

# The factors associated with the spread of cholera in South Asian countries during the British Empire: from the Jaffna peninsula of Ceylon in the 19th century

U.N.K. Rathnayake

*Reading PhD, Center for Historical Studies, University of Jawaharlal Nehru University, New Delhi  
University of Sri Jayewardenepura, Sri Lanka*

**Abstract:** South Asian epidemiology of cholera throughout the British Empire was often a constant concern, which worsened along with socio-environmental and colonial conditions. A case study will present cholera epidemics spread along the Jaffna Peninsula in Sri Lanka through 19th-century history: an analysis of more significant regional dynamics. Under this, there is an introduction regarding a colonial infrastructure that enhanced and encouraged the economic policy through an expansion of urbanization, a driving catalyst toward the transmission of this disease. The research problem focuses on how colonial governance, environmental conditions, and public health negligence interact to create the settings for cholera outbreaks. There is extensive literature on cholera in British India, but research has yet to be conducted into localized responses and ecological factors unique to smaller colonies such as Sri Lanka. The principal research objective is to assess how colonial practices in the Jaffna Peninsula sustained the persistence of cholera and discern patterns of epidemiology that are different from the rest of South Asia. Methodologically, the research integrates archival findings, historical analysis of colonial medical reports, and geographical data tracing relationships between population density, sanitation infrastructure, and water resource management. Key findings point to how the failure to invest in public health, coupled with economic gain through the exploitation of natural resources, had compounded the spread of the epidemic, the seasonal monsoons, poor waste management, and religious pilgrimage routes. The study concludes that dealing with cholera needed more confined and ecologically sensitive public health strategies than those under colonial rule. Such findings are informative and provide important lessons for understanding the socio-political dimensions of epidemic control in similar settings.

**Index Terms:** British Colonial Governance, Cholera Epidemics, Jaffna Peninsula, Public Health Infrastructure, Environmental Determinants.

## 1. INTRODUCTION

### 1.1 Research Problem and Preliminary Research Findings

The cholera pandemics that swept across South Asia during the British Empire's rule were not uniform in their impact or spread. While regional studies have been conducted on India and parts of the subcontinent, the unique factors influencing cholera outbreaks in smaller territories, such as the Jaffna Peninsula in Sri Lanka, remain underexplored. This gap in localized historical epidemiology hinders a comprehensive understanding and development of context-specific health interventions in colonial and postcolonial settings.

Previous research predominantly focuses on the Indian subcontinent, particularly regions like Bengal, which were hotspots for cholera during the British Empire. Studies on Sri Lanka, and specifically the Jaffna Peninsula, are sparse. This lack of attention overlooks how local geographic, climatic, and cultural factors influenced cholera dynamics. Additionally, limited analysis exists on the intersection of British colonial policies and traditional local practices in shaping disease outcomes in smaller colonial territories like Jaffna.

The four themes of data are covered in the primary research. Environmental factors have been listed as a main theme. Water pollution is proven to risk the arid climate of Jaffna and reliance on shallow wells during monsoons. In addition, other researchers have confirmed that common colonial infrastructures, such as poorly managed water systems and overcrowded settlements, facilitated the spread of cholera. Trade and mobility are the third revelation. That is, the strategic location of the maritime trade of the Jaffna Peninsula may have accelerated the spread of cholera

from Indian ports. Cultural practices: Ritual water use in temples and community wells often contributes to contamination.

Against this background, the research objectives cut across a wide range. It is expected to identify and analyze the socio-ecological factors that influenced the spread of cholera in the Jaffna Peninsula in the 19th century and to gain a comprehensive understanding of cholera epidemics in South Asia under British colonial rule.

## 2. RESEARCH METHODOLOGY

Analyzing the research method is primarily based on the historical analysis method. Primary sources used were colonial records, medical reports, administrative correspondence, and 19th-century newspaper articles describing cholera outbreaks in the Jaffna Peninsula. The secondary sources used for this study include academic papers, books, and analyses of the history of South Asian public health and the impact of colonialism on disease management. A qualitative case study approach was also adopted, focusing on the Jaffna Peninsula as a microcosm of the broader cholera dynamics in South Asia. This kind of approach allows for an investigation of local conditions and responses in greater depth. Comparative analysis was used to conclude, and comparisons were made with other cholera-affected areas in South Asia, such as Bengal and Bombay, to identify unique and common factors influencing the spread of the disease. The quantitative study approach was also used when necessary, considering the numerical data to arrive at more accurate conclusions.

