorin tried at his maximum level to maintain the traditional framework of the city as much as possible; we can see that the European powers were given areas that were far from the *Kovilakam* setup of the traditional city space.<sup>72</sup> As the traditional city space of Calicut was based on the *silpa sastras*, according to which separate regions were earmarked for foreigners, and other sections and communities were set

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<sup>68</sup> Ibid., pp.31-33.

<sup>69</sup> M G S Narayanan, 'The Growth of a City', Op. Cit., p. 43.

<sup>70</sup> Dr. N M Namboodiri, 'The Medieval City Complex of Calicut- A Toponymical Reconstruction', Op. Cit., pp.31-33.

<sup>71</sup> M G S Narayanan, 'The City of Honesty', Op. Cit., p. 39.

<sup>72</sup> Dr. N M Namboodiri, *Malabar Patanangal Samoothirinadu*, Op. Cit., p.141.

apart in accordance with the *sastras*.<sup>73</sup> Naturally, the spaces provided for the foreigners were far away from the major point of significance of the traditional city space.

English factory began its operations in the previous areas of Portuguese power in Calicut as early as 1664 . Although Zamorin's efforts to keep the British aloof from the *kovilakam* regions of the traditional city proved to be a failure. The gradual infiltration of the British into these restricted areas was a reality.<sup>74</sup> The first challenge to the traditional city structure came during the Mysore aggression in Calicut. Until then, no foreign forces were able to cause any harm to the traditional city structure of the Zamorin, as there were clear-cut rules and explicitly demarcated regions.

Soon after Hyder Ali reached Calicut on April 20<sup>th</sup> 1766 and after the last Zamorin's death in the fire, all the important structures in Calicut came under his control.<sup>75</sup> The Mysorean invasion caused to enhance the accessibility of Calicut by the establishment of many roads, especially the road network built by Tipu Sultan, widened the earlier narrow paths, and the important roads like Calicut to Feroke, Malappuram to Thamarassery, Feroke to Chathamangalam, Feroke to Coimbatore, Chaliyam to Chettuva, etc. came into existence.<sup>76</sup> These roads were also helpful for the British after their ascendancy to power after the Mysore invasion. The complete transformation of the city was done by the British. The introduction of the telegraph was a major breakthrough in the communication sector as it reduced the distance among the people who were residing in faraway regions from one another. Calicut city had a busy Telegraph Office during the colonial times, as is evident from the archival records of the times. The telegraph service was helpful to create a more

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<sup>73</sup> M R Raghava Varier, Op. Cit., p. 29.

<sup>74</sup> Dr. N M Namboodiri, *Malabar Patanangal Samoothirinadu*, Op. Cit., p.141.

<sup>75</sup> *Ibid.*, pp. 141-142.

<sup>76</sup> Shinoy Jesinth, Op. Cit., p. 77.

accessible Calicut city in the sphere of communication, as in the case of the newly constructed bridges and roads in their contribution to the transportation sector.

Apart from the roads, one of the major methods of conveyance was the train service, and the extension of the railway line to Calicut happened after the British understood their mistake of giving importance to Beypore, an insignificant fishing village, even before the headquarter of the district got its railway line. Calicut was only seven miles away from Beypore, although the British administration failed to extend the railway line the same time when Beypore received the facility. The railway line was extended to Calicut on 2<sup>nd</sup> January 1888.<sup>77</sup> The extension of this railway line to Calicut had some adverse effect on the traditional city structure of the region as the line intersected the medieval city at its centre and divided it into two halves.

The south and west sides of the present day railway line in Calicut city were the main centres of the traditional city space of the Zamorin, and the railway line actually divided it into two: the main centre of the west side of the traditional town was the big bazaar or Valiangadi.<sup>78</sup> This big bazaar was the main centre of trade and the market place in the city of Zamorin, and it was situated between the western wall of the royal fort and the sea shore.<sup>79</sup> This bazaar was one of the main royal streets, and it existed during the period of Vasco da Gama.<sup>80</sup> “On one side of this Valiangadi, there existed the Meetta Bazar and Halwa Bazar of Gujaratis. On the other side was the street of the silk weavers. There also existed a Jain temple.”<sup>81</sup>

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<sup>77</sup> William Logan, *Malabar*, Vol.I, Charithram Publications, Thiruvananthapuram, 1981, p. 87.

<sup>78</sup> Dr. N M Namboodiri, *Malabar Patanangal Samoothirinadu*, Op. Cit., p.145.

<sup>79</sup> M R Raghava Varier, Op. Cit., p. 29.

<sup>80</sup> M G S Narayanan, ‘The City of Honesty’, Op. Cit., p.38.

<sup>81</sup> Ibid., pp.38-39.

The south side included the *Kovilakam*, which was the fort complex and it included all the residential and administrative structures of the king.<sup>82</sup>The circumference of the fort was measured at one mile, and the fort was situated in an area between present day Palayam Road in the south, Mananchira Maidan in the north, Oyitti Road in the west, and Kannur Road in the east. The fort complex consisted of the palace of the Zamorin as well as a few religious and secular establishments. Weavers, potters, flower vendors, and others had their own separate streets. Medieval *silpa* texts and the proposed conventional ideas of town planning in them were followed in the planning and construction of the entire city.<sup>83</sup>The city was under the control of an officer called *Kozhikode thalchennor* and he was assisted by the military groups of Zamorin, who held a permanent position.<sup>84</sup>British actually divided the heart of this traditional city by demarcating it into two halves when they established the railway line through the middle of it.<sup>85</sup>

The typical medieval town with its palace complex, temples, marketplaces etc. was altered by the British occupation into a colonial town with schools, hospitals, churches, barracks, government offices, parks, clubs, bungalows etc.<sup>86</sup>Calicut as a colonial city cannot be compared with Madras or Bombay, as there were no huge structures or buildings like that found in those towns, but colonial rule did bring about a great deal of change in the existing city structure prior to the British. One of the important agencies that made this transformation other than the British was the Basel

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<sup>82</sup> Dr. N M Namboodiri, *Malabar Patanangal Samoothirinadu*, Op. Cit., p. 145.

<sup>83</sup> M R Raghava Varier, Op. Cit., p. 29.

<sup>84</sup> M G S Narayanan, 'The Growth of a City', Op. Cit., p. 43.

<sup>85</sup> Dr. N M Namboodiri, *Malabar Patanangal Samoothirinadu*, Op. Cit., p. 145.

<sup>86</sup> Jidhu M U, 'Architecture in the Urban Space: Life of the Elite in Colonial Calicut' in, *Proceedings of the Indian History Congress, 75<sup>th</sup> Session*, Jawaharlal Nehru University, New Delhi, 2014, p.647.

mission whose endeavours like industrial factories, churches, cemeteries, and schools were detrimental.<sup>87</sup>

The Basel Mission established a carpentry workshop at Calicut as the region was always a major centre of timber industries. The first person appointed there was a native person who was experienced in carpentry, but later a trained person from Germany came there to supervise the workshop.<sup>88</sup>The workshop mainly designed to train the Christian converts was a failure in its competition with the native carpenters and their traditional work in this field. The next main industry started by the mission in Calicut was the weaving industry, which was started in 1859. A factory setup was introduced, and steam engines were there in the Calicut factory. Basel mission was also the first in introducing a tile factory in Calicut.<sup>89</sup>The establishment of these new factories and industries and a salaried job was new to the people who were the converts from different caste groups. They all worked together under the same roof without any caste barriers. The establishment of these industrial buildings and structures transformed the city structure and also had its sociological and economical impact on the lives of the people living in that city space. These new industrial establishments that contributed to the transformation of the city, such as the weaving, tile and printing industries, were highly different in nature when compared to the earlier traditional agriculture-based societal and economic framework.<sup>90</sup>

The introduction of electricity was an important feature that contributed to the urban character of the city, and during the 1920's, the municipality was lit up by oil

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<sup>87</sup> Ibid.

<sup>88</sup> Jaiprakash Raghaviah, *Basel Mission Industries in Malabar and South Canara (1834-1914) A Study of its Social and Economic Impact*, Gian Publishing House, New Delhi, 1990, p. 30.

<sup>89</sup> Ibid., pp.33-35.

<sup>90</sup> Jidhu M U, 'Uparivarga Jeevitham' in, Sivadasan P (Ed.), *Kozhikode Nagaravum Jeevithavum* (Mal.), Sahithya Pravarthaka Co- Operative Society Ltd, Kottayam, 2014, p. 81.

lamps only.<sup>91</sup> There was a light inspector employed by the municipality to supervise the lighting of the oil lamps, but major initiatives were not taken from the side of the municipality in extending this light to other parts.<sup>92</sup> The major step in the electrified lighting of the Calicut town was initiated by K.C Menon, son of O. Chandu Menon, in the 1927, when he applied for an electrical license to supply electricity in the Calicut town area.<sup>93</sup> He was a retired Divisional Engineer from the Telegraph section, and at first, the area that was going to benefit from this electric supply included the city limits, but because of the distance and the expense of extending electric lines to such places, the areas that came under the electric license were reduced to the central part of the city.<sup>94</sup> Thus the areas electrified first in Calicut city were “beach roads from the south pier to the north pier, from beach roads crossing Valiyangadi up to the Mariamman kovil at Palayam, court road, Robinson road, and the roads covering Mananchira.”<sup>95</sup> When the electrification of streets became common, the next turn for electricity was for public institutions and domestic purposes and during the 1935’s, many important officials such as District Judge, Engineer, etc. were supplied with electricity to their homes, .<sup>96</sup>

The daily life of the urban dwellers is very much different from the village life, as the town life essentially needed separate places of work, entertainment, and residence. These three factors were inseparable in the western city planning, and the colonial urban space introduced here was also in the same template.<sup>97</sup> Hotels, parks,

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<sup>91</sup> *Administration Report of Calicut Municipality 1920-1921*, Regional Archives, Kozhikode.

<sup>92</sup> Ibid.

<sup>93</sup> Amrutha A, ‘Vaidyudiyude Agamanam’ in, Sivadasan P (Ed.), *Kozhikode Nagaravum Jeevithavum* (Mal.), Sahithya Pravarthaka Co- Operative Society Ltd, Kottayam, 2014, p. 39.

<sup>94</sup> Shinoy Jesinth, Op. Cit., pp. 156-157.

<sup>95</sup> Ibid., p.157.

<sup>96</sup> Amrutha A, Op. Cit., p.42.

<sup>97</sup> Jidhu M U, ‘Uparivarga Jeevitham’, Op. Cit., p. 82.

and clubs were important places for purpose of refreshing and also used as places of social gatherings in the urban space. These clubs were part of the urban space introduced by the British. One such club was the European club inaugurated on 1864 February 8<sup>th</sup> and which was situated on the Beach road in Calicut.<sup>98</sup>The elite members of the native society founded the Cosmopolitan club in protest over the fact that the above mentioned European clubs were only open to the European population and the natives were not permitted to join. The Cosmopolitan Club was founded in 1900.<sup>99</sup>Club as part of the city life was a new and the concept of club was purely western origin. The people who were having a secure and stable position in the financial front of life only had experiences like this among the native population. The people who engaged in this kind of lifestyle were mainly the European educated ones, as they were also trying to mimic the European way of life in the colonial towns. Public spaces like the clubs gradually became the centre of social gatherings and discussions in the coming years.

Situated in the heart of Calicut, Mananchira ground was one such place in the urban landscape of Calicut. It was built and used by the Zamorins, and during the early stages of the British period, the ground was used as a parading ground for the soldiers, and later that purpose was shifted to the Vikram Maidan near West Hill barracks.<sup>100</sup>Cricket and Basketball matches were conducted on the ground, and during the first introduction of these outdoor games to the ground, entry was restricted only to the European section of the population. Later, due to the works of Arthur Wellesley, natives were also allowed to play. The Huzur Katchery building was opposite Mananchira ground, and in the present times, LIC Compound is in the exact place.

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<sup>98</sup> William Logan, Op. Cit., p.cccxvi.

<sup>99</sup> Jidhu M U, 'Architecture in the Urban Space: Life of the Elite in Colonial Calicut', Op. Cit., p. 650.

<sup>100</sup> T B Seluraj, Op. Cit., p. 279.

The first floor of the Huzur Katchery was used as the dressing room of the players who played test matches on the ground once a week.<sup>101</sup>

Most of the important colonial buildings and offices of the time were situated in close proximity to the Mananchira ground. As the main centre and headquarter of the Malabar district, several colonial administrative offices were located in the city space of Calicut such as the collector's office, treasury, press, sub-court, district munsiff court, telegraph office, post office, police station, district jail, huzur katchery etc. These were some of the most important centres of administration and important buildings. The Town hall was another important requisite of any colonial town, and every important British-occupied region had one such construction by them. In the case of Calicut, the present Town Hall building was constructed by the natives themselves as part of the jubilee celebration of Queen Victoria. When the committee decided to conduct the jubilee celebration of the Queen, and constructed the town hall of Calicut in 1890 with a balance amount after the jubilee celebration.<sup>102</sup>

The presence of jails, dispensaries, hospitals, and asylums in the urban space of Calicut witnessed an altogether shift in the earlier structure of the traditional town, as these were completely alien to the people of the region. These colonial structures of an urban space were a significant part of what was actually the need of the hour. The significant sections of inhabitants of the city space were infact the high-class people, such as the European population and the rich natives who accepted the English lifestyle. Apart from this, a newly emerged urban middle class was also there.<sup>103</sup> The natives who imitated the colonial way of living also adopted the construction techniques of the British. The building techniques followed by the British in the

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<sup>101</sup> M G S Narayanan (Ed.), *Malabar*, Malabar Mahotsav Souvenir, Calicut, 1993, p.628.

<sup>102</sup> Revenue Files Folded, Bundle No. 51, Serial No. 10, Regional Archives, Kozhikode.

<sup>103</sup> Jidhu M U, 'Uparivarga Jeevitham' in, Sivadasan P (Ed.), *Kozhikode Nagaravum Jeevithavum* (Mal.), Sahithya Pravarthaka Co- Operative Society Ltd, Kottayam, 2014, p. 81.

construction of their bungalows were in accordance with the high heat situation of Kerala. High ceilings, long verandahs and windows, porches etc. were the main features of these structures and it was to escape from the heat and humidity. Rich natives also imitated and constructed bungalows with the same features.<sup>104</sup>The construction of bathrooms and toilets inside the residential buildings was also popularised due to the British influence. Caste restrictions were strong during the period, and it was not allowed to use roof tiles in the construction of buildings, except for the construction of palaces and temples. The British were the first to abandon this practice, and in the history of Calicut, the first building to get a roof made of tiles was the shops in Valiyangadi (Big Bazar). The then Malabar collector Conolly ordered to change the heystack roofs of the shops in Valiyangadi in the light of chance of catching fire easily and asked to replace them with tiles.<sup>105</sup>

The other side of the population of the city, which was the lower section, such as prostitutes, menial labourers, beggars etc. were treated as a major threat to the public health condition of the urban space due to their living conditions. Prostitutes were regarded as criminals, and the first women's sub jail in Calicut was inaugurated especially to accommodate these prostitutes of the city. The Madras Suppression of Immoral Traffic Act came into effect in the city of Calicut in 1930.<sup>106</sup>The same treatment of suspicion and segregation of the prostitutes who were associated with the European soldiers can be seen in the study of colonial Lucknow also, which we discussed in the earlier chapter. Indian bodies were viewed by the British as an instrument that was spreading diseases. Hygiene of the body and living conditions of the lowest strata of population in an urban space was viewed through disgust. All these

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<sup>104</sup> Ibid., pp.82-83.

<sup>105</sup> Ibid., pp. 83-84.

<sup>106</sup> Shinoy Jesinth, Op. Cit., p. 80.

new infrastructure and buildings were miles apart from the structure and purpose of the buildings of the traditional city of Zamorin.

The present civil station area in Calicut was the residence of the District judge in the colonial Calicut city.<sup>107</sup>“The centre of municipal administration stood near French Loge. The old court complex was situated on the present Taj Road. The main administrative zone in the central part of the city accommodated Huzur kutchery and the office of the Malabar Police Superintendent, along with a number of colonial institutions.”<sup>108</sup>The positioning of various colonial establishments of administrative purpose in the urban scene of colonial Calicut gives an idea that they were scattered around different areas of the town. There were absence of a clear cut demarcation line between the natives and Europeans especially in the areas of British administrative nucleus. When we study about the important colonial cities in India, one of the major striking points that came to our mind is the presence of a clear-cut demarcation of the White and Black towns. The colonial urban history of Bengal, Bombay, Lucknow, etc. substantiate this aspect. However in the case of Calicut, we can't trace a specific area exclusively as a White town and a Black Town in the central urban area of the city space, rather an agglomeration of spaces of both in the same vicinity is viewed.<sup>109</sup>

Calicut city had its growth parallel to the rise and growth of the Zamorin's rule, and that is the reason why it is rightly mentioned that the history of the Zamorins was the history of Calicut for a long period.<sup>110</sup>This period of Zamorin's rule is well documented, and the trade interactions experienced by the city with foreigners like Arabs, Chinese, etc. is also a well-documented affair through the writings of foreign travellers who visited the region. The European powers came in search of trade

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<sup>107</sup> Ibid.

<sup>108</sup> Ibid.

<sup>109</sup> Ibid.

