

# Public health issues in Medan at the beginning of the 20th century

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**Abstract.** This article aims to explain the dynamics of Medan as a central city of the plantation industry and the emerging public health issues the city's residents face. The method used in reconstructing this event is the historical method, which consists of heuristic, source criticism, interpretation, and historiography. The results of this study indicate that the growth of Medan as an economic center for plantations and the Dutch colonial government in the early 20th century impacted health problems, especially among the local people living in suburban villages. The city government only focused on building infrastructure and public facilities to protect the European population from the threat of epidemics and diseases. On the other hand, infrastructure development caused densely populated and slum settlements due to urbanization. The various health problems in Medan posed threats of epidemics and high mortality rates among the population in the early 20th century.

**Key words:** diseases, epidemics, public health, Medan, slum settlements

## Introduction

The shift in economic policy from conservative to liberal in the Dutch East Indies in the last third of the 19th century influenced urban development in political, financial, and population issues. Population growth due to urbanization affected urban space competition, poor settlements, inadequate clean water, waste and sewage disposal problems, and periodic flood threats (1). The development of colonial cities also divided urban spaces into two parts: colonial or European areas and local villages. These villages were located on the city's outskirts surrounding the colonial-built city center. Urban space development aimed to improve the living quality of Europeans in a town, while the villages inhabited by local people were improved to avoid and minimize health threats and hygiene issues in the colonial city inhabited by Europeans (2).

Unlike Dutch colonial cities in Java, such as Batavia, Semarang, and Bandung, which the government intentionally developed as administrative and

economic centers, the Dutch colonial government did not plan the development of Medan. Medan developed on the initiative of plantation entrepreneurs (3). The development of Medan was closely related to the interests of the plantation capitalism pyramid at that time. This pyramid consisted of plantation owners (Planters), entrepreneurs (Chinese business groups), and local rulers (Sultanate of Deli) (4). Medan grew along with the burgeoning plantation economy in East Sumatra, supported by immigrants working on the plantations.

The arrival of immigrants to East Sumatra, in general, and Medan, in particular, led to health and sanitation issues. The health impact included a cholera epidemic in 1891 in East Sumatra (5). This cholera epidemic also occurred in Medan annually from the late 19th century to the early 20th century. This situation was exacerbated by the polluted Deli River, which caused typhoid and cholera outbreaks among the population. Therefore, from a health perspective, water from the Deli River could not be used directly

for household purposes without prior filtration and purification (6).

As a rapidly developing city from the end of the 19th century to the early 20th century, changes in Medan from various aspects were due to the growth of the agro-industrial plantation economy and the influence of Dutch colonial politics. Various growths occurred in East Sumatra, including economic development, political movements, social changes, modern cities, and heterogeneous populations (7). The development and changes in Medan were not only marked by the construction of grand and beautiful buildings but also had implications for changes in the urban environment and sanitation issues, such as river pollution and the spread of various diseases among the population. Various studies that examine the history of Medan during its early development and Dutch colonialism have not yet explored public health issues of the urban population.

Recent studies on the history of Medan include Nasution (2018), Suriani and Anwar (2019), Affandi, Agustono, and Zuska (2022), Agustono, Junaidi, and Affandi (2022), and Sitepu (2024). These studies explain the growth and dynamics of Medan in terms of modern transformation, sanitation issues, urban entertainment, and public housing development (8-12). Unlike previous research, this study explains the relationship between the growth of the city as a center of the plantation economic industry and the spread of public health problems in the context of slum settlements, the spread of epidemics, and mortality rates in Medan.

Based on the above background, this article will discuss the growth of Medan as the center of the plantation city in East Sumatra during the Dutch Colonial era in the early 20th century, which, on the other hand, caused health issues for the urban population. The growth of Medan as an economic center for plantations and the Dutch colonial government in Sumatra led to the development of urban infrastructure but also resulted in densely populated slum settlements and the spread of epidemics. The growth of urban infrastructure with spatial planning arranged by stakeholders in urban politics developed in two ways: the organization of urban space facilities and the slum settlements that threatened the population of Medan in the early 20th century.