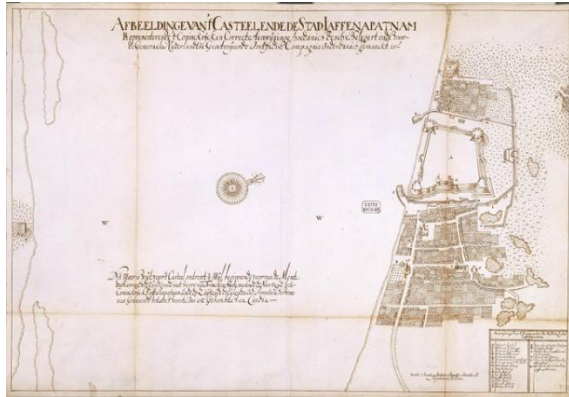
## 3. BACKGROUND OF THE STUDY

Many parts of the island in Sri Lanka experience cholera prevalence, which is one of the health problems faced by the country. Although cholera has not been considered a dangerous disease in recent times, the country has had recorded histories of cholera dating back to 1841. Cholera has reached epidemic proportions on occasion. During those periods, variations in the distribution of the disease can also be observed by region. To understand how the devastation caused by cholera in Ceylon was mitigated in the country when the disease raged on the neighboring sub-continent, it is essential to review the history of the disease in Ceylon. It is important to

avoid simplifying the problem when treating a contagious disease. According to C. E. A. Winslow, "To ignore the true many-sidedness of disease. It is well today that we recognize again in the pre-Pasteurian era the importance of diathesis nutrition and climate and season in the prevalence of germ diseases. No clinical case of any disease is caused solely by the entrance of a germ. Smallpox and measles approach such a situation most nearly, but even here, variation in seasonal prevalence shows that other factors are at work.<sup>i</sup> "This was particularly the case with an explosive disease like cholera in Ceylon, where droughts or excessive rains were common and could affect the transmission rate, the prevalence of which tended to be high during food shortages and famine. The exact time when cholera first affected people is unknown. In early texts written by Sushruta Samhita in the 5th century B.C. Hippocrates in the 4th century B.C.<sup>ii</sup> and Aristaeus of Cappadocia in the 1st century A.D. isolated cases of cholera-like illness were described.<sup>iii</sup> In the spring of 1543 A.D, Gaspar Correa, a Portuguese historian and author of *Legendary India*, recounted an outbreak of the disease in the Ganges Delta, situated in the southern Asia region of Bangladesh and India, which was one of the first detailed accounts of a cholera epidemic. The disease was known by the locals as 'moryxy' and was said to cause deaths within 8 hours of developing symptoms, with such a high fatality rate that it was difficult for them to bury all the victims.<sup>iv</sup> During the next few centuries, Portuguese, Dutch, French, and British observers reported numerous cholera manifestations on the West coast of India.

Cholera is thought to have existed in the Indian subcontinent for centuries, particularly around the Ganges River, where warm temperatures and stagnant water create ideal conditions for the growth of *Vibrio cholera*.<sup>v</sup> Herman Robert Koch confirmed that the bacterium was a new species and described it as "a little bent, like a comma."<sup>vi</sup> Despite cholera-like symptoms in historical texts, it wasn't until the early 19th century that cholera emerged as a recognized epidemic. The first cholera outbreak quickly expanded from Jessore to nearby towns and cities. Within weeks, the epidemic hit Calcutta, one of India's most important trading hubs. Thousands died in the city as cholera spread unchecked. Although aware of the disease, British colonial officials were initially unsure how it spread. Early theories suggested that cholera

was an airborne disease passed through miasmas, or "bad air," which delayed the adoption of effective countermeasures.<sup>vii</sup>



(Bird's eye view of the city of Jaffnapatnam /, 4. VEL inventory number 997" (in Dutch). The Hague: National Archief. Archived from the original on 24 September 2015. Retrieved 25 November 2014.)