<sup>110</sup> M G S Narayanan, *Kozhikkodinte Katha* (Mal.), Op. Cit., p.49.

activities with this medieval port town of great significance, and their interaction with the city and the British transformation of the city as a colonial urban space is discussed in this chapter. When we analyse the settlement pattern of the foreign traders, we can conclude that even though Zamorins accepted every trader with open arms to Calicut, they intentionally kept them away from the traditional fort structure designed by the king in accordance with the medieval *vastu shastra* techniques.

The British were the single European power that successfully infiltrated their administrative powers into these restricted areas of the traditional city. The Mysorean invasion and the establishment of the road network by Tipu was a major event in the urban transformation of Calicut, as the new widened roads in place of the narrow ones increased its accessibility from different directions. The medieval port town of Zamorin with a temple as its centre transformed as the administrative headquarter of Malabar under British rule. The exclusivity and isolation followed by the British officials in every colonial city in India was fulfilled by them in Calicut also by selecting East Hill and West Hill regions for residential purposes. Important characteristics of a colonial city, which was the cantonment area and civil station, were also there in Calicut. The industrial establishments such as the Basel mission weaving factory, and the supply of electricity also changed the structure of the city. Thus, we can assume that the colonial city space was different from the traditional medieval city structure in form, shape, and purpose.

The colonial city and the significance of its maintenance in the day-to-day life under the public health spectrum gave this urbanization process an interesting turn. The urbanization process and the growth of towns and urban spaces have a close connection with the sanitary policies introduced in India during the colonial regime. Sanitation was a serious concern only in the urban spaces because of its congested nature arising from overcrowding and the urban sanitation programmes were began to be observed to tackle the sanitation issues of the towns. Bipan Chandra mentions

that the colonial modernity introduced in India was different from its counterpart in Britain and when colonialism introduced here, India was already experiencing modernity and urbanization which was a fusion of the ancient Hindu urban culture and the Muslim medieval one.<sup>111</sup> But the modern urbanization process of the colonial state was a distinct one without continuing its predecessor.<sup>112</sup>

The colonial cities of the period were having a dual nature as the same urban area was having two different faces in the context of the civic and other facilities provided by the state. A clear-cut demarcation line was between the colonial enclaves in the city and the settlement areas of the natives. Sanitary and hygienic understanding, safety etc. were the most specific and significant aspects the colonial regime bears in mind while selecting a place for the settlement purpose. The urban and other civic facilities enjoyed by these different sections of the town area were also different. The major divisions in a colonial urban space were the native town area, civil station, and cantonment area. The cantonment included the army region, and the civil station was for the other European officials and staffs. Collector, medical officer, and engineer etc. were included in the civil station area, and the provisions related to matters of health were on the shoulder of the medical officer, and he also carried out the sanitary activities.

The elaborate level of town cleaning witnessed in the colonial urban spaces was after the dangerous presence and spread of many epidemic diseases in India. The first cleaning and sanitation only happened on the European side of the town, and when the spread was not contained even after the segregation policy adopted from the natives, the colonizers were forced to implement the same provisions on the native side of the town also. Indian people and their living conditions were viewed as

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<sup>111</sup> Bipan Chandra, *Essays on Colonialism*, Orient BlackSwan, Hyderabad, 2010 (1999), Preface, p. v.

<sup>112</sup> Ibid.

insanitary and dirty, and this attitude had its roots in the racial superiority preached and followed by the British. Indian experiences were viewed as a chance for them to show their so called 'Victorian morality' and it was their right to civilize these 'Barbarians.' Thus the discourse on the concept of 'civilizing mission' and the 'White man's burden' is a recurring occurrence in the studies on the sanitary activities that happened in the colonial urban milieu. The next chapter examines the history of sanitation in the urban milieu of Calicut under the British administration.

## CHAPTER 5

### **DEBATES AND DISCOURSES ON SANITATION IN COLONIAL CALICUT**

Calicut had an enormous level of significance as the capital of Malabar district during its colonial administration and the establishment of a cantonment there and the presence of various government offices and machineries in its vicinity enhanced it to a further level of prominence. The recurrent cases of epidemic diseases prevalent during those times also ignited it as a hotspot. This was sufficient for the rulers to launch an active sanitising venture in the city space. The actions initiated by the British directly or indirectly in Calicut with regard to sanitation are discussed in this chapter.

The municipalities of Kozhikode, Thalassery, Palakkad were formed as part of the Local Boards Act of the Madras Presidency. The foundation of the Malabar District Board in 1859 was aiming at the discussion and execution of the general developmental activities in the villages and small towns that do not fall under the jurisdiction of the municipalities. The first board was consisted of three nominated members and the collector. The supreme authority and the president was the collector. The first agenda item during the starting period of the board was to allot and establish schools in the villages, which were having a backward position in developmental matters. The local Bodies Amendment Act in 1863 gives the board permission to levy education cess; eventually the road cess was included in it and levied through the 1866 amendment.<sup>1</sup>“Outside the five municipalities of Calicut, Palghat, Tellicherry,

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<sup>1</sup> Velayudhan Panikkashery, *Kerala Charithrathinde Ullarakalilekk* (Mal.), Current Books, Kottayam, 2012, p.99 -100.

Cannanore, and Cochin, local affairs are managed by the District Boards, Taluk Boards and Panchayaths. Originally there were five Taluk Boards: Tellicherry, Calicut, Malappuram, Palghat, and Wayanad, corresponding to the revenue divisions of the same name.”<sup>2</sup> “Schools, sanitation, medical institutions and vaccination are some of the objects upon which the boards spend their money, but as usual, a greater part of their income is devoted to communications. There was difficulty in finding funds for the expenses of supervising such matters as sanitation and vaccination.”<sup>3</sup>

In the model of District Boards, Taluk boards like Chirakkal, Kottayam, Kurumbranadu, Wayanad, Eranadu, Valluvanadu, Ponnani were established, and matters like education, health, Sanitation, construction and maintenance of roads and bridges, markets, etc. came under their control. According to the Malabar District Board Act of 1920, it was notified that the two by three percentage of the all members must be selected by the voters, and the president should be elected by the member, and every firca<sup>4</sup> must have one member each.<sup>5</sup>

Several roads in the Malabar district were transformed to be suitable for road transport due to the works of District Boards, along with planting of trees on both sides of the roads. District board members worked towards the construction of new hospitals, dispensaries, and schools. One of the important means of transport during that period was waterways and the construction of boat jetties<sup>6</sup> was a significant

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<sup>2</sup> C A Innes I C S and F B Evans I C S (Eds.), *Madras District Gazetteer Malabar Vol.I*, Government Press, Madras, 1951, p.97.

<sup>3</sup> *Ibid.*, p.399.

<sup>4</sup> Malabar district during that period was divided into taluks, taluks again divided into fircas and fircas divided into amsams.

<sup>5</sup> Velayudhan Panikkashery, *op. cit.*, p.100.

<sup>6</sup> A wide wooden or stone platform where boats stop to let people get on or off, or to load or unload goods.

requisite for this mode of transportation. Many works on the construction of boat jetties were also conducted.<sup>7</sup>

One of the earliest references to the upkeep of the Calicut city with regard to sanitation can be seen in a memo issued by the then Magistrate of the town, dated 5 August 1859 which offered some suggestions and orders for the inhabitants of the town.<sup>8</sup> The memo directs the people of the town to cautiously engage in the improvement of the sanitary condition of the town and not to indulge in any activities that are going to make the town insanitary in nature. The order also assures that the government is willing to fund them money for the purpose from the local fund.<sup>9</sup>

The administration of the Calicut town was vested upon the municipal council, which was an elected body, and matters like health and sanitation were to be undertaken by them. The electors who voted for this municipal council were needed to fulfill some required criteria for participating in the election process, and it is mentioned in the District Municipalities Act. After the introduction of the Act, the power of the Local Board on the administration of Calicut city was transformed to the municipal council. The main eligibility provision for voting right was that the person must have resided in the locality concerned for at least 120 days during the year prior to the one in which the electoral rolls are prepared.<sup>10</sup>

The municipal council may act upon the legislation put for the administration of municipalities by the British government in India and conduct the town administration in accordance with it. In the sanitary perspective, the important duties

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<sup>7</sup> Velayudhan Panikkashery, op. cit., p.100.

<sup>8</sup> Malabar District Gazette 1859, Regional Archives, Kozhikode.

<sup>9</sup> Ibid.

<sup>10</sup> *Swadesamithram* Daily dated 2<sup>nd</sup> April 1931, NNPR Files 1931, Tamil Nadu State Archives, Egmore.

of the municipality were the conservancy, water supply, and drainage maintenance of the town. Conservancy included the upkeep of town premises as neat and clean with the systematic removal of waste from the streets and roads and the removal of night soil as septic tank toilets of today were not prevalent during the period. The sanitary works were considered to be the most important duty that the municipal committees should impart.<sup>11</sup>

“The local self government policy introduced by Lord Ripon strengthened the local bodies with the power and funds needed to implement the upkeep of the conservancy staff like scavengers.”<sup>12</sup> But it was not satisfactory, and the common method of disposal of the night soil, was that the scavengers collected it and later transported it to the trenching or dumping grounds. Eventhough the use of incinerators was introduced during the years 1914-1917, the number of incinerators was limited. In the incinerator, collected night soil and other garbage were mixed with sawdust and burned into ashes. Sawdust was a cooking fuel used by the people, and in this method, availability of sawdust was a serious issue. Use of Kerosene oil and carbolic acid was also prevalent, but it did not become common because it was comparatively costlier when compared with the saw dust.”<sup>13</sup>

Each sweeper in Calicut town had the duty of cleaning seventy houses on his shoulder, and it was a tiresome job, and the number of staff was insufficient.<sup>14</sup> The municipality was lacking funds for the proper maintenance of conservancy, and the

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<sup>11</sup> Veena Talwar Oldenburg, *The Making of Colonial Lucknow 1856-1877*, Oxford University Press, Delhi, 1989, p.99.

<sup>12</sup> Jasriya Yoosof U V, ‘The Changing Perspectives on Urban Scavenging: The Views from Colonial Calicut’ in, *Proceedings of the South Indian History Congress, 39<sup>th</sup> Session*, Osmania University, Hyderabad, 2019, p.337.

<sup>13</sup> Ramya K, ‘War in City Space: Popular Responses in Kozhikode 1914-1918’, Unpublished Ph.D Thesis, Department of History, University of Calicut, 2017, p.38.

<sup>14</sup> C A Innes I C S and F B Evans (Eds.), *Op.Cit.*, p.291.

introduction of private scavenging in the municipal towns, reduced the financial burden of paying the scavengers in the case of privately owned toilets from the shoulders of the municipality. The private scavenging system was considered as the best way to tackle the diseases and introduced after the widespread influence of contagious diseases during the British period in India.<sup>15</sup>

In the system, unlike the public latrines, the cleaning and maintenance of the private latrines were the responsibility of the concerned owners, and they should pay the scavenger for the removal of night soil. The municipality was not the responsible authority for the frequent removal of night soil from the private latrines. The municipality levied one percentage of the annual rental value from the buildings and half percentage of the annual rental value from land as the scavenging tax.<sup>16</sup>

In accordance with a notification issued by the Calicut municipality, it was compulsory for the owner of every house or building to construct a latrine. The latrine must be accessible to the scavengers for periodic cleaning, and the municipality will levy a fine of rupees fifty from the owner of the building if he prevents any municipal staff or scavenger from cleaning the toilet.<sup>17</sup>

“In the smaller towns, there is no attempt at systematic sanitation except in Kollengode in the Palghat taluk and Beypore in the Calicut taluk, where the private scavenging system has been introduced by the taluk boards. Only in municipal towns were public latrines provided, and even there they are not always used. Elsewhere,

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<sup>15</sup> Vasantha P K, ‘Scavenging in Palakkad Town’ in, E Geetha (Ed.), *Perspectives* Vol. VI, No.6, Journal of the Department of Post Graduate Studies in History and Advanced Studies in Local Knowledge, Govt. Victoria College, Palakkad, 2014, p.101.

<sup>16</sup> Notice of Calicut Municipality dated 18/03/1932, Malabar District Gazette 1932, Regional Archives, Kozhikode

<sup>17</sup> Notification of Calicut Municipality dated 29<sup>th</sup> July 1932, Malabar District Gazette 1932, Regional Archives, Kozhikode.

domestic sanitary conveniences are non-existent and the people resort for the purpose of nature to their gardens and hedges or to the banks of channels and rivers.”<sup>18</sup>

During the period 1943, sixty-four families were doing the scavenging work in Calicut town, and only thirty families were provided with a residence area by municipality, and the family should pay an amount of rupees one as monthly rent.<sup>19</sup> Paraya, pulaya, and chakliya were the important castes who were undertaking the scavenging work in Kozhikode city, and the latter were the migrant labourers from Tamil Nadu. The other names used to refer to them were the *thotti parayar* or *pattana parayar*.<sup>20</sup>

Scavengers used to collect the night soil from the houses in buckets and transfer it to the hand carts or trolleys. A hand cart would contain ten buckets of it, and then it was transported to the night soil depot through lorries. These lorries were used to wait for the night soil carts near the Ansari park of the Calicut town.<sup>21</sup> The system of scavenging in the Calicut town starts with the cleaning of latrines by the scavengers in the morning and carrying it to the temporary place of deposit, and the night soil would be there till the forenoon, and then the lorries transfer it to the night soil depot.<sup>22</sup> One of the night soil depots was at Njeliyanparambu, an area that was just 1.5 miles away from the city. The earlier dumping ground was at Puthiyara, but the local people protected against the disposal of excretory material near the water sources. This strong opposition from the people were the reason behind the

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<sup>18</sup> C A Innes I C S and F B Evans (Eds.), Op.Cit.

<sup>19</sup> *Mathrubhumi Daily*, 31<sup>st</sup> August 1943.

<sup>20</sup> Orna Krishnan Kutty, *Parayar - Kulam Gothram Samoohika Jeevitham* (Mal.), Kerala Bhasha Institute, Thiruvananthapuram, 2018, p.5.

<sup>21</sup> K N Madavan Kutty, ‘Kozhikoden Smaranakal’ in, P Zakir Hussain (Ed.), *Kozhikode Orormappusthakam* (Mal.), Olive Publications, Kozhikode, 2012, p.101.

<sup>22</sup> Inspection Notes of the Calicut Municipality, Local Self Government Department Files 1927, Regional Archives, Kozhikode.

introduction of a new night soil depot at Njeliyanparambu and during the year 1927, the area was of eleven acres and a maistry was in charge of the place. The night soil was disposed of by digging trenches by coolies.<sup>23</sup>

Scavengers used to start their work from 5.30 in the morning to 7.30 in the evening, and they had no lunch break in between this shift.<sup>24</sup>If any of the beneficiaries of their work issued any complaint regarding their work, they must come after their shift also to clarify and do it again. They should also report when summoned with an emergency situation and clean the said latrine.<sup>25</sup>The work that they do is cleaning the dirt of others, and the same job was the reason for their societal segregation by the other fellow town dwellers. Traditionally, the lower caste people were the main section of society who were associated with the scavenging work. Open defecation was the norm of Indian society, and it is still prevalent in many parts of India. With the introduction of the urban centres and the overcrowding of cities, the administration found other ways for the removal of human waste, and in the later period, after the coming of the British, their administration started to give much-needed importance to conservancy matters in its public health policies and municipal administration to curb the epidemics:“Thus the institutionalisation of sweeping and scavenging as a profession is of a recent origin.”<sup>26</sup>Scavenging as a practice was there in the pre-colonial period of India also, but it got a more institutionalised form after the British regime introduced the scavenging job in the military cantonments and municipalities.<sup>27</sup>But this institutionalization and a job status in the municipal

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<sup>23</sup> Ibid.

<sup>24</sup> Mathrubhumi Daily, Op.Cit.

<sup>25</sup> Proceedings of the Calicut Municipal Council Meeting held on 30<sup>th</sup> March 1935, Malabar District Gazettee 1935, Regional Archives, Kozhikode.

<sup>26</sup> Jasriya Yoosof U V, Op.Cit., p.336.

<sup>27</sup> Dilip Chavan, *Language Politics Under Colonialism: Caste Class and Language Pedagogy in Western India*, Cambridge Scholars Publishing, U K, 2013, P.2.

administration did not provide them any relief from the age old caste bias and were the most exploited working force. Mulk Raj Anand's book 'Untouchable', narrates the life of Bakha, who was a scavenger in the British military barracks. The book, through his experiences, discusses the exploitative and humiliating treatment received by the scavenging class at the hands of the upper caste people, as India has a strong history of caste differences. Bakha says about the treatment he receives as follows, "They think we are mere dirt because we clean their dirt."<sup>28</sup>The statement itself strongly put forward the inhuman treatment received by the scavenging class. "Caste restrictions regarding the use of public wells, roads, entry to the temples, etc. were even worse to the scavengers when compared with other backward castes."<sup>29</sup>

In the context of colonial Calicut, a similar kind of treatment experienced by the scavenging community can be seen from the inspection report of the Calicut municipality. An inspection report was conducted in the Madras Presidency for every three years.<sup>30</sup>The people engaged in the job of scavenging were kept at a distance by the other town population, and thus finding a place of rest or house was very difficult for them. The inspection notes throw light on the aspect of caste prejudices and animosity prevailed in the town, and it highlights the need to provide urgent housing to every conservancy staff in the Calicut municipality.<sup>31</sup>It mentions Calicut as an "area having strong caste prejudices."<sup>32</sup>The main reference we can assume from these inspection notes is that the conservancy staff or the scavengers were having issues regarding the accommodation and stay, and their caste and job were the main hindrance that was preventing them from finding a decent stay in the Calicut town.