## Methods

This article used the historical method, which includes four stages: heuristic, source criticism, interpretation, and historiography. Heuristic refers to the search for historical sources from archives, annual city reports, city council meeting minutes, and other government archives. These historical sources were obtained from the National Archives of the Republic of Indonesia and the National Library of Indonesia in Jakarta. The next step was source criticism to determine the credibility and authenticity of these sources. The following step was interpretation, which involved analyzing historical facts to construct a historical narrative. The final step was historiography, which was the process of reconstructing and writing history.

## Medan as a plantation city

The growth of Medan as a plantation city cannot be separated from the Dutch colonial intervention in Deli, East Sumatra. This began with the Dutch East Indies government entering into a political contract (*Acte van Verband*) with the Sultanate of Deli, Sultan Mahmud Perkasa Alamshyah, on August 22, 1862 (13-14). Slowly, the Dutch East Indies government managed to occupy other areas of East Sumatra. Initially, the Dutch colonial government's concentration was in the capital of the Sultanate of Deli, Labuhan Deli. In 1864, to increase its influence, the Dutch East Indies government assigned a controller for the Deli area in Labuhan Deli named J.A.M. de Cats Baron de Raet (15).

The political contract between the Dutch East Indies government and the Sultanate of Deli opened this area to political and economic exploitation. On July 6, 1863, the first group of entrepreneurs arrived in Deli, led by Jacobus Nienhuys representing the firm named Van den Arend. In various stories of planters' adventures in Deli, it is often mentioned that Nienhuys was attracted to Deli due to the invitation of Said Abdullah Ibn Umar Bilsagih, a relative of the Sultan of Deli (16). Subsequently, Nienhuys obtained a plantation land concession in Titi Papan, an area near Labuhan Deli, and his concession area expanded along the Deli

River towards the upstream area. The Sultan of Deli granted This concession land with lenient conditions for 99 years. Initially, Nienhuys's plantation business did not only develop one type of plantation commodity but various commodities such as tobacco, pepper, coconut, pineapple, gambier, and areca nut (15, 17).

The plantation business of Nienhuys began to flourish with the establishment of the first limited liability company in the Dutch East Indies. In 1869, Nienhuys and his fellow traders G.C. Clemen and P.W. Janssen founded NV. Deli Maatschappij. With an initial loan of 10,000 from Nederland Handels Maatschappij (NHM), the Deli plantation company grew into the largest corporation in East Sumatra and even the Dutch East Indies by the early 20th century (18). The main commodity of their plantation was tobacco, which stretched from the downstream to the upstream of the Deli River. The company established its headquarters in Medan Putri, an area located around the confluence of the Deli and Baboera rivers. This location was chosen not only because it was centrally located within the plantation but also due to its slightly elevated land compared to the Labuhan Deli area. This was done to avoid the threat of flooding in the lower plains of the Deli River. Medan Putri, later known as Medan, developed as a multicultural plantation industry center with entrepreneurs from the Netherlands, Germany, England, Poland, Switzerland, Denmark, France, and Norway (5).

Plantation entrepreneurs played a significant role in the development of Medan since the late 19th century. The Deli plantation company built employee housing, logistics warehouses, hospitals, shops, and kiosks for daily necessities, as well as military garrisons and controllers' houses for the government. In addition, the Deli Company allowed their facilities, such as the Assistant Resident's Office in Sukamulia, to be used by the government. This development led the Dutch Colonial Government to relocate the government center from Labuhan Deli to Medan in 1879. Since then, Medan has elevated to the status of the capital of *Afdeeling Deli* (14, 19).

Since becoming the capital of *Afdeeling Deli* in 1879, Medan grew as a center of plantation capitalism and government administration. In 1887, Medan was made the capital of the East Sumatra Residency, which

was previously located in Bengkalis. The rapid growth of Medan as an economic and administrative center for the Dutch colonial government eventually led the Sultanate of Deli to relocate its government center from Labuhan Deli to Medan. The relocation of the Sultanate of Deli's capital was carried out in 1891 after the completion of the Maimun Palace in Medan (14).

The significant influence of plantation entrepreneurs on the city's growth was partly due to the expansion and development of the city on land concessions from the Deli Plantation Company. The modern city of Medan was established on the land concessions of Mabar – Deli Tua Plantation, covering 225 hectares, and Polonia Plantation, covering 63 hectares (14). At the beginning of the 20th century, specifically on April 1, 1909, Medan was designated as a *gemeente* by the Dutch colonial government. However, the administration was still managed by the Assistant Resident of *Afdeeling Deli Serdang*, who also served as the Chairman of the *Gemeenteraad* (20). The *Gemeenteraad* was a city council representing European, Foreign Eastern, and Native residents (21-22).