#### 4. DISCUSSION

##### 4.1 Reasons for the cholera outbreak in Ceylon

###### 4.1.1 Trade and maritime connections

Cholera reached Ceylon (now Sri Lanka) during the British colonial period due to factors tied to increased global trade, mobility, and empire-building, which facilitated the spread of infectious diseases. As the British Empire expanded its influence in South Asia, cholera spread from India to surrounding regions, including Ceylon, due to its proximity and the strong colonial ties between India and Ceylon.

Ceylon was a vital hub for British maritime trade routes during that period, connecting the Indian subcontinent with the rest of the empire. Ships arriving from Indian ports like Madras (Chennai) and Calcutta (Kolkata) were significant vectors for the disease. Sailors, merchants, and laborers traveling between these ports and Ceylon could unknowingly carry cholera bacteria, leading to outbreaks. According to the 1867 cholera commission report, in reporting the primary reasons for the spread of the cholera epidemic in the Jaffna Peninsula of the island, it has been confirmed that the cholera disease was introduced to the northern part of the country through a young man who came to Kytes Island from South India for trade.<sup>viii</sup>

The British Empire, with its wide network of colonies and global trade routes, played a significant role in the

spread of epidemics across regions. Maritime trade, the movement of goods, and the constant circulation of people contributed to the transmission of diseases between Britain and its colonies. Several scholarly works highlight specific instances where trade facilitated the spread of epidemics, particularly in regions like India, Ceylon, Africa, and the Caribbean. Here are key examples from research and scholarly analysis.

David Arnold, who conducted a study on the spread of the cholera epidemic in India and beyond in the Asian region, said that trade route connections were primarily instrumental in spreading these disease vectors.<sup>ix</sup> India, being a key colony of the British Empire, had extensive trade routes connecting it to Europe, Africa, and Southeast Asia. Arnold's research focuses on the cholera pandemics of the 19th century, which originated in Bengal, India, and were spread to other parts of the empire via British maritime trade routes. According to him, the reasons for the spread of this epidemic were that British ships that carried goods such as textiles, tea, and spices were also vehicles for the cholera pathogen. The disease spread from India to Europe, the Middle East, Africa, and the Americas. The 1832 cholera pandemic, for example, reached Britain and the rest of Europe largely through ships involved in trade. Arnold argues that the cholera pandemics were exacerbated by the empire's trading infrastructure, which linked densely populated colonial cities and ports. Ports like Calcutta (now Kolkata), Bombay (now Mumbai), and Madras (now Chennai) were major hubs where diseases could easily be transmitted between sailors, merchants, and local populations.<sup>x</sup>

Kenneth F. Kiple and others also discussed smallpox in the British Caribbean, which also spread due to trade routes.<sup>xi</sup> The British West Indies, particularly islands like Jamaica, Barbados, and Saint Kitts, were integral to the transatlantic trade, primarily for the sugar economy. Ships that carried enslaved Africans, as well as goods like sugar and rum, were major vectors for disease transmission. Once the ships reached the Caribbean, the disease would spread to local populations and among enslaved laborers on sugar plantations. Epidemics frequently decimated plantation labor forces, leading to further economic and social strain in the colonies. As confirmed by these research conclusions, international trade was

responsible for the spread of epidemics, including cholera.

John H. Bryden, in "Plague in India, 1896-1947," and other scholars discussed how both India and East Africa were critical regions in Britain's imperial trade system, with India exporting cotton, opium, and spices, and East Africa serving as a transit region for ivory, slaves, and other goods. The plague outbreaks that began in Bombay in 1896 are strongly linked to British maritime trade.<sup>xii</sup> McNeill's work discusses how British-controlled trade networks and infrastructure, including railroads and shipping routes, facilitated the rapid movement of goods and diseases across large distances. The plague devastated populations in colonial cities, further highlighting how interconnected trade facilitated the spread of epidemics.