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<sup>28</sup> Mulk Raj Anand, *Untouchable*, Popular Book Depot, Bombay, 1935, p.63.

<sup>29</sup> Jasriya Yoosof U V, *Op.Cit.*, p.338.

<sup>30</sup> Inspection Notes of the Calicut Municipality, *Op.Cit.*

<sup>31</sup> *Ibid.*

<sup>32</sup> *Ibid.*

When different working class people began to form unions and associations to ask and demand for their rightful privileges in the work sphere, scavengers also formed unions to submit their grievances to the authorities.

The introduction of trade union movements in different parts of the country influenced the scavengers in Madras to form their trade unions, and three thousand scavengers in the Madras Corporation went on strike, asking for a salary hike under the Madras Scavengers Union.<sup>33</sup> Similar campaigns were seen in the Calicut municipality, also as the scavengers formed a union under Harijan Seva Sagham, and it conducted a survey among the scavenging class of the Calicut town and submitted its findings to the municipality. The report discussed the hazardous condition of the scavenging lane situated opposite the woman's hospital.<sup>34</sup>

The petition demanded the approval and grant of casual and sick leave, provident funds, etc., and the need to do some quality measures and programmes for the uplift of the community through the education of their children. The immediate and necessary allotment of adequate housing was also stressed upon and also urged the municipality to stop the heinous practice of removing the night soil in buckets and the transportation of it as head load. It criticized that no other municipal body in the world would engage and promote such a disgusting practice.<sup>35</sup>

The municipal supplement gives every minute details regarding the proceedings of the general meetings of the municipal commissioners, and it is the best source material to know about the day-to-day administration of the municipality. It gives knowledge on the various discussions and debates that happened during the

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<sup>33</sup> D Veeraraghavan, *The Making of the Madras Working Class*, Left Word Books, New Delhi, 2013, p.163.

<sup>34</sup> *Mathrubhumi* Daily, Op.Cit.

<sup>35</sup> Ibid.

municipal committee meetings and the measures adopted by the authorities on matters connected with the administration of the city. One such discussion is mentioned below about a meeting that held on the 21<sup>st</sup> October 1896; it discussed some matters related to sanitation. It was about the scavenging work of the latrine attached to the Telegraph office. The scavenging fee of the toilet in the telegraph office of Kozhikode was paid previously by the municipality, and the meeting of the municipal body on the above mentioned date decided to stop this and asked the telegraph office to pay the scavenger by themselves from then on.<sup>36</sup>

The service of scavengers was part of the conservancy policy of the urban sanitation programme and the methods of conservancy consisted of the removal of night soil and rubbish in carts to dumping and trenching depots. Private latrines were cleaned by a special staff on payment by householders of a special fee called the private scavenging fee. In many of the towns, the contents of the dumping and trenching depots were sold periodically for manure.<sup>37</sup> Calicut municipality levied one percentage of the annual rental value of the buildings as scavenging tax from the owners of the buildings, and in the case of land, the tax was a half-percentage of the annual rental value.<sup>38</sup> The scavenging fee paid by the Calicut Fisheries Training Institute was 3-6-0 as it was the quarterly fee to be paid to the municipality in the year 1925. The hostel attached with it had the scavenging fee paid by the residents of that hostel.<sup>39</sup>

On December 14, 1910, the West Coast Spectator, a Calicut-based newspaper, published a report about the removal of night soil from the town. It highly criticized

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<sup>36</sup> Malabar District Gazettee 1896, Regional Archives, Kozhikode.

<sup>37</sup> *Notes on Recent Sanitary Developments*, Tamil Nadu State Archives, Egmore.

<sup>38</sup> Notice of Calicut Municipality dated 18-03-1932, Malabar District Gazettee 1932, Regional Archives, Calicut.

<sup>39</sup> Development Department Files 1925, Regional Archives, Calicut.

the municipality for its handling of the disposal of human waste and alleged that it was extremely unsatisfactory. There cannot be any other municipality doing this kind of method as the Calicut municipality, like the use of carts with their lid semi-closed and there by exposing the content of the cart to the pedestrians. While the scavengers are moving this cart along the road, the smell of the human excreta is experienced by the passengers on the road, and it is cruel to be tortured by this loathsome smell every morning.<sup>40</sup>

The smell that the diabolical little cart spreads around and leaves behind as it goes along a trailing cloud of obnoxious gas is very disturbing to the nose and eyes. The news report refers to the governing authorities as a curse instead of a bliss and criticizes the municipality as some people playing along the whims and fancies of a few and neglecting the common interest of the people.<sup>41</sup>

In accordance with a report of the *Kerala pathrika* (published from Calicut) on June 26<sup>th</sup> of 1915, there were many thickly populated and insanitary parts in Calicut, which makes it very difficult to keep clean, and there should be some fixed rule regulating the construction of houses in these places. It is not possible for the municipality to buy and demolish the existing houses in such places and and to build new ones there without any governmental help of funds.

The news report asks for the appointment of a special officer in the Presidency, to report upon town planning. The special officer also needs to submit his report only after consultation with the sanitary officer in charge, and thereby he can provide special attention towards the sanitation of the town. The report also discusses the inconvenience caused to the public by the then-current system of removing night soil

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<sup>40</sup> *West Coast Spectator Newspaper* , December 14 1910, NNRP File 1910, Tamil Nadu State Archives, Egmore.

<sup>41</sup> *Ibid.*

in Calicut and suggests a remedy. It recommended the construction of pit latrines in thinly populated areas and the increase in the number of public toilets in other parts so that the lanes can be clean without any trace of human waste. The report concluded by mentioning that the problem of removing the night soil is the most important of all issues connected with the sanitation of the Calicut town.<sup>42</sup>

The practice of manual scavenging prevailed before the British period also and was considered the most demeaning labour, and thereby the group of people practicing it became the untouchables who were not allowed to live in the inside area of the town during the ancient and medieval periods. With the introduction of British rule in India, they also took the services of the scavengers by officially appointing them in the military cantonment areas and the municipalities.<sup>43</sup> Here the ‘torch bearers of the so-called civilizing mission’ did not provide more funds and staffs to introduce a more technologically advanced way of disposing the night soil and stuck with the same old method of manual scavenging. After the independence also, scavenging existed, and in the case of Malabar, it ended during the 1980’s, which was a result of the various discourses from the sides of the scavenging community<sup>44</sup> and the introduction of the septic toilets may also have been the reason for the same.

In the early 20<sup>th</sup> century Innes and Evans, portray the Calicut town as follows: “For a municipal town, the roads are bad. The town is still without a regular system of water supply or drainage and owes its municipality a few public improvements. A few wells, a new building for its civil hospital, new *Mappila* and Christian burial grounds, the aeromotor and reservoirs erected to preserve the water of the *Mananchira*

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<sup>42</sup> *Kerala pathrika* News paper June 26 1915, NNRP File 1915, Tamil Nadu State Archives, Egmore.

<sup>43</sup> Dilip Chavan, Op. Cit., P.2.

<sup>44</sup> Vasantha P K, Op.Cit., p.104.

tank from pollution, and a footpath over the *Kallayi* railway bridge are its most important additions to the town. The town is still without a protected water supply or modern system of drainage. The water supply schemes suggested were too costly to be taken up. The *Mananchira* tank continues to supply drinking water to a large part of the town, almost throughout the year. Public wells have also been sunk in many places.”<sup>45</sup>

*Mananchira* is still quenching the thirst of *Kozhikode* town; it was a pond that was included in the palace complex of the Zamorins. The palace complex was extended upto Thali, and the name *Mananchira* for the pond was after Manavikraman, the founder of the Zamorins royal power.<sup>46</sup> *Kozhikode* town witnessed its growth around this pond and, it is still used as a water source for the town population.<sup>47</sup> The pond and the adjacent ground next to it got the name *Mananchira* because it was built by the Zamorin ruler, Manavedan.<sup>48</sup> The *Mananchira* ground was used by the *Chavers*, who were the bodyguards of Zamorin, for training and performing their martial arts skills and it was used for this purpose during the period when zamorin rule was at its zenith.<sup>49</sup>

The British administration first thought about the use of *Mananchira* water for drinking purposes during the 1890’s, and a letter written by Ellis, who was the sanitary officer of the town, to the chief secretary on October 29,1894, adhered to this.<sup>50</sup> The sanitary officer made a detailed report on this matter. He mentioned that no other

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<sup>45</sup> C A Innes ICS and F B Ivans ICS (Ed.), Op.Cit., p.401.

<sup>46</sup> M G S Narayanan, *Kozhikkodinte Katha* (Mal.), Mathrubhumi Books, Kozhikode, 2017 (2001), p.60.

<sup>47</sup> Ibid.

<sup>48</sup> T B Seluraj, *Innalekalile Kozhikode* (Mal.), Mathrubhumi Books, Kozhikode, 2015, p.157.

<sup>49</sup> M G S Narayanan, Op.Cit., p.60.

<sup>50</sup> T B Seluraj, Op.Cit., p.158.

drinking water source is available in the city, and there should be a detailed examination of how much water is available in Mananchira during the hot season. He also referred to the fact that, when he made the suggestion to the municipality about the proposal to make Mananchira a full-fledged drinking water system for the municipality, the latter rejected it, citing insufficient funds.<sup>51</sup> He also asked to take a sample of the Mananchira water for chemical examination so that it could give them an understanding regarding the status of the water's purity.<sup>52</sup>

The sanitary officer then mentions in his report that he appointed Dr. Kings to study about the water availability in Mananchira, and he gave a negative report that Mananchira lacks that much availability of water to use as a municipal water source because the water of the Mananchira came from the clay layers beneath it, so that the water content may be less. But sanitary inspector is of the opinion that it may not be true. The wells and small ponds near Mananchira area have higher water levels, and thereby the report of Dr.Kings can be neglected.

The sanitay officer's report also mentions his visit to Kozhikode town in 1894 on October 10 and 11, and he visited Polur kunnu, which is 3 miles away from the town, and the place is used as a laterite stone quarry. Sanitary officer mentions small streams of water in the areas and suggests the use of that water as a source of drinking water for the town after conducting a chemical examination of the purity of that water. But the expected capital for this plan was rupees four lakhs, and if the finance of the municipality is not able to execute this plan, the Mananchira water can be used for some more years.<sup>53</sup>

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<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> Ibid., p.159.

The sanitary officer in his report asks to give importance to the Kuttichira or the Mappila town with regard to the distribution of drinking water and mentions that his Mananchira plan will cost only one lakh rupees, and according to the public opinion, the water of Mananchira is sufficient and clean for drinking water purposes. The report also mentions that the Eurasians and Europeans in Kozhikode were using this water, and in accordance with an earlier chemical analysis of the Mananchira water, it has the same quality as the water the British use in Madras and Bombay. The report concludes by recommending that the municipality should pay rupees 500 to study on his Mananchira plan and to start this plan during the 1895-1896 period.<sup>54</sup>

Like the conservancy, water supply and drainage were also important pillars of the sanitary policy of the government. A protected water supply and an efficient system of drainage were the most pressing needs of the municipalities and for the hastening of the efficient working of this, the sanitary engineering section was strengthened with the appointment of two deputy sanitary engineers and four assistant engineers working under the chief sanitary engineer.<sup>55</sup> The drains were cleaned using the crude and kerosene oil<sup>56</sup> and in a letter by the municipal health officer to the municipal council, he was asking the council to permit him to purchase twelve gallons of crude oil and twelve gallons of kerosene oil for the cleaning of the drains in Calicut. He was also asking for the issue of funds needed for the matter in his letter to the municipal council.<sup>57</sup> The drains in Calicut were mentioned as well maintained even though the drains would become filthy after the rains.<sup>58</sup>

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<sup>54</sup> Ibid., p.160.

<sup>55</sup> *Notes on Recent Sanitary Developments*, Op.Cit.

<sup>56</sup> Malabar District Gazette 1935, Regional Archives, Kozhikode.

<sup>57</sup> Ibid.

<sup>58</sup> Malabar District Gazette 1860, Regional Archives, Kozhikode.

The financing of the water supply and drainage schemes has often proved difficult. In many cases, the government availed a free grant of half the capital cost and lent the municipal council the other half at four percent, the amount being repayable with interest in twenty annual installments. The municipalities should find the finance through taxes. Revenue from taxes should be used to meet the annual working expenses and the charges necessary for the repayment of the loans. In exceptional cases, where towns could not afford even half the cost of a scheme, the government has occasionally made a grant of three-fourths of this cost or extended the period of repayment of the loan.<sup>59</sup>

The maintenance of the roads and their cleaning were also vested upon the municipality, and a progressive step linked with the same from the Calicut municipality can be seen in the following incident. The town had some roads exclusively used by the high caste Hindus only, and as it was not open for everyone irrespective of their caste status, the municipal council, in its meeting, decided not to undertake cleaning of the road by using their funds. It also prohibited the lighting of such roads by using municipal funds.<sup>60</sup>

As part of the Public health policies in India, several policies and decisions were introduced in connection with the curbing of epidemics. Introduction of vaccination, opening of hospitals and dispensaries, segregation huts for the infectious disease patients etc. were among the main steps taken. As a part and parcel of these public health measures, attention was given to drinking water facilities, waste management, toilets and disposal of excretory materials, drainage, etc. All these measures can be traced in the colonial Calicut as well.

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<sup>59</sup> *Notes on Recent Sanitary Developments*, Op.Cit.

<sup>60</sup> *Kerala Pathrika* January 1887, NNRP Files 1887, Tamil Nadu State Archives, Egmore.

According to Michel Foucault, medicine is a power knowledge that can be applied to both body and population, and it has disciplinary and controlling effects.<sup>61</sup> This controlling power of medicine as a power knowledge can be seen in Calicut when some water bodies were destroyed on health grounds by accusing them of the source of the spread of some contagious diseases. One such story is of a water body called *Kandamkulam* in a colonial city like Calicut which was destroyed by the authorities in the name of public health. Even if we try to give the administration a benefit of doubt on its intentions behind the filling up of that pond initially, a closer look into the situation will tell otherwise, as there was disparity in implementing the health laws like this. A clear cut distinction between the treatment of people according to their societal status can be seen in the case of *Kandamkulam*.

The Epidemic Diseases Act of 1897 gave the British government in India the power to segregate a person with an infectious disease to a segregation hut, to destroy the buildings, to inspect, and to destroy any property if the Public health governing bodies suspect of spreading the disease.<sup>62</sup> The act also provided the local municipal administration the power to destroy any water body if they suspected it as a source of the spread of epidemics. *Kandam kulam*, or *Kandam tank*, was a public water body in the Calicut town, and the main beneficiaries of this tank were the homeless town dwellers. Rickshaw drivers, beggars, prostitutes, scavengers, etc. were using this tank for bathing and washing purposes. The tank was later filled up with soil and made into a park due to a petition submitted by the residents of Thali ward in Calicut town in 1935. The petition was submitted to the municipal council which was the governing body of the Calicut town. Thali area was inhabited by the affluent caste group like

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<sup>61</sup> David Macey (trans.), *Society Must be Defended*, Penquin Books, London, 2003, p.243.

<sup>62</sup> David Arnold, 'Touching the Body: Perspectives on Indian Plague, 1860-1900' In Ranajit Guha (ed.), *Subaltern Studies V*, Oxford University Press, New Delhi, 1999 (1987), p.59.

Brahmins, and they had a private tank called *Thalikkulam*, which was under the ownership of Zamorin. The petition from the Thali residents accused Kandamkulam of being the most filthy water body in the town, and that was the main reason behind the spread of many contagions. They also made an offer of Three Thousand rupees towards the cost of destruction of the tank and recommended changing the spot to a recreational park. Without trying to discuss this matter with the people who are using this tank for their daily chores, the municipal council accepted the petition and made an estimated amount of 5695 rupees for the filling up of this tank and instructed the residents of Thali to pay the assured 3000 rupees in advance.<sup>63</sup> Even though the filling up of the tank was made by the municipal council, they did not speak about any other alternative solution for the people who were actually using that water for their daily needs. The decision to fill up the tank made arouse agitation against the municipal authorities under the leadership of a congress worker, Koran, and hence he was later known as Kandamkulam Koran. This incident got a passing remark in the popular literature.<sup>64</sup>

In this case we can see an injustice happened to the people with no other option to look for, and when the municipal council decided to fill up the tank, they were not given any other alternate option to the people who were dependent on Kandamkulam. As I mentioned earlier, the residents of Thali were mainly high-caste people, and the people using Kandamkulam were mainly the outcastes and lower castes. So when the residents of Thali were even ready to economically fund the municipal body for the destruction of this tank, a prejudiced caste animosity can be read between the lines. The inspection report of the Calicut municipality mentions that Calicut town was an

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<sup>63</sup> Malabar District Gazette 1935, Op. Cit.

<sup>64</sup> S K Pottekkatt, *Oru Theruvinte Katha* (Mal.), D C Books, Kottayam, 2016 (1960). p.149.

area having strong caste prejudices<sup>65</sup> and this caste hostility may also be the reason for the petition.