In 1918, Medan experienced territorial expansion due to a land grant from the Sultanate of Deli. This land grant was carried out as a step for the development and expansion of the city of Medan. On November 30, 1918, Sultan Deli, Sultan Ma'moen Al-Rasyid Perkasa Alamasyah, along with Datuk X II Koetta, Datuk Serbanyaman Sunggal, Pemangku Adat Sukapiring, Pemangku Adat Senembah, Kejeruan Percut, Pemangku Adat Padang, and Bedagai, as the first party, faced Notary Johannes Michiels de Hondt Junior. In addition, there was the Chairman of the *Gemeenteraad* Cornelius Suthoff (Mayor of Medan Authority), and the Governor of East Sumatra, Hendrik Jan Grijzen, as the second party. The first party handed over the land to the second party, namely the Government of Medan City and the *Gubernemen* of East Sumatra. Since 1918, a definitive mayor was appointed for Medan. The first mayor of Medan was Baron Daniel MacKay, who was the longest-serving mayor during the Dutch colonial period. Furthermore, MacKay established the basic principles of infrastructure regulation and city development in Medan. He served from April 21, 1918, to April 15, 1931. He was succeeded by J.M. Wesenlink (April 25, 1931 – August 19, 1934), G. Pitlo (August

19, 1934 – August 27, 1938), and C.E.E. Kuntze (August 27, 1938 – March 13, 1942) (14).

### *Plantation city infrastructure*

As the initial center for the burgeoning plantation industry, Medan was developed by plantation entrepreneurs. Since the late 19th century, the growth of the city's infrastructure was intertwined with the advancement of plantations. Moreover, initiatives for urban infrastructure development always came from plantation entrepreneurs. Various city facilities serving as public spaces were constructed. The first was the city square known as Lapangan Esplanade, which functioned as a park, sports venue, and center of public gatherings, surrounded by towering buildings. In 1879, the first post office was established, and next to it, a building named "*Witte Societeit*" was constructed for planters, managers, assistant planters, and company staff to assemble. In 1884, the first hotel, Medan Grand Hotel, was built in the southern part of Lapangan Esplanade. Besides supporting facilities, the city's economic infrastructure was also developed, such as The Chartered Bank in 1888 and a branch of the *Nederland Handel Maatschappij* in 1892. Earlier, in the early 1880s, there were already more than 60 Chinese-owned shops in Kesawan (5).

Government and economic infrastructure in the city were supported by adequate transportation. Since 1885, the Medan-Labuhan Deli railway line was constructed (23). This transportation network connected various plantations. Electric and water companies were established to showcase Medan's modernity. In 1897, an electricity concession was granted to the firm *Langereis en Co*. Subsequently, in 1898, the *Electriciteits Maatschappij Medan* (E.M.M.) was established, responsible for street lighting (24). In addition, electricity was supplied to Hotel Medan, Hotel de Boer, Witte Societeit, Tjong A Fie Mansion, and the Maimun Palace (14).

Another essential infrastructure was the provision of clean water. This was crucial as, until the late 19th century, the city's population was afflicted by cholera and malaria outbreaks, causing fatalities. Previously, the population relied on river water for consumption. In 1887, the first artesian well was dug to meet the

city's drinking water needs, but it was insufficient. At the beginning of the 20th century, the Deli Plantation Company took the initiative to apply for a concession to supply clean water. In 1905, a water supply company named "Ajer Beresih" was established. The water source was from springs in Sumbul, a region in the Karo Highlands (24).

Since the formation of the Medan Municipal Government (in the form of a *gemeente*) in 1909, the colonial government attempted to manage the city independently from the influence of plantation entrepreneurs. According to the State Gazette of 1909 No. 180 regarding the formation of the Medan *Gemeente*, the colonial government allocated an annual budget of f. 89,500 to be managed by the Medan City Government. This fund was used for public interests, city facilities, construction, maintenance, and repair of infrastructure such as roads, bridges, culverts, cleanliness of squares and parks, water distribution, street lighting, fire fighting, and European public cemeteries (20).