Trade, particularly through maritime routes, played a key role in the spread of epidemics during the British Empire. Scholars like David Arnold, Kenneth Kiple, John Bryden, and Philip Curtin highlight how diseases like cholera, smallpox, plague, and yellow fever traveled along imperial trade routes, often exacerbated by poor living conditions on ships and in colonial cities. These pandemics not only caused immense human suffering but also challenged colonial authorities, who struggled to manage public health in the face of global trade. In the 19th century, it was confirmed that trade relations with South India helped bring the cholera vector to Ceylon, and it is clear that the arrival of the vector to the Jaffna Peninsula was not a coincidence.

#### 4.2 Recruiting South Indian workers

In 1866, a cholera outbreak in Ceylon was directly linked to the arrival of a ship from Madras carrying a large number of South Indian laborers.<sup>xiii</sup> (See Table 01) The disease spread quickly in Colombo, Jaffna, and other areas that lacked proper quarantine measures at the time, leading to a significant epidemic. Another outbreak in 1889 was traced to laborers arriving from the Coromandel Coast, who brought the disease with them after a severe cholera outbreak in South India. The epidemic spread along the labor routes from Galle to the plantation regions in the central highlands. Several researchers have argued that the importation of South Indian laborers significantly influenced the cholera epidemic in Ceylon during the British colonial period. The British colonial economy in Ceylon, especially the plantation sector, required a large

workforce, and this demand was met through the recruitment of South Indian laborers, many of whom were from regions where cholera was endemic. These scholars suggest that the migration and labor importation practices directly contributed to the spread of cholera on the island.

Table 01. Statement of Arrivals and Departures of the Immigrant Coolies for the year 1866 and the two months in 1867

Months	Arrival	Departures
1866 Jan.	998	2562
Feb.	1430	4654
Mar.	2245	7204
April	4285	3828
May	11743	1983
Jun	13982	1153
July	10115	772
Aug.	9201	1276
Sep.	10004	1881
Oct.	3605	1437
Nov.	1560	2026
Dec.	1429	1852
sub. Total	70597	30666
1867 Jan.	623	3069
Feb.	467	41119
Sub. Total	1090	7188
Grand Total	<b>71687</b>	<b>37856</b>

In his work on diseases in the colonial era, the historian David Arnold emphasized how the labor movement under British rule facilitated the spread of cholera across South Asia and its nearby regions, including Ceylon.<sup>xiv</sup> Arnold highlighted that cholera was endemic in certain parts of South India, particularly the Madras Presidency, and argued that the frequent movement of laborers between this region and Ceylon, particularly for work in the tea, coffee, and rubber plantations, introduced cholera to Ceylon. Arnold noted that laborers were often transported in unsanitary conditions by sea, where access to clean water and adequate facilities was limited—the cramped quarters on ships and poor sanitary practices contributed to the rapid spread of the disease among workers, who then carried cholera with them to the plantations and urban centers of Ceylon. The epidemic thus became a consequence of the colonial economic structure, which depended on importing cheap labor without adequate attention to public health risks. Epidemics and Labor Migration historian P.E. Pieris explored the links between labor migration from South

India and cholera outbreaks in Ceylon during the mid-19th century. Pieris pointed out that cholera outbreaks often followed the arrival of ships carrying South Indian laborers, particularly during the monsoon season, when the movement of laborers peaked due to agricultural cycles in both South India and Ceylon.<sup>xv</sup> According to Pieris, the urban centers where laborers disembarked, such as Colombo, Jaffna, and Galle, became epicenters of cholera outbreaks due to the lack of proper quarantine measures and sanitary infrastructure. He argued that the colonial government's focus on economic development, particularly the expansion of the plantation economy, often came at the expense of public health considerations, allowing diseases like cholera to spread unchecked.