The main evidence of the hypocrisy of the residents of Thali ward is that they accused Kandamkulam as the main source of spread of contagious diseases due to its filthy condition, but at the same time the condition of their own tank, i.e. the Thali tank, not different in the matter of hygiene. The inspection report of the Deputy Sanitary Commissioner refers to the Thali tank as one of the extreme foul condition tanks in the town and asks the municipal council to take action. In reply to this, the municipal council mentions that according to Section 185 of the Municipal Act, it issued a notice to the owner to clean it. But the Zamorin failed to do so, and the municipal council itself cleaned the tank later.<sup>66</sup> Even though the Thali tank was a private one used only by the Brahmins, who were a small minority of the town population, the tank was not filled up and destroyed like Kandamkulam. It was cleaned using the municipal fund, but the same did not happen with the case of Kandamkulam, even though it was a public tank and there were many beneficiaries who were using this water body.

If the Public health policies were for the general good of the populace, it would have been the same for everyone, irrespective of any caste, economic well-being, societal status, etc. If the same law implementation is different for different strata of society, it shows indifference and inequality. In the case of Kandamkulam, the affected people were from the lowest strata of town dwellers, the municipal council implemented the Epidemic Diseases Act without fail and not used its financial position to issue the expense to clean the public tank but had the fund to fill up and

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<sup>65</sup> *Inspection Notes of the Calicut Municipality*, Local Self Government Department Files 1927, Regional Archives, Kozhikode.

<sup>66</sup> *Inspection Notes of Deputy Sanitary Commissioner*, Regional Archives, Kozhikode.

destroy it without giving any alternative option to the affected people. When the same situation was affecting the privileged section, the municipal council was ready to clean the private tank from their funds when the owner refused to clean. Kandamkulam in Calicut is an example of how the privileged section and the authorities tie up with each other and appropriate every law in their favour, but every time the suffering section is the underprivileged people.

The sanitary works like filling up of a tank under the pretext of causing epidemics were always conducted on the public health ground, and other important matters like vaccination also came under the steps through which an area can be free from the clutches of contagious diseases. Colonial administration in India always point the blame of epidemics on the insanitary and filthy conditions of Indian towns and villages, thus attributing the main reason for the introduction of sanitary reforms to preventing the spread of the epidemics.<sup>67</sup> The same attitude was emphasised by the Plague Committee of Bombay in 1897 that the insanitary and filthy condition was the main reason behind the birth and spread of epidemics.<sup>68</sup>

The same vigour in the introduction of sanitation to cope with the epidemics can be seen in the context of colonial Calicut also . In the case of vaccination, the collector had instructed all the thahsildars to help the vaccinators and provide them with the assistance they needed to efficiently work on the vaccination process of the general public.<sup>69</sup> In the working of the vaccination programme, the sanitary commissioner's report refers to the need to appoint more vaccinators, and the vaccination process was made a mandatory procedure to undergo in the 38 municipal

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<sup>67</sup> David Arnold, *Op.Cit.*, p.61.

<sup>68</sup> *Ibid.*

<sup>69</sup> Malabar District Gazette 1859, *Op. Cit.*

towns, and it was placed under the sanitary department.<sup>70</sup> Vaccination was compulsory in municipal areas especially, and the vaccine used for the vaccination purpose was produced in the King Institute at Quindy near Madras. A cold storage and refrigerating plant was installed there for preservation.<sup>71</sup> This King's Institute of Preventive Medicine was the centre of research work in the Madras presidency on matters connected with vaccination programmes. The institute also provided training for sanitary officers and vaccinators and also conducted experiments on the purification of water and sewage treatment.<sup>72</sup>

One of the aspects closely monitored by the regime was the mobility of the people, and it was also viewed as a threat to the public health as the Indian people and their bodies may be the carriers of many diseases.<sup>73</sup> Travellers were viewed as a threat to the general health of the population because of their mobility. Fairs and festivals were also viewed with caution because it led the people to concentrate in one particular area. We can see how some fairs and festivals were banned in colonial Calcutta on the grounds of conservancy.<sup>74</sup> It was feared that the journey of people to attend these fairs would cause the spread of diseases from one place to another. An easy way of preventing these diseases from spreading is to make people live in a stationary position. Fairs and festivals were viewed by the British administration as a reason behind the spread of many epidemics as it involved the overcrowding of a

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<sup>70</sup> Revenue Folded Files, Bundle Number 89, Serial Number 18, Sanitary Commissioner's Report 1890, Regional Archives, Kozhikode.

<sup>71</sup> *Notes on Recent Sanitary Developments*, Kerala State Revenue Reference Library, Thalassery.

<sup>72</sup> Ibid.

<sup>73</sup> Jasriya Yoosof U V, 'Epidemics and the City : A Study of Colonial Calicut' in, *Proceedings of the Indian History Congress*, 78<sup>th</sup> Session, Jadavpur University, Kolkata, 2017, p.557.

<sup>74</sup> Anindita Ghosh, *Claiming the City- Protest, Crime and Scandals in Colonial Calcutta C 1860-1920*, Oxford University Press, New Delhi, 2016, p.168.

specific region. The travelling of the devotees and their assembly at a particular place of worship for the participation in the fairs and festivals were closely monitored by the administration. In the Malabar district, Kottiyur temple had one such festival that witnessed the coming of devotees from various places, and a detailed report on the sanitary arrangements conducted during the festival can be seen. It elaborately discussed the matters such as the number of people attending the festival, general health of the population, water supply provisions, conservancy arrangements, epidemic prevalent during the time of the festival, stay of the devotees, and the sanitary arrangements of the devotees attended.<sup>75</sup> In a similar report made on the festival held in the year 1891, the acting Civil Surgeon of that time was entrusted with the sanitary provisions to be followed in the festival.<sup>76</sup>

The blame game of the colonial administration on the insanitary condition of the town area and its direct effect on the presence of recurrent diseases can be seen in the city of Calicut in the context of the spread of Cholera epidemic in the period between 1858 and 1859. However, the mobility of the people, the presence of travellers and troops etc. were not portrayed as the villains in the epidemic.<sup>77</sup> Even though the above mentioned people were exempted from the accusation of spreading the epidemic, the overcrowded residential areas of the fishermen community in the north of the town and the insanitary situation of the Mappilas were indirectly blamed as the reason for the spread of the cholera. They were the communities most badly affected by the cholera epidemic of the time.<sup>78</sup>

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<sup>75</sup> Revenue Folded Files, Bundle Number 70, Serial Number 29, 1891, Regional Archives, Kozhikode.

<sup>76</sup> Revenue Folded Files, Bundle Number 70, Serial Number 65, 1891, Regional Archives, Kozhikode.

<sup>77</sup> Malabar District Gazette 1860, Op. Cit.

<sup>78</sup> Ibid.

Another important measure in the period of cholera epidemic in colonial Calicut is that the introduction of public cemeteries in the town. 1858 and 1890 saw the cholera outbreak in Calicut, and cholera epidemic and the higher number of mortality led to the construction of Kannamparambu and the West Hill cemeteries.<sup>79</sup>The British administration thought about public cemeteries after the outbreak of cholera epidemic, and a portion of land in Kannamparambu was allotted for the Muslim community. Later, the adjacent land was also provided to the communities like Christians, Bohra Muslims, and Parsis. The last community that got a fraction of the land for burial purposes was the Hindus. As the Hindu population believed in the burning of the dead bodies, the administration exempted them in the early years of the Kannamparambu cemetery. It was believed that, because of the burning custom, the spreading of cholera does not occur in the case of Hindu population.<sup>80</sup>

Affected by the cholera outbreak of 1858 in Calicut, many people died, and the then magistrate of Malabar wrote a report after studying the epidemic situation. He made the remarks that the mappila settlements, situated in the north of the town, is the most affected area, and the maximum number of deaths is also among the Mappila community. The thickly populated residential area, the filthy and insanitary situation that arises due to this close-knit habitation setup, and the burial of so many dead bodies in a small and limited space of the town mosque were highlighted by Robinson in his report as the reasons for the gravity of the cholera situation in the Mappila areas. He advised to stop the burial of dead bodies in the town mosque and suggested the government to legally ban the burial there. The government should also find a suitable place to construct a cemetery and should also erect the surrounding

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<sup>79</sup> T B Seluraj, *Op. Cit.*, p.145.

<sup>80</sup> *Ibid.*, p.146.

walls. The report also asked to find a burial ground for the Hindu community of the town. Although the Hindu community was practicing the burning, the corpses of small children were used to be buried, thus creating a concern regarding the spread of diseases. Thus the government found Kannamparambu as the public cemetery for the Muslims of Calicut city. But the cemetery was not used extensively when the cholera situation changed. The cemetery once again came to the forefront of the municipal discourse after the cholera epidemic of 1890-1891. When the space limit of the town mosques was clearly visible during this time, the municipal council banned the burial of dead bodies there and issued a notification regarding a hundred rupee fine if anybody violated this order. Kannamparambu should be solely used for the burial purpose, as the burial done in the town mosques was causing serious repercussions in the cholera scene.<sup>81</sup>“Burning or burial of the dead bodies inside the municipality were strictly monitored in the later years also. No person was allowed to cremate or bury the dead in their house property. Some relaxations were given in accordance with religious, caste, and family sentiments. Many municipal council meeting’s minutes had the petition from different town dwellers asking for permission to cremate or bury their loved ones’ dead bodies in their house premises apart from the public cemeteries.”<sup>82</sup>One such petition from Mr. Kunhambu can be seen asking for permission to cremate a dead body in his private land. The petition was submitted on 26 march 1935, and he was given permission to do so.<sup>83</sup>

There were so many considerations while selecting land for the purpose of making it a public cemetery. While going through the inspection of Calicut municipality by the sanitary commissioner, he found some objections regarding the

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<sup>81</sup> Ibid., pp.141-144.

<sup>82</sup> Jasriya Yoosof U V, ‘Epidemics and the City : A Study of Colonial Calicut’, Op. Cit., p.552.

<sup>83</sup> Malabar District Gazette 1935, Op. Cit.

site of some of the public cemeteries in Calicut. He asked to find alternate places for the shift of these objectionable burning and burial grounds during his visit in 1892.<sup>84</sup>The rules and regulations regarding the site of the burning and burial ground suggested that it should not be nearer to a drinking water source and human habitations. The area must be a distant land from the inhabited areas and a well-drained one, even though the drainage should not have direct access to any water bodies, which is a source of drinking water. The land must not be marshy or moist; rather, should be a dry one.<sup>85</sup>

During the outbreak of cholera in the year 1891 in Calicut, there were recommendations put forward by the Sanitary Board on the better working of the District and Medical Sanitary Officers and asking the municipalities for the efficient utilisation of their services without fail. The most significant duty prescribed for the municipal council during the times of cholera was the extreme cleanliness practices to be followed in the urban areas under their jurisdiction. The removal of waste materials from towns in prompt action was also instructed.<sup>86</sup>It also instructed for the day-to-day upkeep of town premises by the work of sweepers and scavengers by maintaining good hygienic condition of dustbins, cess pools, drainages, and the public and private latrines. Waste matters accumulated in the town area must be cleaned and transferred to places outside of the town. All the above areas, such as latrines, drains, etc. should be disinfected properly. Water supply and the sources of drinking water should be given utmost significance and must be examined periodically without any fail to check for any contamination.

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<sup>84</sup> Revenue Folded Files, Serial Number 13, Inspection Report of Sanitary Commissioner 1892, Regional Archives, Kozhikode.

<sup>85</sup> Ibid.

<sup>86</sup> Revenue Folded Files, Serial Number. 27, 1891, Regional Archives, Kozhikode.

The sanitary Board also recommended to immediately isolate the infected person from mingling with the people around and made it compulsory for every municipality to have a separate and exclusive hospital to treat the patients of epidemic diseases.<sup>87</sup> There were also isolation huts in every town for the cholera patients, and male and female patients were staying in different huts. The medical subordinate in the municipal hospital was in charge of these huts and was given funds for the maintenance. He had the necessary equipment and subordinate staffs under him. Every municipality should accommodate these funds under the title of a cholera reserve.<sup>88</sup> The sum allotted for the cholera reserve was rupees 1000 to every 25000 residents of a municipality.<sup>89</sup> The local *adhikaris* were asked to ensure the proper maintenance of the epidemic registers for cholera, plague, smallpox and other kinds of fevers. These registers should be submitted to the Taluk offices and Deputy Tahsildar's offices every month for checking. The epidemic register along with the birth and death registers was submitted monthly.<sup>90</sup> A manual for the birth and death registrar was also published by the government, which gave detailed descriptions regarding the symptoms of many diseases such as cholera, dysentery, diarrhea, measles, chickenpox, smallpox, plague etc. This manual was to help them identify the disease from the symptoms visible in a patient and thereby take them to the confinement at the earliest before it spread to any other person.<sup>91</sup>

The medical discoveries happened in Britain, especially in the field of Bacteriology and other such branches of science, which was the base through which

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<sup>87</sup> Ibid.

<sup>88</sup> File No. M/88, Madras Municipal Manual, Regional Archives, Kozhikode.

<sup>89</sup> Ibid.

<sup>90</sup> Collectors Standing Orders of the Malabar District, Kerala State Revenue Reference Library, Thalassery.

<sup>91</sup> *A Manual for the Birth and Death Registrar*, Kerala State Revenue Reference Library, Thalassery.

disease prevention methods and sanitary works were carried out in colonial India also. “Entomological<sup>92</sup>discoveries indicated that a disease was not contagious while bacteriologists attributed the spread of disease to transfer by contact, the two studies still calling for quarantine regulations for the prevention of the spread of diseases.”<sup>93</sup>This was the theory behind the asking for separate and exclusive epidemic hospitals in Calicut also by the Sanitary Board. “The medical profession and bodies connected with public health in cities in Britain had laid down the axiom that it was a mistake to admit patients with contagious diseases to general hospitals.”<sup>94</sup>Thus it was mandatory to have an isolation kind of setup called epidemic hospitals to accommodate the physical bodies of these infected people, which was a jeopardy for the general health of the uninfected population. These epidemic hospitals “offered better opportunities for isolation, observation, and control.”<sup>95</sup>

The most recurrent epidemic diseases in the Calicut city were cholera, smallpox, fevers, dysentery, diarrhoea<sup>96</sup>and in the year 1891, Calicut was at the top position in the mortality rate due to smallpox among all the other municipalities in the Madras presidency. With regards to this high mortality due to the smallpox, the sanitary commissioner in his report, attributed that the unsatisfactory way through which the vaccination programme carried out by the Calicut municipality was the reason behind this high mortality rate. The sanitary commissioner also directed the

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<sup>92</sup> Entomology is the branch of Zoology which studies about insects.

<sup>93</sup> Poonam Bala, *Imperialism and Medicine in Bengal A Socio- Historical Perspective*, Sage Publications, New Delhi, 1991, p.95.

<sup>94</sup> Mridula Ramanna, *Western Medicine and Public Health in Colonial Bombay 1845- 1895*, Orient Longman, New Delhi, 2002, p.79.

<sup>95</sup> David Arnold, Op.Cit., p.61.

<sup>96</sup> Revenue Folded Files, Serial Number. 57, Sanitary Engineer’s and Sanitary Commissioner’s Report 1891, Regional Archives, Kozhikode.

municipal council to draw attention on the vaccination drive more rigorously by understanding the seriousness of the issue.<sup>97</sup>

Apart from the civil dispensary, leper and smallpox hospitals, other contagious diseases hospitals were also present in Calicut. During an outbreak of a contagious disease, a medical subordinate from the municipal hospital was given the duty to check the spread of the epidemic, and he was instructed to conduct direct visits to the affected areas and to inquire upon the precautionary measures adopted there, like general sanitation.<sup>98</sup>The recurrent epidemics which created havoc in the Calicut city were Leprosy, cholera, and smallpox. This led to the opening up of the epidemic disease hospitals and isolation huts, because the people affected from smallpox were died in the streets. When they were suffering due to the disease, they were not admitted to the civil dispensary due to the contagious nature of their disease. It was very difficult to find staffs in these hospitals, as is evident from a letter from the Malabar Magistrate, C Grant, to the secretary of government. The letter by him was asking for a hike in the salary of the staff in the epidemic hospitals in Calicut, as he was afraid that if the salary is unsatisfactory, it would be very difficult to employ the staff from Calicut in these establishments.<sup>99</sup>The exclusive hospitals for these diseases were viewed by the native population as a torture setup where they were forced to live away from their respective families.

Isolation hospitals for the patients were there, and a complete lockdown for the prevention of the disease was witnessed by every one of us. Lockdown in the outbreak was also there in the colonial history of Calicut, as there were instances of

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<sup>97</sup> Ibid.

<sup>98</sup> Revenue Folded Files, Bundle Number 89, Serial Number. 29, Sanitary Engineer's and Sanitary Commissioner's Report 1891-1892, Regional Archives, Kozhikode.

<sup>99</sup> T B Seluraj, *Kozhikodinte Paithrukam* (Mal.), Mathrubhumi Books, Kozhikode, 2011, pp. 48-50.

the closing of markets like places. It was done on the grounds of public health measures adopted for curbing the spread of contagious diseases. When a smallpox was erupted in Calicut, markets were closed, and a merchant in the market, in his petition, asked the municipal council for a reduction in his rent amount as he was unable to do the business during the time when the market was closed.<sup>100</sup> The state always tries to control the population when an emergency like the spread of a contagious disease happens. The recent case of Covid is a testament to it, but the difference in the time of Covid times with the colonial period is that the racial undertone of the policies adopted during the colonial period. The treatment and facilities were not the same for every population. The western antipathy and prejudice towards the people can be evident in various instances of the policy formation, which was aimed at curbing of the spread of epidemics.