The Medan Gemeenteraad formed institutions and agencies overseeing this infrastructure. In 1909, a Technical Commission responsible for designing Medan's infrastructure development was established (21). In 1911, the Department of Public Works (*Gemeentewerken*) was formed with its first director, J. Hogervorst. This department was tasked with realizing the construction and maintenance of city infrastructure. Besides this department, the organizational structure of the Medan City Government also included a Land Affairs Bureau and a Public Health Service. The Public Health Service was divided into several sub-departments: City Slaughterhouse Service, Market Service, and Sanitation Regulation Monitoring and Research Service (21). Many city infrastructure and facilities were constructed by the Public Works Department, which oversaw sub-departments such as the Public Works Service, City Cleaning Service, and Building Supervision Service (25).

A significant infrastructure development was the construction of roads and bridges. Before its establishment as a *gemeente*, the city's road network was only 44 km long and covered with gravel. The development of settlements and residential areas contributed to the construction of roads in European, Chinese, and Native villages adjacent to European areas. After 20 years

of the establishment of Medan *gemeente*, the road network grew to 1,388.6 km. Besides the road network, the government also built bridges across the city's rivers: the Deli River, Baboera River, Rengas River, and Kerah River. By 1933, 10 bridges had been built, with three crossing the Kerah River, three crossing the Rengas River, two crossing the Baboera River, and two crossing the Deli River (25).

The construction of roads and bridges in the city was aligned with the development of drainage systems, ditches, and culverts. The construction of ditches followed the construction of the road network. Drainage and culverts were part of the work of the City Public Works Department. These systems were designed to channel rainwater to prevent flooding. In addition, culverts were integrated with the city's waste disposal system to minimize the threat of pollution and environmental contamination in densely populated residential areas.

#### *Dense and slum settlements*

Amidst the rapid development of infrastructure and spatial planning in Medan towards the end of the 19th century, significant disparities and residential segregation emerged among the city's population groups. Political authorities further reinforced these divisions based on the legal and citizenship distinctions between the colonial Dutch (*Gemeente*) and the Deli Sultanate (*Sultangronde*). This differentiation stemmed from the distinct identities of the Sultanate's indigenous Malay population and the Dutch colonial settlers. The Deli Sultanate's residents were native Malays or those willing to assimilate into Malay culture, while the Dutch colonial residents were newcomers subject to Dutch colonial jurisdiction and laws (3, 8).

The government classified residential areas in Medan based on ethnicity and race, resulting in segregated enclaves. Local settlements, although not exclusively ethnic-based, were divided into specific kampongs. The Indian community resided in a distinct area known as Kampung Keling or Madras (4), located on the border between the European settlement in New Polonia (*Nieuwe Polonia*) and Malay kampongs. The Arab and Chinese communities were centered in the economic hub and marketplace of Kesawan, which

was the city center filled with facilities and infrastructure primarily for Chinese and European residents. Over time, an elite residential area known as New Polonia (*Nieuwe Polonia* or *Polonia Wijk*) was developed for the European population. This area housed various government offices and elite residences and was designed to reflect European, particularly Dutch, urban planning and living standards (22).

Local residents lived in kampongs typically located on the city outskirts or within the Deli Sultanate's territory. Their settlements were divided into three areas within the *gemeente* and Kampung Sultan (*Sultangronde*). The *gemeente* areas included seven kampongs near the city center, four in West Medan, and three in East Medan. The central kampongs were Kampung Doerian, Padang Loemba Aoer, Mesdjid, Koeboer, and Kebon Melajoe. The western kampongs included Kampung Gloegoer-Silalas, Sekip, Gloegoer-Silalas Petisah Oeloe, and Petisah Darat. The eastern kampongs were Kampung Sei Kerah, Sei Kerah-Pandau, and Sei Rengas. In addition, the Sultanate's kampongs included Kampung Sei Kerah-Pertjoet, Kota Matsoem, and Soeka Radja (26).

European residential areas starkly contrasted with local settlements. European housing was intentionally designed to resemble cities in Europe, especially the Netherlands. The layout featured grid-like patterns with roads, ditches, and canals separating blocks. Most houses were built with bricks to prevent fires and were considered healthier. European neighborhoods were made as comfortable as possible, in sharp contrast to local settlements, often deemed sources of disease and sanitation issues (27). The Table 1 illustrates the population and housing distribution in Medan in 1920.