Plantation Economy and Health Crisis H.L. Seneviratne focused on the relationship between Ceylon's plantation economy and public health during the British period. He argued that the recruitment of South Indian laborers not only filled the demand for cheap labor but also inadvertently facilitated the spread of diseases such as cholera. The coolie labor system, which brought thousands of workers to Ceylon, lacked proper health regulations, and the laborers themselves were often from impoverished and disease-stricken regions of India. Seneviratne highlighted the high mortality rates among South Indian laborers on the plantations, many of which were due to cholera.<sup>xvi</sup> He argued that the movement of laborers was the primary vector for the transmission of cholera from South India to Ceylon, particularly because these laborers lived in overcrowded and unsanitary conditions on plantations, where cholera spread rapidly.<sup>xvii</sup>

These researchers collectively argue that the British colonial labor practices, particularly the large-scale importation of South Indian laborers, played a central role in the spread of cholera in Ceylon during the 19th century. Cholera flourished in the colony due to the unsanitary conditions where laborers traveled and worked, as well as the lack of adequate public health measures, resulting in repeated epidemics. According to Table 01, it is also confirmed that South Indian coolies have a high frequency and percentage of arrivals during the second and third quarters of the year, while their departure from the island is relatively low. The introduction and spread of epidemic conditions like cholera in Ceylon can be traced back to

the arrival of large-scale tenants, as is evident. The spread of epidemics such as cholera has been more common in Northern Ceylon than in other parts of the island due to the arrival of Indian laborers on a large scale, since it's closer to South India.

#### 4.3 The British military relocations

Several researchers have explored the role of the British military in spreading cholera in British colonies such as India and Ceylon (Sri Lanka). They argue that the movement of troops, combined with the poor sanitary conditions and the lack of proper health management by the colonial authorities, played a critical role in the spread of cholera across these regions.

Mark Harrison's *Work on Cholera and the British Military* asserts that the British army played a significant role in spreading cholera across colonial territories, including India and Ceylon. During his seminal work, Harrison highlights how troop movements made cholera transmission possible, particularly during campaigns and military transfers. The soldiers were often exposed to unsanitary conditions while traveling, which led to cholera spreading quickly among the troops and in the civilian populations they encountered. As an example, during the First Anglo-Burmese War (1824–1826), British troops stationed in India experienced high levels of cholera. The disease rapidly spread across India, including Ceylon, where soldiers were deployed to protect British interests due to its rapid spread. Harrison argues that the deficiency of clean water supplies and inadequate camp sanitation exacerbated the military's role in transporting cholera bacteria. "The movement of large numbers of British troops between India and its neighboring colonies, including Ceylon, was a key vector in the transmission of cholera during the early 19th century."<sup>xviii</sup>

David Arnold's *Study on Colonial Epidemics and Military Impact* also discusses the British army's role in the spread of cholera. He emphasizes that the frequent deployment of British and Indian troops to different parts of the empire created a network through which infectious diseases, including cholera, could spread. Arnold contends that the army served as a portable source of infection, transporting cholera between regions, frequently using the same routes that British soldiers and colonial officials traveled. Arnold notes, "The spread of cholera in British India and Ceylon can be traced to the movement of troops,

particularly during the Anglo-Maratha Wars and subsequent military deployments”.<sup>xix</sup> In 1817, cholera was first recorded in Jessore, Bengal. British troops stationed there were quickly infected, and as they moved to other parts of India and Ceylon, the disease spread with them. Arnold highlights that military encampments were particularly vulnerable due to overcrowding and insufficient sanitation measures, which allowed the disease to thrive and spread to surrounding civilian populations.

Philip D. Curtin's *Analysis of Disease and Empire* identifies the British army as a significant conduit for the spread of cholera in its colonies. Curtin focuses on the logistical challenges of maintaining sanitary conditions for the military in tropical climates where cholera flourished. He argues that the army's frequent relocations, combined with inadequate medical knowledge and preventive measures, led to the spread of cholera to previously unaffected areas. Curtin refers to the 1845 cholera outbreak in Ceylon, which he links to British soldiers returning from Madras (Chennai) after an epidemic in South India. The soldiers, already weakened by disease, traveled in close quarters on ships, further accelerating the spread of cholera. Upon arrival in Ceylon, the disease spread rapidly in garrison towns like Colombo and Trincomalee, infecting military personnel and local populations. Curtin observes, "The British army's role in transmitting cholera was central to its spread in the colonies, particularly during troop movements between epidemic centers like Bengal and military outposts such as Ceylon."<sup>xx</sup>

These scholars argue that the British army, through its frequent troop movements and poor sanitary conditions, played a significant role in the spread of cholera across British colonies like India and Ceylon. The army acted as a mobile vector for cholera, particularly during military campaigns, transfers, and the establishment of garrisons in cholera-prone regions. Inadequate public health measures and insufficient knowledge about cholera transmission compounded the problem. Epidemic outbreaks in the Jaffna Peninsula are also a possible application of this factor.