The day-to-day life of the resident of a town was in the hands of the state when their body was showing the symptoms of any disease. They were then regarded as a threat to the people who were not affected by the disease yet and were forced to segregate themselves from their loved ones and homes, then placed under a new system which was the epidemic disease hospitals. The medical and sanitary staff of the state design their lives after this, and elaborate municipal laws and sanitary rules aid and assist this process.<sup>101</sup> Disciplinary and the regulatory effect of public health are visible in this context highlighted in the Foucaultian analogy, which examined public health in the wake of power through which the state tries to control the subjects. As far as Foucault is concerned, “the struggle against disease must begin with a war against a bad government, and man will be totally and definitely cured only if he is

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<sup>100</sup> Malabar District Gazette 1935, Op. Cit.

<sup>101</sup> Sumanta Banerjee, *The Wicked City- Crime and Punishment in Colonial Calcutta*, Orient Blackswan, New Delhi, 2009, p.109.

first liberated.”<sup>102</sup>As far as he is concerned, hospitals and jails work on the same principles, as both of them are the two power machineries of the state to subjugate the subjects. Thus the innate nature of these institutions is disciplinary, regulatory, and controlling, and he calls medicine “bio-politics or bio-power, and its first knowledge and the target it seeks to control is the birth rate, mortality rate, etc.”<sup>103</sup>

Mark Harrison and Biswamoy pati, in their work on the colonial medical and health history of India, discuss that the majority of the studies in this context always considered and analysed the country as an isolated region, but the major breakthrough in many of the colonial interventions of the country was due to external pressure.<sup>104</sup>Mark Harrison studied how the epidemic situation due to cholera and plague affected the Haj pilgrimage from India, and the quarantine restrictions put up by the international scene were also detrimental to the economic and trade projects of imperial powers in India, and he draws a parallel between these instances and the sanitary regulations of the empire.<sup>105</sup>here a new view point behind the interest of the colonial administration to provide sanitary reforms can be seen. The earlier versions mentioned about the fear of epidemics and the inherent antipathy towards Indian way of living as the reason behind the introduction of the sanitary reforms in the urban spaces.

Some were of the opinion that the sanitary reform was part of a reformist state like what they did in Britain. Even though this new view point was completely

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<sup>102</sup> A M Sheridan (Tran.), *Michel Foucault The Birth of the Clinic- An Archaeology of Medical Perception*, Routledge, London, 1989 (1973), p. 33.

<sup>103</sup> David Macey (trans.), *Op. Cit.*, p. 243.

<sup>104</sup> Mark Harrison and Biswamoy Pati, ‘Social History of Health and Medicine: Colonial India’ in, Mark Harrison and Biswamoy Pati (Ed.), *The Social History of Health and Medicine in Colonial India*, Routledge, Oxon, 2009, p. 2.

<sup>105</sup> Sanchari Dutta, ‘Plaque, Quarantine and Empire British-Indian Sanitary Strategies in Central Asia’ in, Mark Harrison and Biswamoy Pati (Ed.), *The Social History of Health and Medicine in Colonial India*, Routledge, Oxon, 2009, p. 74.

contradictory with all the previous theories. In the context of Calicut also, as the city witnessed the outbreak of many epidemics in its course of the journey, it saw restrictions of a similar kind. Several petitions to the Malabar district collector were there regarding their inability to travel for Haj pilgrimage as the ships from India were restricted to travel to different countries due to the fear of diseases. An international ban on the ships from Indian ports during the plague outbreak was preventing the people from going to Haj.<sup>106</sup>

The 'external pressure', the term used in the work, *Social History of Health and Medicine in Colonial India*, can also be the rules and regulations put forward by the International Sanitary Conference of 1866 held in Constantinople. As Britain was also a member in this, they were obligated to obey and practice different provisions put forward by the conference on matters related to the prevention and quarantine to be followed during an epidemic, the rules and regulations to be followed in the ships and ports etc. The conference also asked for the issue and maintenance of a Bill of Health by the port authorities, which include every minute details regarding the region of departure, the health, and other situations like the presence of epidemics there and the health statistics of the crew etc. which would help the port of arrival in understanding and taking precautions to control the spread of diseases. In extreme conditions, countries banned the coming and going of ships from their ports to disease affected regions and vice versa.<sup>107</sup> In the context of Malabar also, notice regarding the issue of the Bill of Health can be seen as the British administration was forced to accept the provisions of the sanitary conference in order to safeguard the mercantile interests of the firm. Notice says that the port surgeon should issue the above-mentioned Bill of Health to the ship officials, and the same is needed to embark on any port of the

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<sup>106</sup> T B Seluraj, *Kozhikodinte Paithrukam* (Mal.), Op. Cit., pp. 186-187.

<sup>107</sup> File No. S/3, Proceedings of the International Sanitary Conference, Regional Archives, Kozhikode.

Madras presidency, and the bill would certify that the port and the adjacent areas are free from contagious diseases and the crew of the ship and passengers are in good and sound health conditions.<sup>108</sup>

Calicut under the colonial regime saw many sanitary provisions and rules in the urban milieu like any other colonial city of the same period. The activities and works in the field of medical institutions like dispensaries and exclusive epidemic hospitals also came under the sanitary work. The municipal council was the fund-allotting body for the upkeep of the town area, and sanitation was one of the most important responsibilities of the council. Vaccination, drainage construction and maintenance, cemeteries, conservancy of the city, scavenging, and drinking water supply were all part of the sanitary activities to be undertaken by the municipality. The main aim or objective of the sanitary policies adopted in the city space was to prevent the origin and spread of contagious diseases, and in the sanitary history of colonial Calicut also, such kinds of activities are visible.

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<sup>108</sup> Malabar District Gazette 1869, Regional Archives, Kozhikode.

## CONCLUSION

Public health policies adopted by the colonial regime in India and its cultural and sociological impact on the native population got the attention of the historians in recent times. Introduction of the western medical practices in India can be attributed as a byproduct of colonialism in India, and from the colonial perspective, public health did not implicate just the treatment of disease. Apart from the treatment of illness, it also included many other aspects such as sanitation, preventive medicine etc. We can see the traces of sanitation measures undertaken in the colonial urban spaces in the works that dealt with the history of the recreation of public health in colonial India. Health measures introduced during the early British period were mainly focused on the health care of the British officials in India, as the growing number of deaths became a serious concern among them in their early years of administration. The colonial administration in India predominantly worked with vested interests and never considered the people of the colony as equal to them. Like any other legislation and works of the colonial state, the municipal and health-related legislations passed during that time were mostly influenced by the racial antipathy.

The present study is an analysis of the history of sanitation in the urban spaces of the colonial city of Calicut in the context of the above-mentioned scenario. The early part of the thesis discusses how a colonial urban space was constructed and what were the characteristic features of a colonial urban city. The demarcation between an indigenous settlement of people and the European counterpart was very visible while planning a colonial urban space. The British residential areas had a clear cut isolation from the natives, and the main cause for this fear of natives was the diseases. The physical bodies of Indians were viewed as breeding grounds for many diseases, so to

protect them from the unhygienic natives, the colonizers chose distance and isolation. However, when we try to understand the situation of the metropolitan cities like London of the same period, the situation was not a bed of roses. Like the colonial Indian cities, the living conditions before the sanitary reforms were also the same, as pointed out by Thomas R. Metcalf in his *Ideologies of the Raj*. Before the sanitary reforms of Edwin Chadwick, the streets of Britain were insanitary due to the urban agglomeration. In India, the insanitary condition of the urban spaces were viewed by the administration with the lens of racial supremacy and considered the natives as mere filth, and the unhygienic living conditions were attributed to their inherent nature. Whereas in Britain, the unhygienic living conditions of the people were viewed as the result of their poverty and helplessness. The reformist activities to improve their living conditions also stemmed from the welfare of the people promised by the government. Whereas the Indian scene with regard to this matter was the exact opposite, as the aspect of hygiene and sanitation was on the ground of saving the British officials stationed here, and even the thoughts of a welfare state were out of the focus.

The history of health and sanitation in the city of Calicut during the colonial rule shares similar experiences with those of the other parts of colonial India. Calicut had its significance as a city even before the arrival of the European powers as one of the prominent port cities of the world. Indeed, European powers who came to Calicut before the British actually failed to alter the medieval city structure. However, the advent of the British in Calicut marked a complete makeover of the city structure as it transformed it to a whole new face and eventually paved the way for the making of a colonial city. This change in the urban space had its own colonial features, such as cantonment, civil station, etc. One of the key features of a colonial urban space was the specific areas of European presence called the 'white town' and the assigned place for the native population called the black town. This gave a dual characteristic to the

urban spaces within the city itself. Unlike the other colonial cities of the contemporary period, a clear cut demarcation of a white and black town is not visible in Calicut. The city space was an agglomeration of Europeans and natives in the central administrative regions, even though a superior and inferior hierarchy among them was still present there. The exclusivity and isolation followed by the British in their selection of the residential settlement areas, away from the natives which was a prominent characteristic of the colonial cities can also be seen in Calicut.

Hills were considered the safest place for the residence, and in Calicut also, the British followed the same. Important buildings like railway station, telegraph office, town hall, hospitals, dispensaries, schools, churches, government offices, etc., the part and parcel of the colonial administration, were visible in Calicut. Hotels, clubs, and parks were the places of rejuvenation and used for entertainment for the colonial masters. The introduction of new roads and railways increased the accessibility of Calicut from different regions. New industrial structures and the introduction of electricity were other important factors that contributed to the growth of this city space in its full glory.

Calicut had a great significance as a colonial city during the period because it was the headquarter of the Malabar district and one of the important ports of the Madras presidency. Before the establishment of the Calicut municipality, the administration of the city was under the Local Boards and responsibilities such as schools, sanitation, medical institutions, and vaccination came under the Boards and were powered with the grant of funds to look after these activities in the towns. After the municipalities Act, administration of the town was vested with municipal councils, and the councils were responsible for maintaining hospitals and dispensaries, sanitation, water supply, burning and burial grounds, conservancy, etc. The Municipal Council was responsible for the day-to-day administration of Calicut city. The magistrate of the town also had some powers regarding sanitation, as he could advise

the municipal council to grant funds for the same and issue an order for the town population to maintain hygiene and sanitation.

Construction and maintenance of roads, lighting, water supply, vaccination, conservancy, scavenging, power to decide upon the destruction of any water body on the grounds of insanitary condition, etc. were the duties of the council. Every minute activity of the town had to come under the purview of the council, and the health and sanitary provisions were carried out on the basis of the orders and legislation approved by the colonial masters. The waste management in the urban space and the maintenance of the dumping grounds of the municipality were burning issues faced by the municipality. The removal of night soil from the town premises was one among such issues. Calicut municipality had a dumping ground near Puthiyara for the disposal of the night soil, as the local residents of the area protested against its presence, the municipality was forced to shift it to Njeliyanparambu, which is still a headache for the people of Calicut. The establishment of the new dumping ground had its origins in the colonial period. Scavengers who collected this night soil from buildings were a section of underprivileged residents of the town. Due to their job and the associated caste prejudices, they were subjected to inhumane treatment. The working hours were lengthy without any breaks, and the salary was bare minimal.

Like any other Indian city during those times, Calicut also witnessed the visit of the epidemic diseases periodically. The establishment of public cemeteries in Calicut was due to the recurrent phenomenon of epidemics. The areas inside the town were unable to accommodate the growing number of mortalities due to epidemics such as smallpox and cholera. The still prevalent Kannamparambu cemetery in Calicut was constructed during those times because of the area constraints faced by the town mosque. Some concessions were given to people on the basis of written petitions to cremate or bury their kin on their house premises on the grounds of religious sentiments.

The water of Mananchira, the tank in the heart of the city, was used by the city dwellers of the colonial period exactly similar to the present situation. Many studies were conducted by the authorities in this regard to find an alternate source of water body other than Mananchira to quench the thirst of Calicut city, even though nothing materialised because of the financial constraints of the municipality. Apart from the water supply, drainage, the upkeep of roads and their cleaning, maintenance of public latrines, and dustbins were also part of the sanitary activities. The decisions of the municipality associated with sanitation were found contradictory in several instances. Archival sources mention about a petition that requested the municipality to construct lights on a road adjacent to the Tali temple. Even though the road was a public municipal road, it was exclusively used by the high caste Hindu people, and the lower-caste city residents were not allowed to use the road strictly on the grounds of caste prejudices and hostility. The municipality took the revolutionary decision of not using its funds for that road and its maintenance until it was opened for all.

Another instance that contradicts this stance was when the municipality decided to cover up a public pond used by the downtrodden sections of the city by accepting a petition from the residents of the Tali ward. The petitioners were high-caste Hindus and of the opinion that the public pond was the breeding ground of several epidemics. Even though the pond was public, the municipality covered it up rather than seeking an alternate way to clean it. On another occasion, when the sanitary inspector warned about the deteriorating condition of the Tali tank, which is a private pond under the Zamorin, the municipality used its own funds for its cleaning. It was the duty of the owner to clean it using his own money as it was a private pond. These are some of the instances when the municipality followed contradictory positions. Such incidents show that the urban characteristics introduced in the Calicut city were unable to wipe out its caste prejudices, and some of the laws and regulations of sanitation were made use of by the high-caste people to materialize their own vested

interests and to maintain their dominance over downtrodden sections of the Calicut city. The petition submitted to cover the pond on the grounds of sanitation was one such incident.

The public health and sanitary laws that enabled the destruction of buildings, ponds, etc. and the forceful quarantine of an infected body, introduced during the colonial period, reminds us of the theory of Michael Foucault on the concept of medical knowledge as a power structure established by the state to control and discipline the life of the public. According to Foucault, the disciplinary effect of medicine as a tool of executing power can be used upon human bodies and populations. The mandatory quarantine-huts established during the outbreak of contagious diseases, admission in hospitals and dispensaries in sickness, etc. can be viewed with this theory as the restriction of the human body and its isolation from its natural habitat. The destruction of a water body on the grounds of sanitation and public health, like that of the earlier mentioned incident in colonial Calicut, can be attributed to the controlling effect of medicine as a tool of power on a population.

The major arguments put forward by prominent historians on the motive behind the introduction of sanitary and public health policies in the context of the city spaces in colonial India is as follows: The first and foremost argument is that the health and sanitary reforms were not part of any reformist state endeavour, and they were purely based on the protection of the European army stationed here. David Arnold is the most significant advocate of this theory, and in the experiences of colonial Calicut also, similar factors can be attributed to the introduction of sanitary reforms in urban spaces.

The fear of disease was one of the contributing factors that led to the cleaning up of streets. Unlike the other urban spaces of colonial India, Calicut lacked a clear-cut demarcating line between the white and black town. The British officials chose the hill areas of Calicut, such as the West and East Hill, for the residential purpose,

intending to create exclusivity and isolation from the native population, even though the central part of the city and the administrative offices situated in the present Mananchira square area were having contact with the native population. Thus the British needed the sanitary measures and the cleaning up of the streets and town areas for their own well being in the urban spaces of Calicut.

The second prominent viewpoint is the external pressure exerted by the international community on Britain to clean up the streets in India in the context of the recurring presence of the epidemics. This view was proposed by Mark Harrison, and according to him, Britain was a member country in the international sanitary conference held at Constantinople and she signed the provisions passed in the meeting. As the custodian of colonial India during that period, Britain was forced to adhere to it and introduce the necessary sanitary policies in India also. The conference was mainly concentrated on the prevention and following quarantine of epidemic diseases and to control their spread through ports. The proposed provision of the meeting also included the issue of an agreement called the Bill of Health by the port authorities, which would include all the details regarding the health condition of the crew and passengers of the ship, the epidemic situation of the region from where the ship was coming, etc. The conference also asked to perform a quarantine regulation if needed for the passengers and crew. After the completion of the prescribed quarantine period, only they will be permitted to enter the destination country. These regulations were a blow to the mercantile interest of the British, as the ships from India were banned by many countries due to the epidemic situation that existed here. Thus, for their own vested interest, the British administration in India actively tried to act accordingly. Harrison uses the records, which mention how the application for Hajj pilgrimage from Indians was rejected on the grounds of quarantine regulation proposed by the International Sanitary Conference. He is of the opinion that, if the Hajj pilgrimage ships from India were not allowed, the mercantile ships of the British

empire may also face the same fate. Thus, the cleaning up of cities and sanitary activities in India was a necessity for the British administration for their own good.

The above theory of Harrison can be applicable to Calicut also. The municipal council records of Calicut show several petitions from people asking for help in the removal of quarantine regulation so that they can go to Mecca. The epidemic situation in Calicut was against the provisions of the International Sanitary Conference, and thereby the ships were not allowed from the port. Trading ships also faced the same issues in times of epidemic diseases. The Bill of Health was a mandatory document for the departure from ports in the Madras presidency, as it is evident from the archival sources. The base or foundation of the British occupation of India, which was the trade activities, were jeopardized in this context of quarantine regulations of Indian ports due to the presence of many infectious diseases in the Indian cities. Thus the administration was forced to initiate and materialize sanitary activities in the urban spaces for their own selfish reasons of trade mobility and the lifting of quarantine restrictions put up on India by the international community.