Approximately 11,000 people lived in kampongs within the *gemeente* area. According to the 1920 census, about 4,000 people resided on the borders

**Table 1.** Number of houses and their inhabitants in Medan, 1920

Population Grup	Inhabitants	Number of Houses
European	3.128	953
Foreign Eastern	16.359	2.825
Natives	23.823	4.596
<b>Total</b>	<b>45.248</b>	<b>8.374</b>



between the *gemeente* and Kampung Sultan (*Sultan-grond*), while around 9,000 lived within the Sultanate's territory (26). Economic opportunities in the plantation sector drove the urban population density. Urbanization was measured by population scale, density, and diversity (28). As a city that developed due to the plantation industry, Medan has attracted many individuals interested in its economic growth. The population migrating to Medan was not limited to those directly involved in the plantation industry, such as plantation entrepreneurs, staff, and laborers. The rapid economic development also drew many local people, in addition to the local Malay population, who flocked to the city in search of a better livelihood. The local populations that urbanized primarily comprised the Mandailing and Minangkabau ethnic groups, who were the main ethnic communities to settle in Medan (29).

Local population density was highest in central Kampongs due to the influx of workers attracted by economic opportunities in the city center. They preferred to live close to their workplaces. However, these central kampongs were poorly organized, with irregular land and building plots, leading to chaotic urban layouts. Examples included settlements around Bindjeiweg, Kampung Bantam, Kampung Kubur, Kampung Masjid, and their surroundings (26).

Poor housing conditions were predominantly found in areas near the city center. The overcrowded buildings made constructing drainage or water channels difficult, resulting in minimal natural light entering the homes. This situation caused the houses to be unsanitary and often stuffy. A similar yet somewhat different condition was observed in villages located on the outskirts, far from the city center. The chaotic state of residential buildings was a common sight among the local population. In these villages, the houses were sparsely located, complicating the construction of drainage systems and water channels, and requiring significant expenditure from the municipal government to develop such infrastructure (26).

Residents of these slum areas typically belonged to the poorer segments of the population, earning between f. 10 and f. 20 per month. Discriminatory sanitation budgets exacerbated this situation. City Council member M. Noeh protested the inadequate funding for kampung cleanliness, despite residents paying taxes

regularly. The city government was perceived as favoring central city residents, especially Europeans, over kampung inhabitants, which was evident in the insufficient budget for kampung sanitation (26).

Since the 1920s, data indicated that poor village conditions were primarily due to the state of housing and the surrounding environment. Houses with otherwise good structures became inadequate if they lacked bathrooms and access to clean water. In addition, insufficient lighting, muddy roads, and poor household waste disposal contributed to the deterioration of these settlements. Villages were considered substandard if they contained shanty and dilapidated houses that polluted the residential environment (26). Poor housing conditions adversely affected the health of the residents. Tillema observed that damp houses with limited sunlight could facilitate the spread of various diseases. Moreover, adverse weather and climate conditions and pests such as mosquitoes, lice, and rats exacerbated the situation. Overcrowded homes and unsanitary environments, including domestic animals like pigs and poultry, posed additional risks of environmental contamination. Potential outbreaks and diseases included respiratory disorders, tuberculosis, malaria, hookworm, dysentery, typhus, and cholera (30).

#### *Outbreaks, infectious diseases, and mortality rates*

As previously discussed, the proliferation of densely populated and slum settlements on the outskirts of Medan has led to significant health issues among the city's residents. Marginalized populations experienced a degradation in health quality and were more susceptible to various diseases. The growth of the plantation city and the mobility of its population, driven by its role as an economic hub for the plantation industry, had exacerbated the threat of epidemics (31). Since the establishment of plantations in Deli in the 1860s, there were no recorded infectious disease outbreaks in the region until the industry began to develop, after which several outbreaks occurred in East Sumatra, including Medan.

The first major epidemic to hit East Sumatra was a cholera outbreak in the 1890s, primarily caused by the influx of Chinese and Javanese laborers to the

plantations through the Belawan Port. In the mid-19th century, Java and mainland China were already experiencing cholera outbreaks (32). The spread of the epidemic was exacerbated by inadequate surveillance and inspection at Belawan Port, where the weekly influx of laborers reached between 1,500 and 2,500 individuals (33). In the early 20th century, Medan faced cholera and typhoid fever outbreaks. Data indicates that in 1901, these outbreaks resulted in a mortality rate of 40 deaths per 1,000 city residents (6).