#### 4.4 Deterioration of sanitation facilities

The link between cholera epidemics and the decrease in sanitation facilities in British-ruled Ceylon (modern-day Sri Lanka) and India has been well-documented by many researchers. David Arnold, a

prominent South Asian historian, argues that the British Empire's failure to improve or maintain adequate sanitation and public health systems in India was a factor in the frequent cholera outbreaks. Through his research, he shows how, particularly in the 19th century, rapid urbanization without adequate infrastructure improvements, like sewage systems and access to clean water, increased the spread of cholera. Arnold mentioned, "The British administration's priorities in India were largely geared towards resource extraction, and public health measures were often neglected unless they directly affected the colonial authorities. Cholera thrived in poor sanitation conditions, especially in overcrowded urban centers like Calcutta and Bombay, where sewerage systems were rudimentary at best."<sup>xxi</sup> In particular, the poor access to clean water, inadequate drainage systems, and the failure to properly dispose of human waste created ideal conditions for cholera bacteria (*Vibrio cholerae*) to spread. The government's decrease in public health infrastructure investment post-1857 (after the Indian Rebellion) is frequently considered a contributory factor.

In his study of the disease, N. B. Banerji observed a significant increase in cholera outbreaks in Bengal. According to his research, this increase was caused by urban growth and administrative neglect, which led to less investment in sanitation facilities, particularly in regions such as Bengal, which was a major cholera hotspot. Banerji states: "As British administrative focus remained on military and economic concerns, public health took a back seat.

Mark Harrison's research on public health during British rule in Ceylon also highlights the neglect of sanitation as a key factor in cholera outbreaks. Harrison points out that while the British did invest in some public health campaigns, these efforts were often minimal and sporadic, particularly outside major colonial centers. He writes: "The sanitary conditions in rural areas and small towns were appalling, with open drains, unclean water supplies, and the absence of latrine facilities being the norm rather than the exception. Such conditions fostered the rapid spread of waterborne diseases like cholera."<sup>xxii</sup> Harrison also notes that even in urban areas, the sanitation systems put in place by the British were often insufficient to meet the needs of growing populations, particularly as Ceylon became more integrated into global trade networks.

In "The Sanitation Problem of Colonial Bombay," W. H. W. Sabatier discusses how the rapid growth of Bombay under British rule, combined with a lack of corresponding infrastructure development, led to recurrent cholera epidemics. The city's water supply was regularly contaminated due to poor waste management, and inadequate efforts were made to expand sanitation services as the population grew. Sabatier writes: "The British municipal authorities failed to expand public health infrastructure to match the city's exponential growth. Slums without access to clean water or proper waste disposal became breeding grounds for diseases like cholera."<sup>xxiii</sup>

These studies collectively show that the British Empire's dedication to resource extraction and administrative control caused chronic neglect of essential public health infrastructure. Cholera epidemics could spread widely due to the conditions created by this neglect, which led to the destruction of local populations in Ceylon and India. The persistence of these epidemics was largely due to the decrease in the availability and maintenance of sanitation facilities, especially in rapidly urbanizing areas. The Jaffna Peninsula's cholera outbreaks could benefit from this situation as well.

#### 4.5 Climate and Geographical Condition

In the 19th century, the spread of the cholera epidemic in the Asian British colonies; in addition to the information mentioned above, it is also suggested that the climatic and geographical environmental factors of this region were affected. This has also been discussed in the 1867 report regarding the spread of the cholera epidemic in the Jaffna Peninsula. The spread of cholera is attributed to climatic and geographical factors, as confirmed by research studies and associated findings.