Colonial Calicut witnessed several sanitary measures adopted in its municipal administration like any other contemporary colonial cities of India. Even though the city had its own similarities and contradictions in its sanitary history from the rest of colonial India, although the motive behind its introduction in the urban space by the British administration is similar in each of the regions. Unlike their mother country, the sanitary policy in colonial India was not rooted in the concept of a welfare state. The establishment of cemeteries, water supply, scavenging, drainage, lighting, and maintenance of roads, etc. were the main factors of the sanitary policy, and all these were closely connected with the day-to-day lives of the people inhabited in the urban space. Many provisions of the sanitary policy, like the monitoring of the mobility of the people and their participation in the fairs and festivals, were also used as a controlling mechanism by the state to control the population. In the long run, hygiene

and sanitation became one of the ideological tools of the state to control, subjugate, and oppress the colonized.

To conclude, the present study is an attempt to examine the growth of the colonial urban space of Calicut in the context of the British perspective of sanitation. The major limitation of the present study is the missing of native voices and their perspectives in the the British records, which is the significant source material used for the study. The indigenous view points and their experiences of the period are not represented thoroughly and archived, leaving it to the researcher to interpret the period through the limited data available. It may lead to errors or misinterpretations and also to an incomplete understanding of the social life of the urban population. The lives of the local residents of the urban space were recreated mainly through the news paper reports of the time and also through the archival records of their petitions submitted to the municipality. Similarly, the response of those who engaged in the the sanitary work in order to create a non-toxic urban space is under-represented in the study due to the same reason. Another important limitation is the missing link between health, hygiene, and sanitation in understanding the lives of the people of Kerala in the pre-colonial period, as the study focuses mainly on the colonial period. The sanitary provisions practiced in the pre-colonial urban centres of Kerala, especially of Calicut in this regard, are not mentioned.

The study opens up possibilities for further studies in the future, especially the urban environmental history of the city of Calicut. The environmental impact of urban growth such as the change in land use patterns, construction techniques and materials used, water bodies and their management, waste disposal mechanisms, etc. can be explored through such a study. There is also the possibility of an exclusive analysis of town life from the perspective of the history of medicine. As we have seen recurrent epidemic situations in the city that demanded new structures and buildings for its control, like the medical staff, and other offices for the implementation of the medical

policies, diseases and cures in the prevailing indigenous medical practices and its practitioners, and their conflict with the new western medical practices in an urban space also offers a space for further research.

## GLOSSARY

- Adhikari* - The head of the revenue unit, amsam
- Ambadi kovilakam* - Residential palace of the women members of the zamorin family
- Amsam* - Revenue administrative unit in a district
- Baboos* - A term used in the Bengali language to refer to a person or individual
- Bazars* - Market
- boat jetties* - A wide wooden or stone platform where boats stop to let people get on or off, or to load or unload goods.
- Chandalas* - Scavengers in ancient India
- Farakan* - Officer in charge of goods, its pricing etc. under the Zamorin
- Halalkhores* - Term used for scavengers in Bombay
- Kottapparambu* - Fort compound
- Kottaram parambu* - Palace compound
- Kovilakam* - Residential palace
- Krosa* - A land measuring unit used to be in the ancient period and according to *Arthasasthra*, *krosa* is about 3000 meters.
- Matilakam* - Fort

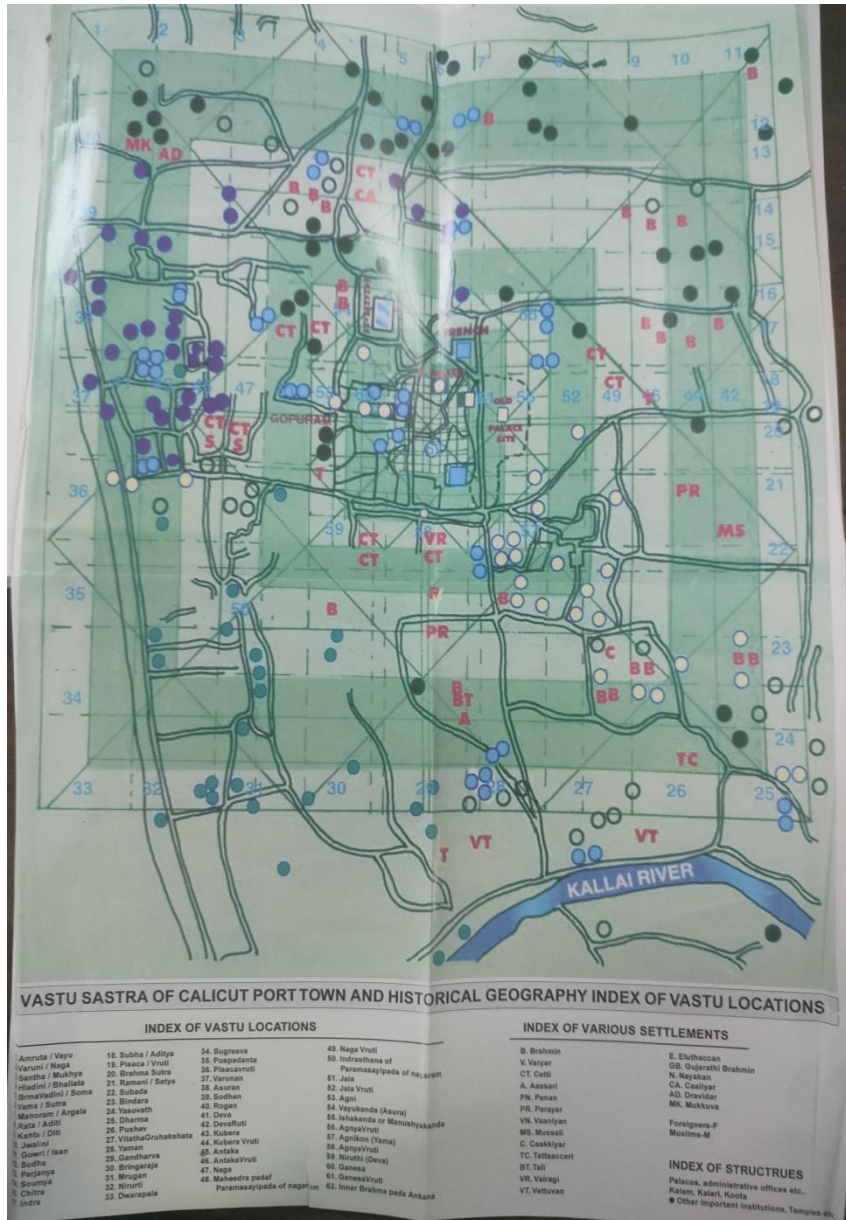
<i>Mayamata</i>	- An ancient Indian text on housing and architecture
<i>Miasma</i>	- Greek word for pollution
<i>Nala</i>	- Flowing sewer
<i>Padippura</i>	- Gateway
<i>Sala</i>	- Centre of vedic learning
<i>Shah bandar koya, or Kozhikode koya</i>	- Muslim officer appointed by the Zamorin to supervise the trade activities in the ports
Silpasasthra	- An ancient Indian text on architecture
<i>Silpins</i>	- Craftmen
<i>Thamburatti</i>	- Princess of the royal families of kerala
<i>Unniyachi charitham</i>	- Manipravalam text called Champu Kavya

# **APPENDICES**

# Appendix I

## MAPS

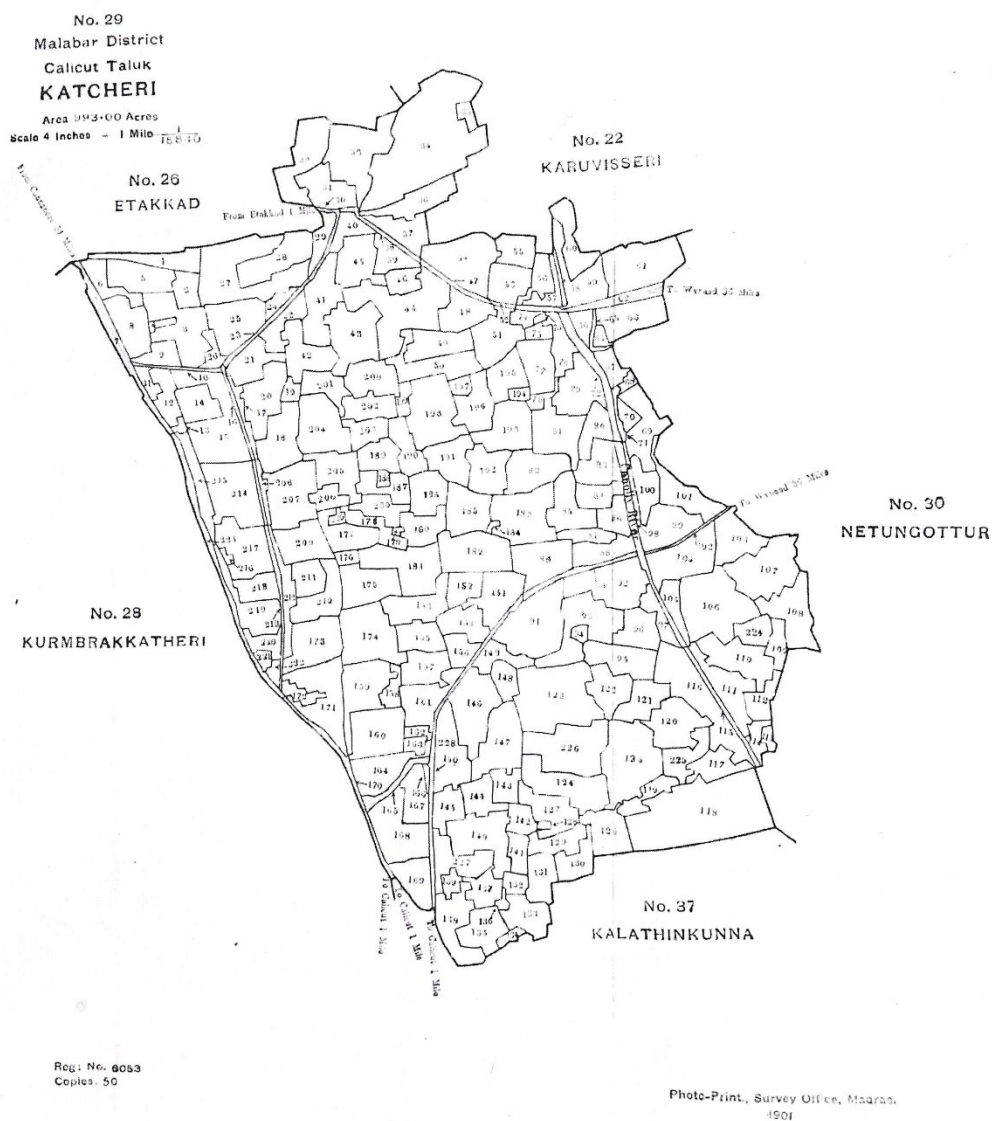
Map showing the design of the Calicut city according to the Vasthusastra



Source: Dr. N.M Nambootiri, Malabar Patanangal Samoothirnadu, State Institute of Languages, Thiruvananthapuram, 2008.

**Maps of the *Amsams* which were part of the Calicut city during the colonial period**

***Katcheri Amsom***

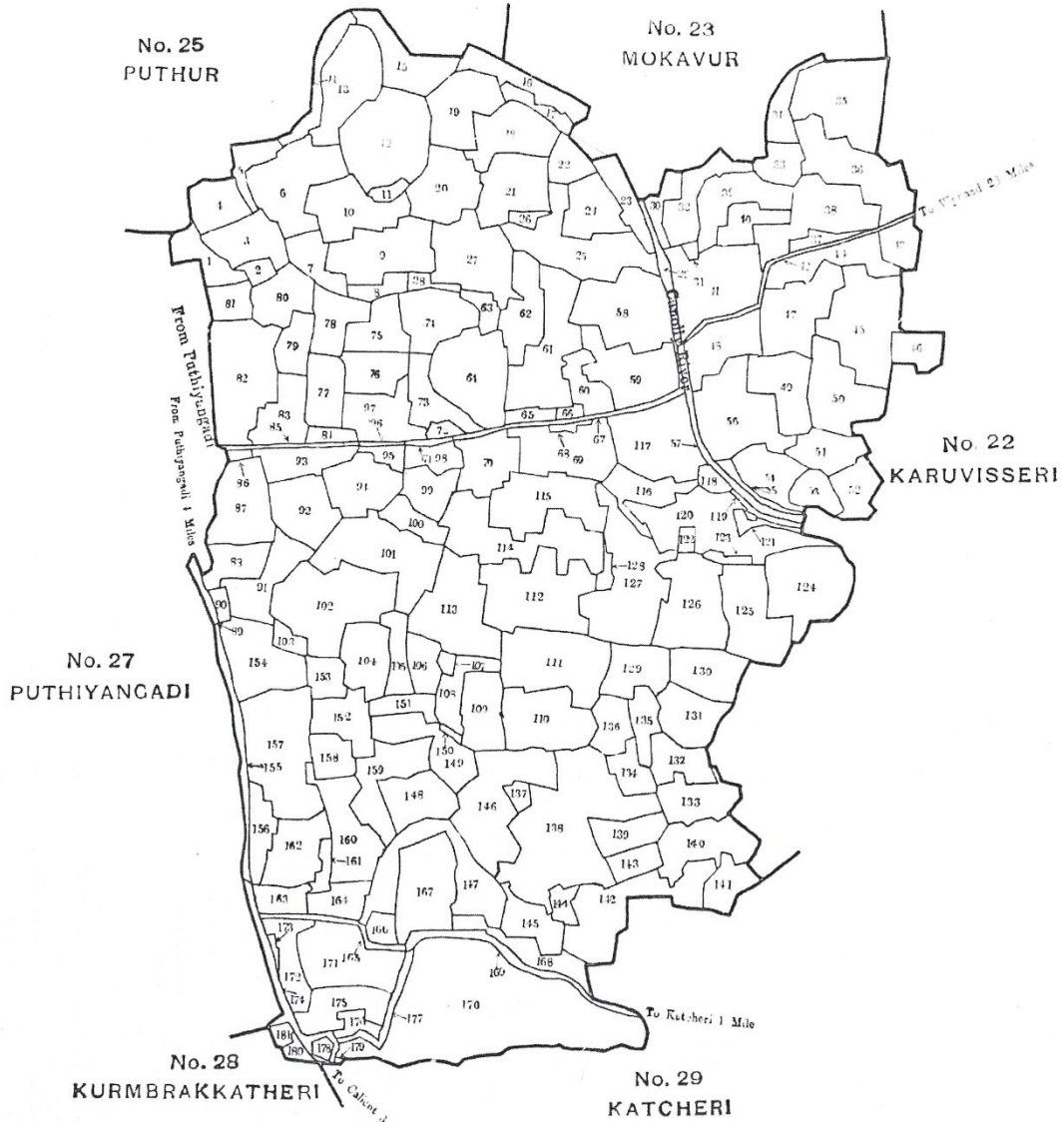


Source: Settlement Register (hereafter SR), Katcheri Amsam, No.29, Regional Archives (hereafter RA), Kozhikode.

**Etakkad Amsom**

No. 26  
Malabar District  
Calicut Taluk  
**ETAKKAD**

Area 939.94 Acres  
Scale 4 Inches = 1 Mile  $\frac{1}{15840}$



Reg: No. 6053  
Copies. 50

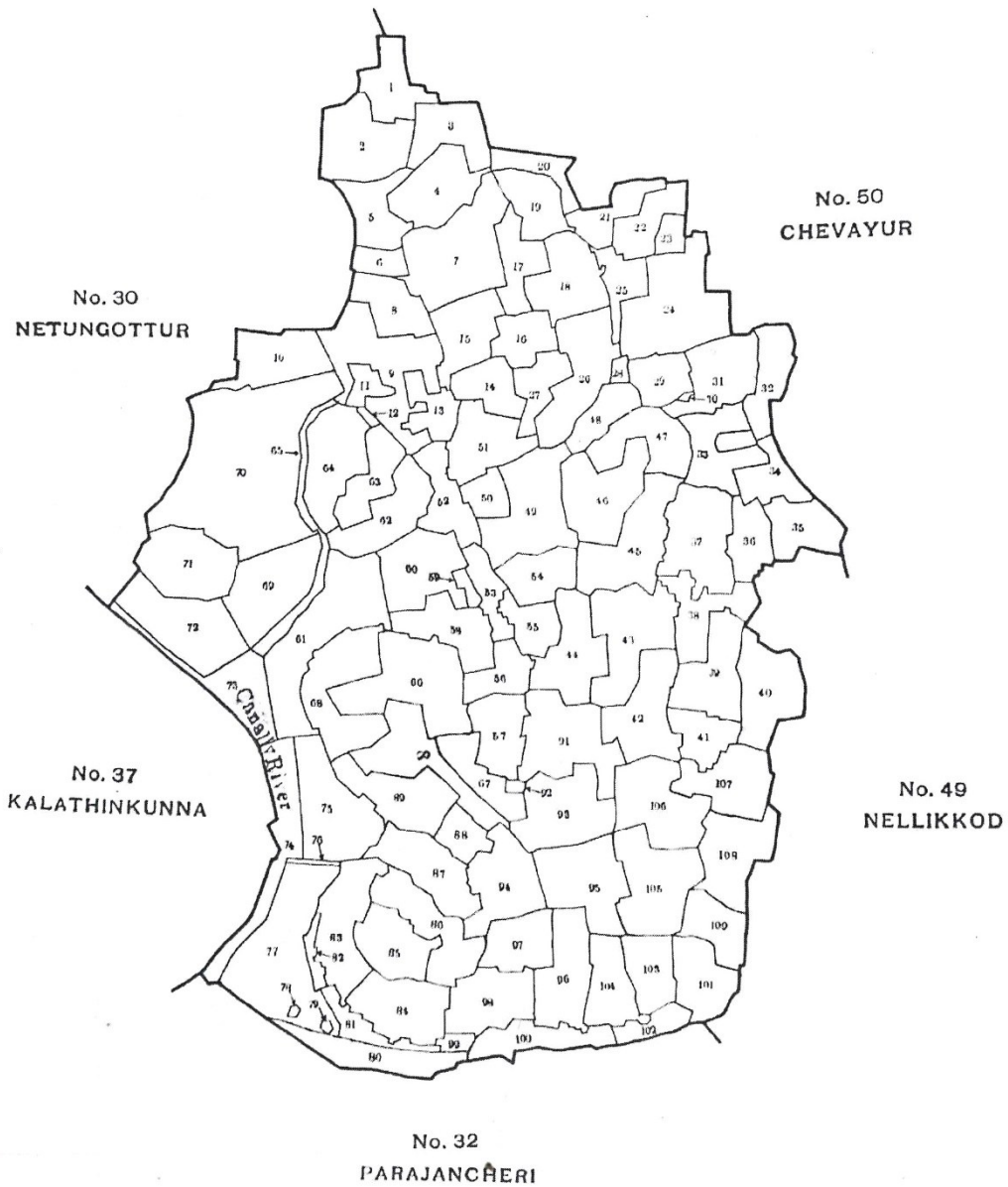
Photo-Print., Survey Office. Madras.  
1901

Source: SR, Etakkad Amsom, No. 26, RA, Kozhikode.