Other infectious diseases affecting the population included dysentery, smallpox, plague, malaria, tuberculosis, and sexually transmitted diseases such as syphilis and gonorrhea. In addition, the influenza pandemic, known as the Spanish Flu, spread in 1918 (33). The prevalence of these diseases was linked to the environmental conditions, weather, and climate of the Dutch East Indies, which were unfamiliar to Europeans. Europeans harbored fears and anxieties about their regions and residences, believing that the Dutch East Indies were only habitable and healthy for the local population (34).

The threat of epidemics and diseases in the tropical climate caused significant concern among Europeans in the Dutch East Indies. From the late 19th to early 20th centuries, Medan experienced high mortality rates, prompting the city government to improve public health through environmental and sanitation enhancements. Despite these efforts, the mortality rates showed little improvement. Data from 1922 to 1928 indicate that the annual death toll in Medan consistently exceeded 1,000 residents. Based on the 1920 population, the annual mortality rate was approximately 4.5 – 5%. The Table 2 illustrates the mortality rates in Medan from 1922 to 1928.

The causes of death in Medan were diverse. According to city reports, these included neurological diseases, respiratory diseases, heart diseases, digestive diseases, old age, violent causes (excluding suicide), suicide, pregnancy-related deaths, infant mortality (under three months), congenital deaths, urinary diseases, typhoid fever, cancer (malignant tumors), malaria, tuberculosis, sexually transmitted diseases (syphilis and gonorrhea), dysentery, beriberi, and other illnesses. The 1926 and 1927 city annual reports indicated that infant mortality was the leading cause of death, with

**Table 2.** Mortality rates in Medan, 1922-1928

Year	Population Grup			Total
	European	Foreign Eastern	Natives	
1922	39	730	603	1.372
1923	37	506	528	1.071
1924	46	582	525	1.153
1925	31	585	740	1.356
1926	29	534	657	1.220
1927	19	582	648	1.249
1928	14	654	817	1.485
Total	215	4.173	4.518	8.906

197 deaths in 1926 and 211 in 1927 (35-36). In 1928, tuberculosis was the leading cause of death, with 239 fatalities (37). These mortality causes disproportionately affected the Local and Chinese populations compared to other groups.

The 1926 and 1927 city reports also showed that mortality rates varied by residential area. The locations were divided into the old city center, the Chinese district (new city center), Keling Kampong, Gemeente Kampong, western Medan kampongs, eastern Medan kampongs, and hospitals. In 1926, there were 1,191 recorded deaths, excluding European residents, while in 1927, the total was 1,249, including all residents. The highest mortality rates in these two years were in the eastern Medan kampongs, with the lowest in the Gemeente kampongs. Some areas saw an increase in mortality rates from 1926 to 1927, including the old city center, the Chinese district, Keling Kampong, and western Medan Kampongs. Conversely, mortality rates decreased in the Gemeente kampong, eastern Medan kampongs, and hospitals (35-36).

## Conclusion

The growth of Medan, driven by the plantation industry and Dutch colonial intervention, significantly impacted urban development and infrastructure. However, it also led to public health challenges. In the early 20th century, Medan became a plantation city, with much of its development initiated by plantation entrepreneurs. The plantation sector played a crucial

role, leading to Medan's establishment as a *gemeente* in the early 20th century. As a rapidly developing city, Medan underwent extensive physical development. The infrastructure development in Medan, while showcasing the city's modernity, also led to various urban issues. The primary purpose of this infrastructure development was to support Medan as a center of the plantation economy. The city's status as a plantation hub attracted migrants, resulting in rapid population growth. This population increase led to segregated settlements based on specific population groups. As the dominant group, Europeans occupied the highest social strata compared to other groups, such as Foreign Orientals and local people.

The influx and mobility of the urban population introduced the threat of epidemics and diseases, resulting in high mortality rates among Europeans, Chinese, and local residents. This situation caused significant concern among Europeans about their living conditions. Mortality rates were notably high in certain areas, particularly in eastern and western Medan, predominantly inhabited by local residents. The colonial administration prioritized protecting European residents while addressing public health issues that contrasted with the grandeur of Medan's development as a plantation city.

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