In this influential book, Arnold analyzes how colonial medical policies intersected with epidemic disease in India. He discusses how the monsoon season, flooding, and inadequate drainage systems created favorable conditions for the spread of cholera by contaminating water supplies. "The regular monsoon cycle and the subsequent contamination of water sources were key drivers in the cholera epidemics that plagued British India during the 19th century."<sup>xxiv</sup> Furthermore, Zurbrigg investigates how colonial economic policies and environmental factors such as droughts, floods, and crop failures intensified the vulnerability to cholera outbreaks. Zurbrigg

mentioned, "Cholera outbreaks frequently followed monsoon floods that contaminated drinking water supplies, exacerbating the vulnerability of famine-stricken populations."<sup>xxv</sup> The Jaffna Peninsula's condition, especially the monsoon climate that caused cholera to spread, confirms these researchers' views. In addition, Harrison examines the public health measures taken by the British in India, including how environmental factors influenced the spread of diseases like cholera. The lack of adequate sewerage and water treatment, particularly in densely populated areas, worsened the impact of seasonal changes such as the hot, wet climate, which facilitated the bacterial growth of *Vibrio cholerae*. According to him, "The geographic distribution of cholera in India was closely related to waterborne transmission, which intensified during the rainy seasons due to poor infrastructure."<sup>xxvi</sup>

Watts explores how climatic conditions and colonial practices of urban planning, including the placement of military cantonments and civilian settlements near rivers, exacerbated cholera outbreaks. The combination of hot, humid weather and contaminated water sources provided ideal conditions for the bacterium to thrive, leading to frequent epidemics, especially in areas lacking proper sanitation. "Climatic factors such as intense heat and monsoon rains contributed significantly to the repeated cholera outbreaks, especially in water-scarce regions where the use of contaminated rivers was unavoidable."<sup>xxvii</sup> Indian scholar Ramasubban discusses the impact of environmental factors on the spread of diseases in British India, emphasizing the role of water contamination during the monsoon season and the lack of effective drainage in urban centers. The research also focuses on how these climatic and geographical challenges complicated the colonial government's efforts to control the spread of cholera. "The inadequate drainage systems in colonial Indian cities, particularly during the heavy monsoon season, created ideal conditions for the spread of cholera through contaminated water."<sup>xxviii</sup> These research works confirm the relationship between the climatic and geographical conditions in British India and Ceylon and the spread of cholera, particularly through contaminated water during monsoons, inadequate sanitation, and colonial urban planning policies.

In the last few decades of the 19th century, in the study of the facts related to the onset and spread of cholera

in the Jaffna Peninsula, it is revealed from the report that the above-mentioned basic factors contributed to the spread of the disease. The researchers' research has proven that those factors possess similar and fair features in the Jaffna region and the regions with India's most prominent British colonies.

## 5. CONCLUSION

This research, which investigates the causes of cholera spread in South Asian countries under the British Empire, focuses on the Jaffna Peninsula during the 19th century in Sri Lanka. It depicts a complex interaction of environmental, social, and administrative influences that lead to an understanding of whether colonial policies, coupled with inadequate public health infrastructure, created a conducive environment for cholera to spread swiftly. The vulnerability of communities in the region is aggravated due to underprivileged sanitation, limited access to clean water, population mobility, and constrained urbanization.

The dynamics of disease in the Jaffna Peninsula were fashioned by local practices and environmental conditions, such as drawing water from shallow wells and not managing waste properly. Colonial public health measures often collided with local contexts. Hence, the challenge of aligning it was often obstructed by cultural and economic constraints, causing delayed intervention and community compliance with health directives.

This study shows the importance of historical analysis in understanding how issues of structural inequalities and environmental management contribute to epidemic outbreaks. The lessons from this epoch are placed on public health strategies emphasizing inclusiveness and sensitivity from a historical perspective and concerning contemporary global health challenges. The study reveals new insights into the experiences of Jaffna and their parallels across South Asia, further illuminating the socio-environmental drivers of disease and the long-term legacy of colonial public health practices.