***Kottuli Amsom***

No. 31  
Malabar District  
Calicut Taluk  
**KOTTULI**

Area 866.08 Acres  
Scale 4 Inches = 1 Mile - 1846



Source: SR, Kottuli Amsam, No. 31, RA, Kozhikode

## Valayanad Amsom



Source: SR, Valayanad Amsom, No. 34, RA, Kozhikode

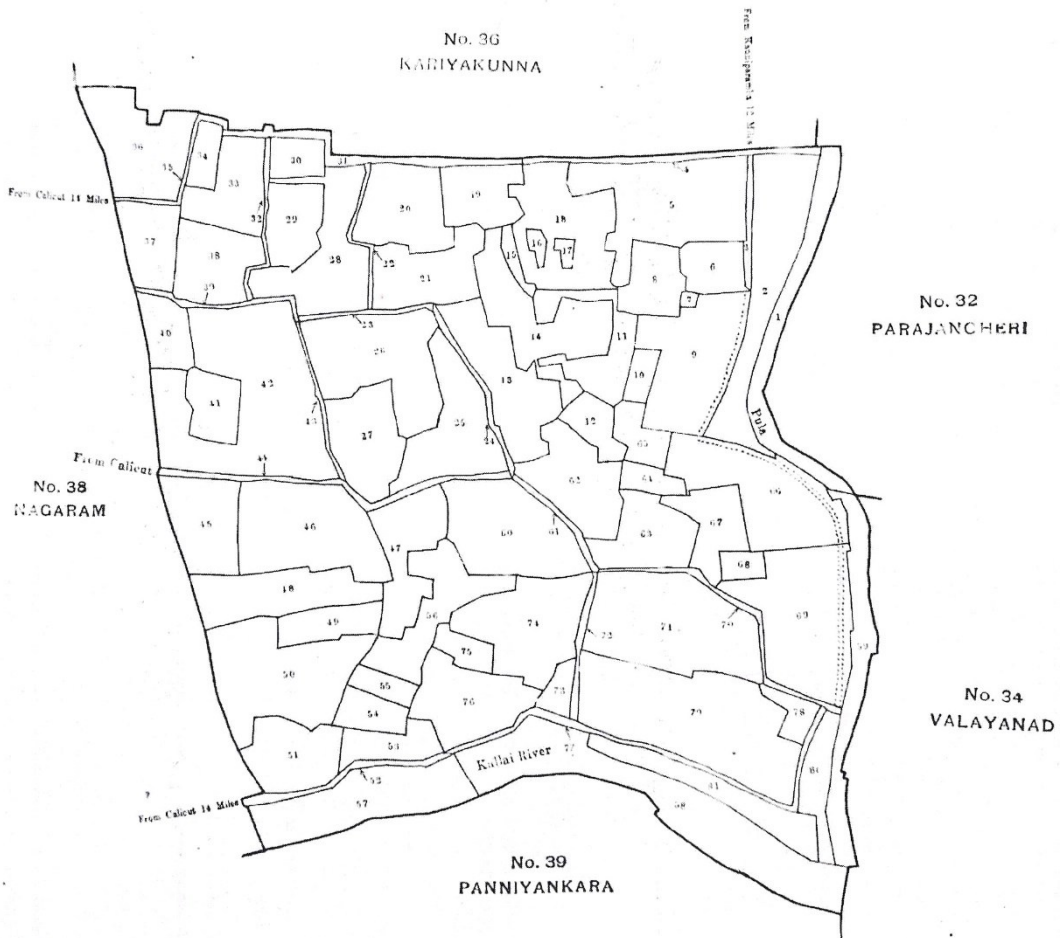
# Panniyankara Amsom



Source: SR, Panniyankara Amsom, No. 39, RA, Kozhikode

**Kasbah Amsom**

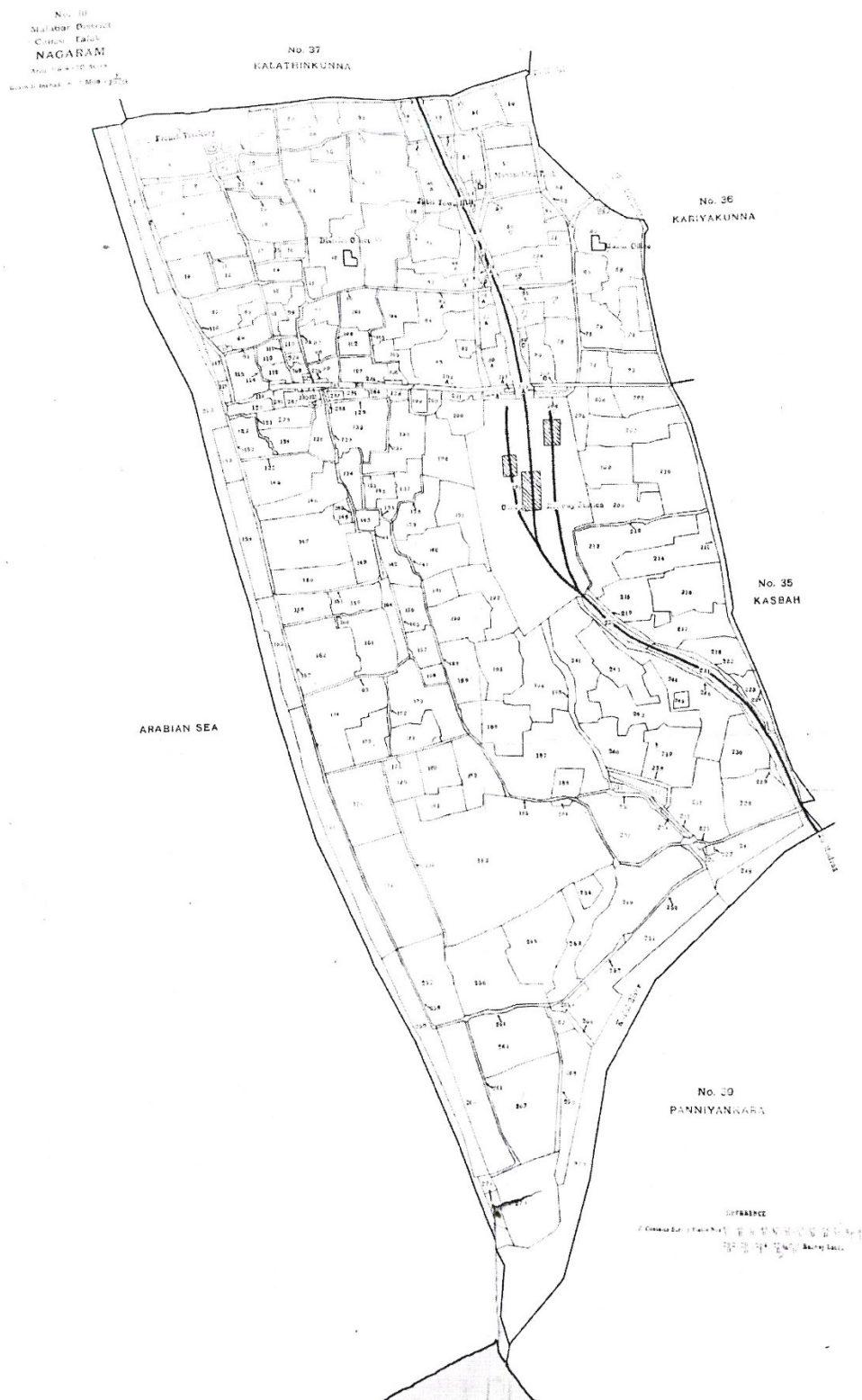
No. 35  
Malabar District  
Calicut Taluk  
**KASBAH**  
Area 276.37 Acres  
Scale 8 Inches = 1 Mile  $\frac{1}{7920}$



S. O. / Reg. No. 6053  
1801 Copies. 50

Source: SR, Kasbah Amsam, No. 35, RA, Kozhikode

**Map of Nagaram Amsam, the main centre of administration of colonial Calicut and included the major administrative buildings.**



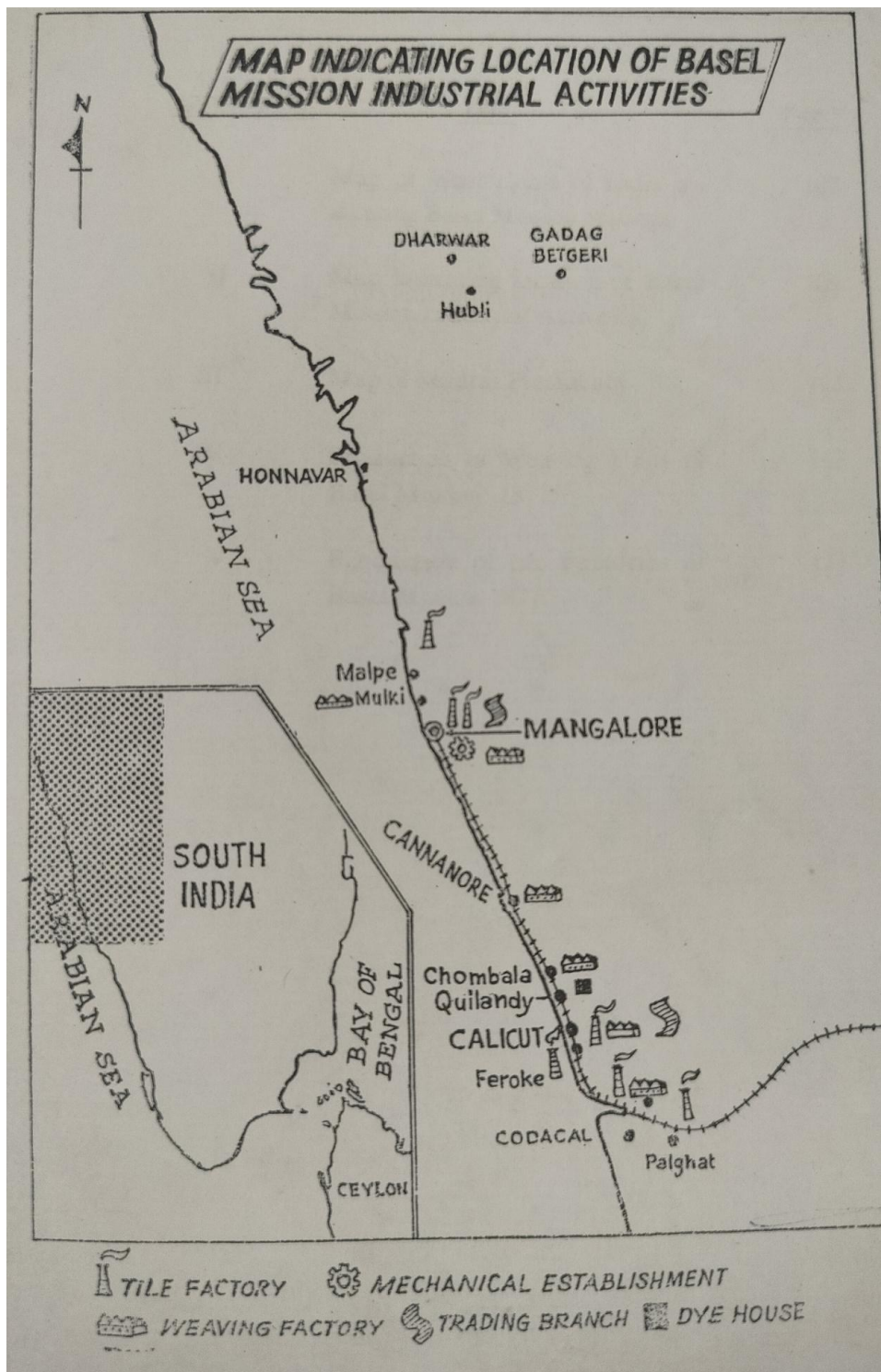
Source: SR, Nagaram Amsam, No. 38, RA, Kozhikode

## Present Map of the Nagaram region



Source: Nagaram Village Office, Kozhikode

**Map Indicating the Basel Mission Industries**



Source: Jaiprakash Raghaviah, *Basel Mission Industries in Malabar and South Canara (1834-1914) A Study of its Social and Economic Impact*, Gian Publishing House, New Delhi, 1990.