## REFERENCE

- <sup>i</sup> Winslow C. E. A., *The Conquest of Epidemic Disease* (Princeton, 1943), p. 334.
- <sup>ii</sup> Coiffard, L., Piron-Frenet, M., & Amicel, L. (1993). Geographical variations of the constituents of the essential oil of *Crithmum maritimum* L., Apiaceae. *International Journal of Cosmetic Science*. <https://doi.org/10.1111/j.1467-2494.1993.tb00064.x>
- <sup>iii</sup> Cholera studies. 1. *History of the Disease*. Bulletin of the World Health Organization.
- <sup>iv</sup> Boucher et al... "The out-of-the-delta hypothesis: dense human populations in low-lying river deltas served as agents for the evolution of a deadly pathogen." *Frontiers in Microbiology*, 2015
- <sup>v</sup> David Arnold, *Pandemic India: From Cholera to Covid-19*, C Hurst & Co Publishers Ltd, 2002
- <sup>vi</sup> Howard-Jones, N. (1984). "Robert Koch and the cholera vibrio: a centenary". *British Medical Journal*. 288 (6414): 379–381.
- <sup>vii</sup> C.E. Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1962), 31-32.; David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India*, Los Angeles, London: University of California Press, 1993.
- <sup>viii</sup> 1867 Cholera Commission Report, Sri Lanka National Archives.
- <sup>ix</sup> David Arnold in "Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India" (1993)
- <sup>x</sup> Ibid
- <sup>xi</sup> Kenneth F. Kiple and Virginia H. Kiple in "Black Yellow Fever Immunities, Innate, and Acquired, as Revealed in the American Slave Experience" (1977)
- <sup>xii</sup> John H. Bryden in "Plague in India, 1896-1947" (1909) and William H. McNeill in "Plagues and Peoples" (1976)
- <sup>xiii</sup> 1867 Cholera Commission Report, Sri Lanka National Archives.
- <sup>xiv</sup> Arnold, D. *Cholera and Colonialism: The Epidemiological and Social History of Cholera in India*. Cambridge University Press, 1986.
- <sup>xv</sup> Pieris, P.E., *Epidemics and Public Health in Colonial Ceylon*. Colombo: Ceylon Historical Journal, 1949
- <sup>xvi</sup> 1867 Cholera Commission Report, Appendix No. 09, Sri Lanka National Archives
- <sup>xvii</sup> Pieris, P.E., *Epidemics and Public Health in Colonial Ceylon*. Colombo: Ceylon Historical Journal, 1949.



---

<sup>xviii</sup> Harrison, Mark. *Public Health in British India: Anglo-Indian Preventive Medicine, 1859–1914*. Cambridge: Cambridge University Press, 1994

<sup>xix</sup> Arnold, David. *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India*. Berkeley: University of California Press, 1986.

<sup>xx</sup> Curtin, Philip D. *Disease and Empire: The Health of European Troops in the Conquest of Africa*. Cambridge: Cambridge University Press, 1998.

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

<sup>xxii</sup> Harrison, Mark. *Public Health in British India: Anglo-Indian Preventive Medicine, 1859-1914*. Cambridge University Press, 1994.

<sup>xxiii</sup> Sabatier, W. H. W. "The Sanitation Problem of Colonial Bombay." *Journal of Colonial and Post-Colonial Studies*, 1981.

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

<sup>xxv</sup> Sheila Zurbrigg, "Hunger and Epidemic Disease in Colonial India: A Study of Policy Failures and Public Health", *Social Science and Medicine*, Vol. 32, No. 4 (1991)

<sup>xxvi</sup> Mark Harrison, "Public Health in British India: Anglo-Indian Preventive Medicine, 1859-1914", 1994

<sup>xxvii</sup> Michael J. Watts, "The Cholera Pandemic and the Nature of Colonial Medicine in India", *Medical History*, Vol. 25, No. 1 (1981)

<sup>xxviii</sup> Radhika Ramasubban, "Imperial Health in British India, 1857-1900", *The Indian Economic and Social History Review*, Vol. 15, No. 2 (1978)