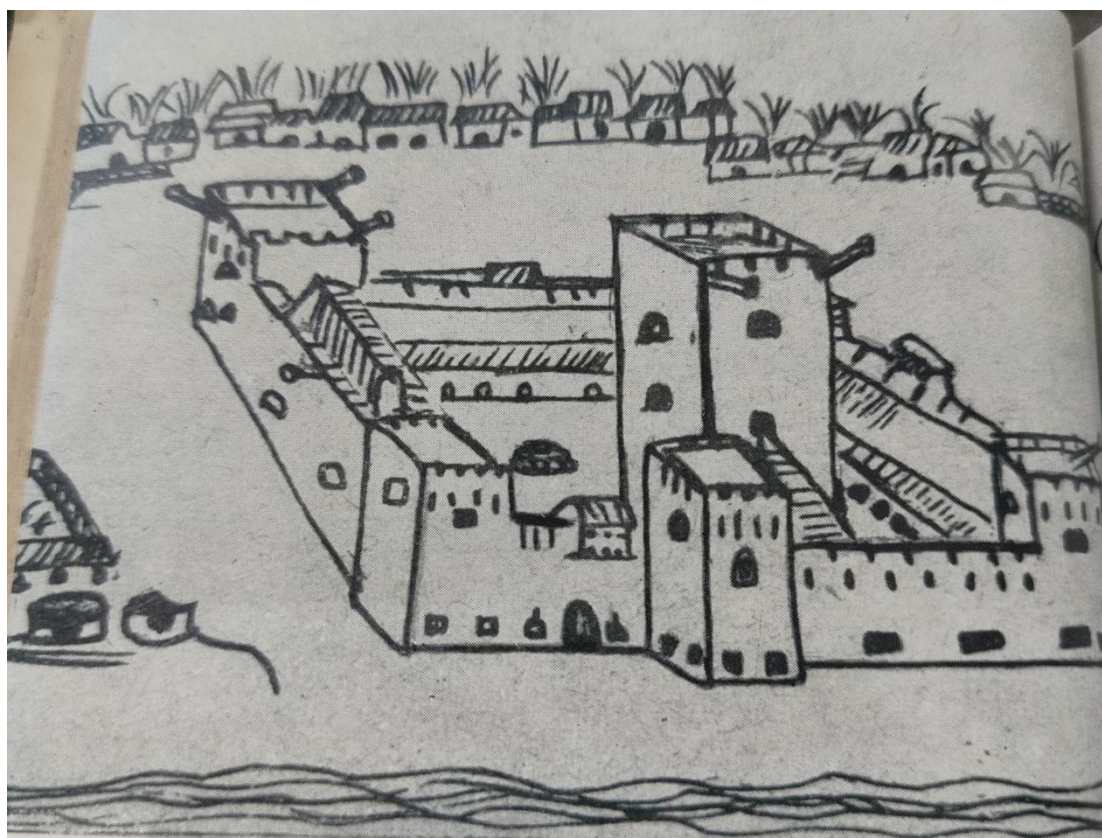


**Appendix II**  
**PHOTOGRAPHS**

**A 16<sup>th</sup> Century drawing of the view of Calicut from the sea by the Portuguese**

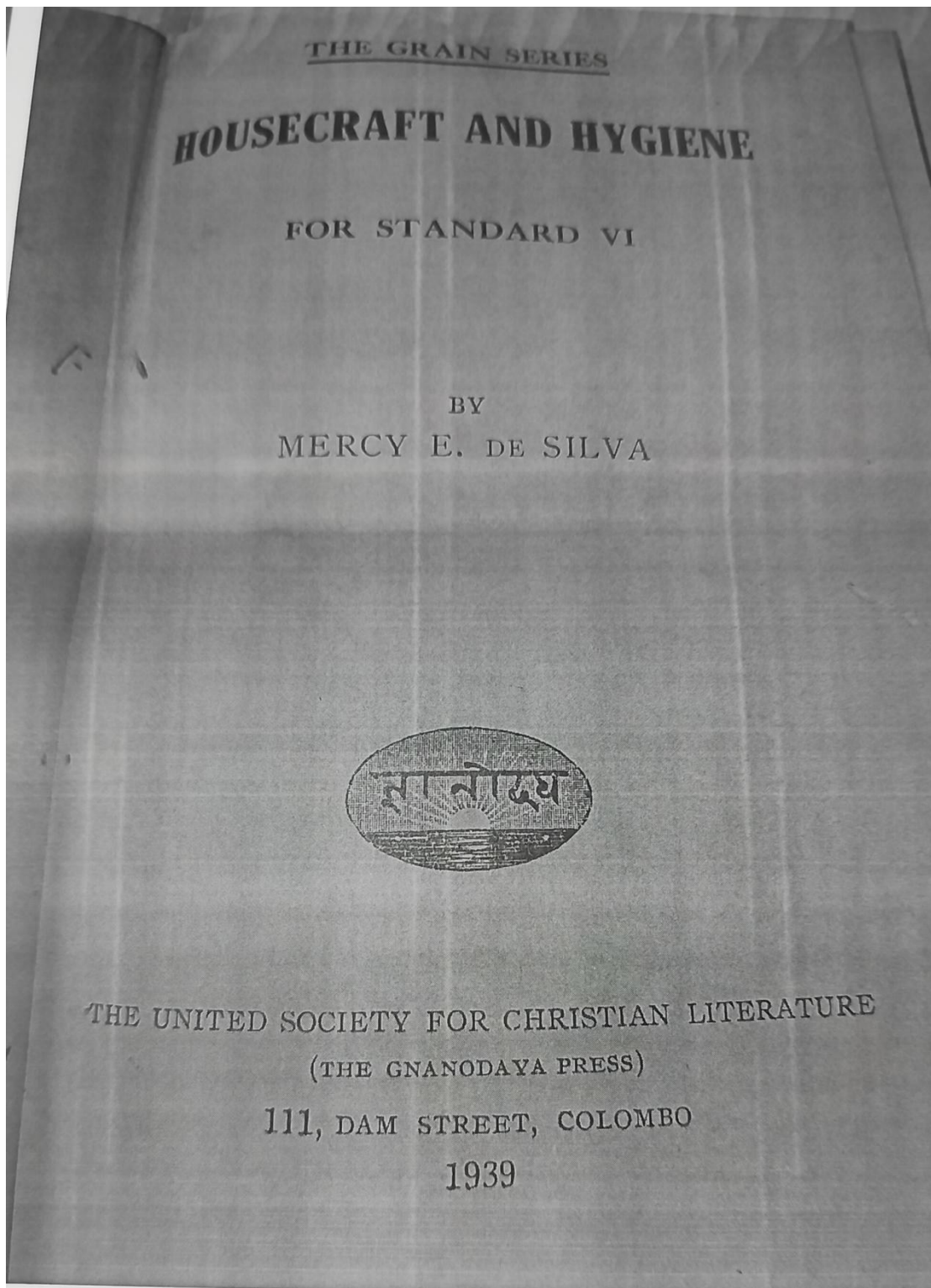


**A drawing of the demolished Portuguese fort at Calicut**



Source: O. K Nambiar, *The Kunjalis Admirals of Calicut*, Asia Publishing House, Bombay, 1963.

Cover page of a text book on Sanitation used in the schools

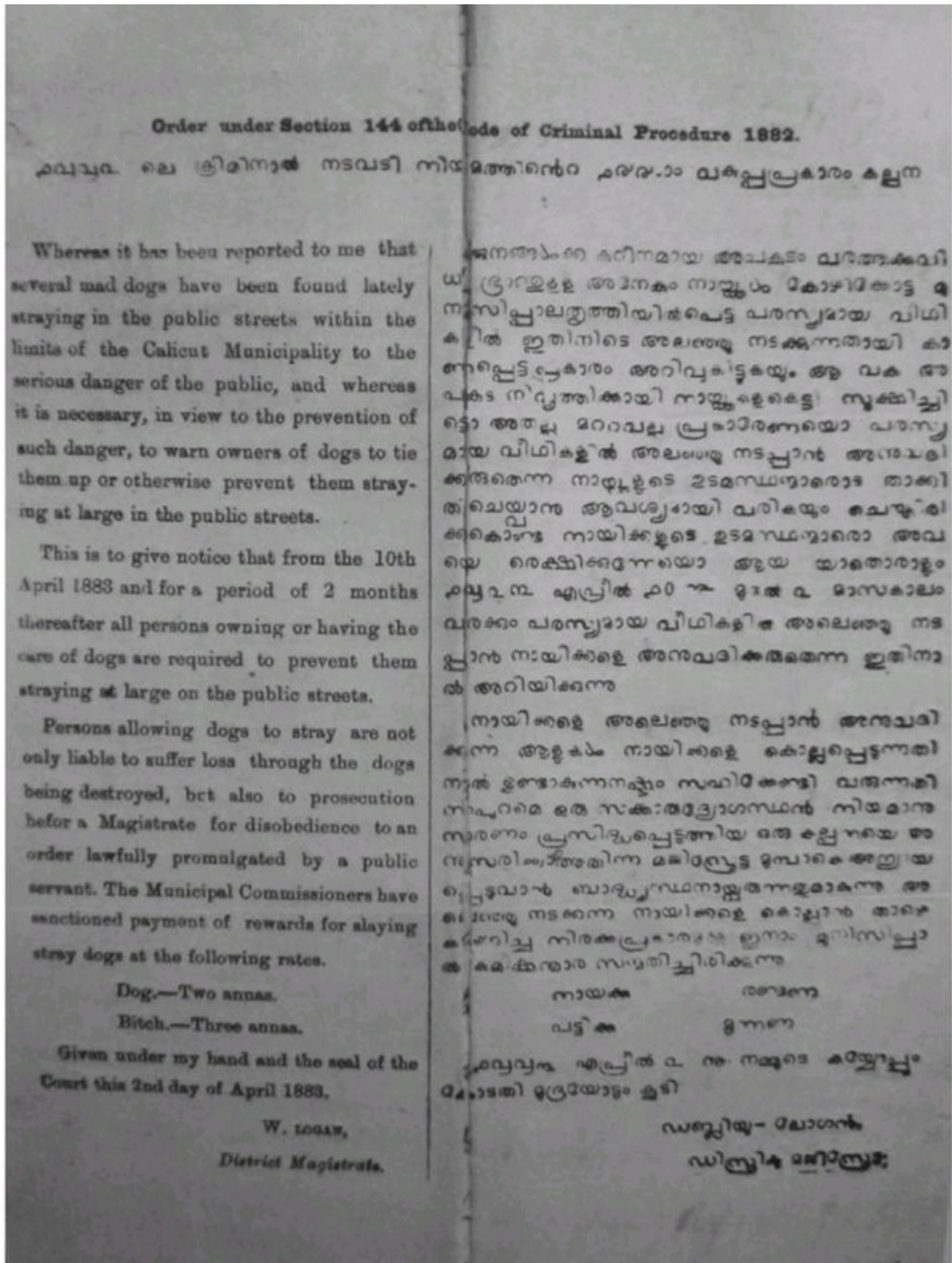


## Syllabus of sanitation in the text book

viii	CONTENTS
glands—The pancreas—The liver—The manner in which the food is masticated, digested and absorbed—Food-stuffs and their classification—Quality and quantity of food required—Percentage composition of the most important foods—Hours for meals—The care of the teeth ... ..	47
VI	
THE NERVOUS SYSTEM	
The nervous system in general—The chief parts of the brain and their functions—The cerebrum—The cerebellum—Medulla oblongata—Physical and mental fatigue—Causes of dullness, headache, neuralgia, etc.—Their prevention by hygienic living—Advantages of regular habits, physical exercises, rest, sleep, change of occupation, etc.—Formation of regular habits ... ..	65
VII	
EXCRETORY SYSTEM	
Waste and excretion—The work of the excretory organs—The lungs—The alimentary canal—The kidneys—The ureter—The bladder—The urethra—The urine—The skin—The sweat glands—Evils of delayed and irregular excretion; and the formation of regular habits—Cleanliness, bathing and kinds of baths—Some skin diseases and their causes and prevention by the application of hygienic principles—Itch—Eczema—Boils ... ..	76
VIII	
SANITATION	
Bacteria and the origin of diseases—Beneficial, harmless and harmful bacteria—Means of dispersal of bacteria—Insects and disease—Preventive measures—Personal cleanliness—Cleanliness of the surroundings—Ventilation—Filtering and boiling of water—The cooking of food—The use of food-safes—Prevention of disease by the use of mosquito-curtain—The more important epidemic diseases and their modes of spreading—Preventive measures—Disinfection or the destruction of germs—Isolation—Inoculation—Vaccination—Re-vaccination—Treatment of mosquito-infected areas ... ..	87

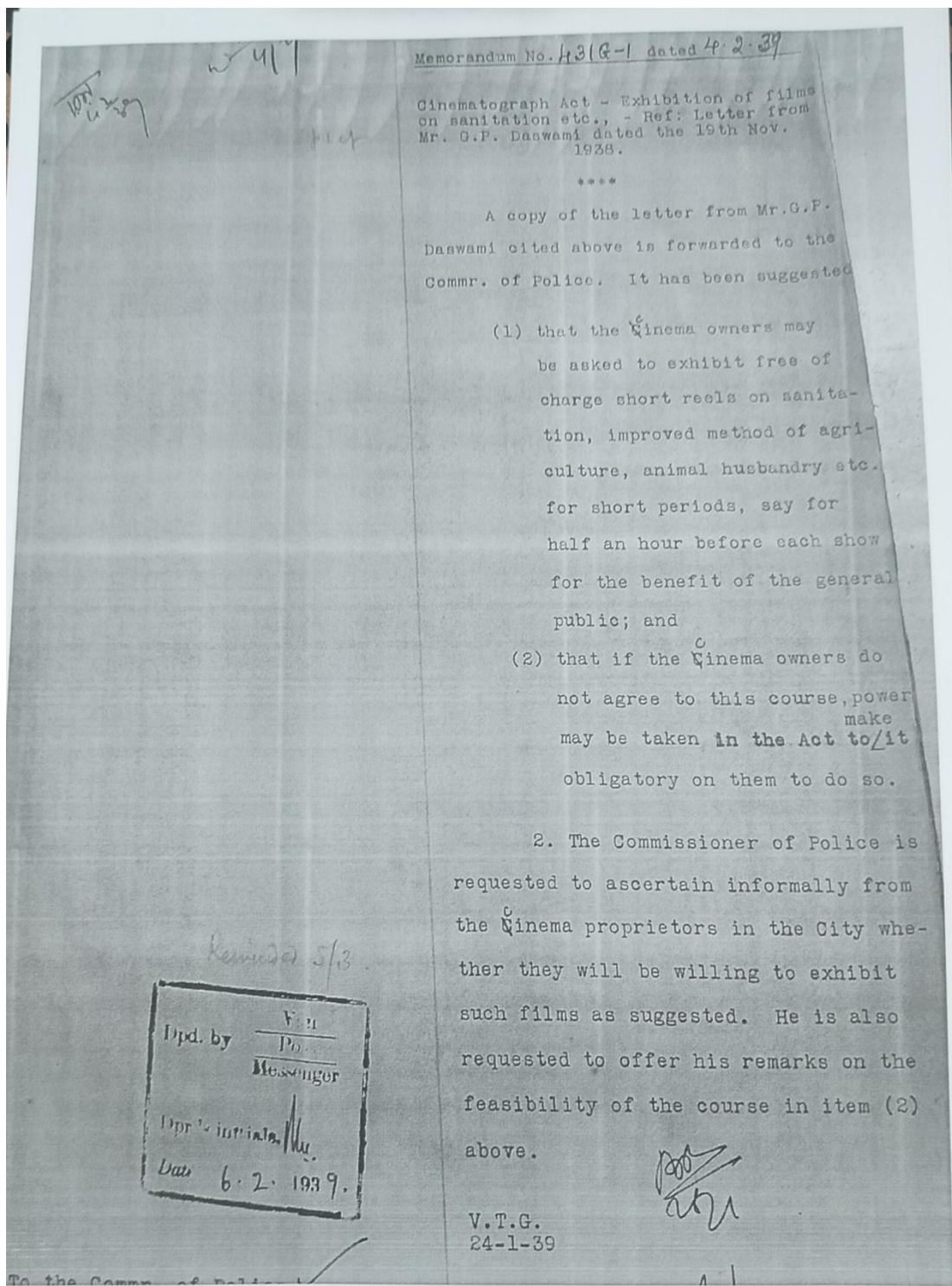


A municipal notice regarding the stray dogs of Calicut municipality



Source: MDG 1883, RA, Kozhikode

**Notification regarding the exhibition of films on sanitation for the general awareness of the public**



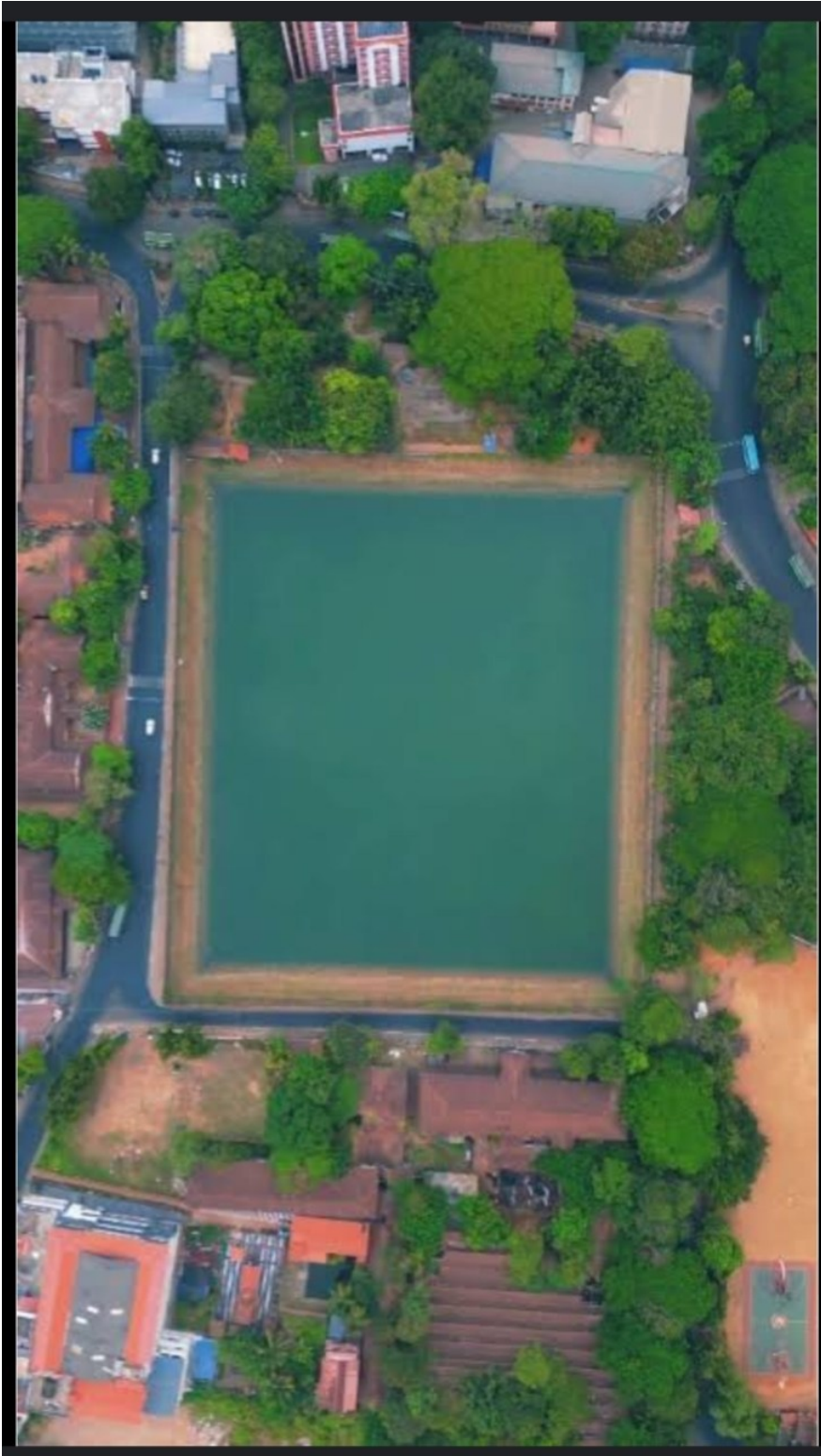
Source: RF 1939, RA, Kozhikode







## Mananchira in Calicut city



Source: Internet

**Talikkulam or Tali Tank in the Calicut city**



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