

The Change and Continuity in the Morphology of Traditional Malay *Kampung* in Medan, Indonesia 1913-2024

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Abstract

This study examines the morphological transformation of the traditional Malay *kampung* in Medan, Indonesia, from the colonial period (1913) to the present day (2024). Using a typo-morphological approach, the research analyzes spatial changes of streets, buildings, and open spaces, revealing how historical, social, and economic dynamics have shaped the *kampung*'s evolution. The findings indicate that early settlements were structured around the Malay Sultanate called Istana Puri in Kota Matsum III district. This area showed a clear spatial arrangement of Malay traditional settlement. However, post-independence urbanization, migration, and economic shifts led to increasing density, irregular patterns, and the fading of traditional Malay architectural identity. By 2024, commercial activities dominated major roads, while residential areas moved inward, resulting in fragmented spatial patterns. The study highlights the impact of colonial legacies, the 1946 social revolution, and economic growth in shaping Medan's urban transformation. Understanding these changes provides insights for urban planning strategies that balance modernization with cultural preservation. This research contributes to the discourse on historical urban morphology and the challenges of maintaining cultural identity in evolving cityscapes.

keywords: urban morphology, Malay kampung, Medan, spatial transformation, cultural identity

Perubahan dan Kesinambungan Morfologi Kampung Tradisional Melayu di Medan, Indonesia 1913-2024

Abstrak

Studi ini menganalisis transformasi morfologi kampung tradisional Melayu di Medan, Indonesia, dari periode kolonial (1913) hingga 2024. Menggunakan pendekatan tipomorfologi, penelitian ini mengevaluasi perubahan spasial pada jaringan jalan, bangunan, dan ruang terbuka untuk memahami pengaruh dinamika historis, sosial, dan ekonomi terhadap perkembangan kampung. Temuan menunjukkan bahwa kampung tradisional ini pada awalnya berpusat pada area di sekitar istana Kesultanan Melayu yang dikenal dengan nama Istana Puri. Area ini didominasi oleh permukiman dengan hierarki spasial yang jelas. Namun, pasca-kemerdekaan, beberapa faktor seperti urbanisasi, migrasi, dan perubahan ekonomi menyebabkan peningkatan kepadatan hunian, pola permukiman menjadi tidak beraturan, serta memudarnya identitas budaya dan arsitektur Melayu. Pada 2024, aktivitas komersial mendominasi jalan utama, sementara kawasan hunian bergeser ke bagian dalam, menghasilkan pola spasial yang terfragmentasi. Studi ini menyimpulkan bahwa kolonialisme Belanda, revolusi sosial 1946, dan pertumbuhan ekonomi pasca kemerdekaan, telah mengubah morfologi kampung tradisional Melayu dan akhirnya membentuk lanskap perkotaan Medan masa kini. Penelitian ini menekankan pentingnya memahami perubahan morfologi dan kaitannya dengan identitas budaya pada kawasan yang berkembang pesat.

. kata kunci: morfologi perkotaan, kampung Melayu, Medan, transformasi spasial, identitas budaya

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Introduction

When a colonial power occupies a country, the spatial planning and development of that region often undergo significant changes, typically reflecting the priorities of the colonizers rather than the local community. These transformations impact urban layouts, land use, and resource allocation, often marginalizing local communities in the process. It often continues to influence even after independence.

British colonialism in Malaysia and Singapore left a lasting impact on both countries. Malaysia's urban and rural division is a colonial legacy that still continues today [1]. Post-independence policies, such as the New Economic Policy (NEP), sought to uplift the Malay population economically but struggled to dismantle entrenched spatial inequalities [2]. Urban centers like Kuala Lumpur, Penang, and Johor Bahru still reflect colonial planning in their segregated layouts, with certain areas historically linked to specific ethnic groups [3].

In Singapore, the racial zoning by Sir Stamford Raffles continues to influence the city-state's spatial organization [3]. While ethnic enclaves like Chinatown, Little India, and Kampong Glam have evolved, they remain culturally distinct neighborhoods that reflect their colonial origins [4]. These areas are celebrated for their heritage, but they also perpetuate the segmented spatial patterns of colonial rule [5].

As in Indonesia, a persistence of segregated urban patterns still exists. After independence, many Indonesian cities retained the spatial hierarchies established during Dutch colonial rule [6]. For instance, the *kampungs* (informal settlements) that housed indigenous communities remained peripheral to urban centers, and many of these areas still lack basic infrastructure [6]. Dutch-planned areas, such as Menteng in Jakarta, continued to be prestigious neighborhoods for elites, showing the durability of colonial urban designs [7].

In Medan, before the arrival of the Dutch, the Malay Sultanate, particularly the Sultanate of Deli, was a dominant political and cultural force in the region [8]. Established in the 17th century, the Sultanate of Deli emerged as a powerful entity following its separation from the Sultanate of Aceh [9]. Its pre-colonial roles and functions included governance, economic management, military defense, and cultural leadership [8][9]. The Sultanate served as the central authority, with the Sultan acting as the ultimate ruler and decision-maker [9]. The governance system was deeply rooted in Islamic principles and *adat* (customary law), ensuring social order and justice. The Sultan delegated responsibilities to local chiefs (*penghulu*) who managed smaller territories, creating a hierarchical yet cohesive governance structure [10]. The Sultanate controlled trade routes and agricultural production, particularly in tobacco and rubber, which were highly sought after in international markets [9]. The ports under its control facilitated trade with merchants from China, India, and the Arab world, enhancing Medan's economic prosperity [11].

The arrival of the Dutch in the 19th century drastically altered the roles and functions of the Malay Sultanate. Through treaties and military coercion, the Dutch East India Company (VOC) and later the Dutch colonial government undermined the Sultanate's sovereignty while exploiting the region's economic resources [10]. The Dutch introduced large-scale plantation agriculture in Medan, particularly for tobacco, rubber, and palm oil [12]. These ventures, known as the Deli Culture System, heavily exploited local labor and resources. While the Sultanate initially benefited from the revenues, it eventually lost significant control over the economy [12].

After Jacobus Nienhuys initiated the first tobacco plantation in Medan in 1863, the success of the tobacco industry, particularly Deli tobacco, attracted many other Dutch companies to invest and exploit the fertile lands of North Sumatra [13]. Nienhuys established the Deli Maatschappij in 1869, which became the cornerstone of Dutch agricultural enterprises in the region [14]. Following this, several Dutch companies entered the market, forming a network of plantations that collectively dominated the industry. By the late 19th and early 20th centuries, around 75 Dutch plantation companies were operating in Medan and its surrounding areas, primarily focusing on tobacco cultivation [14].

This marked the beginning of *koeli kontrak*. The term *koeli kontrak* refers to the system of indentured labor that became the backbone of Dutch plantation operations in colonial Indonesia, particularly in the Medan region of North Sumatra [15]. Under this system, laborers, or *kuli* or coolie (a term derived from Hindi meaning "worker"), were brought from China, India, and Java to work on plantations under binding contracts [13]. By the early 20th century, estimates suggest that over 750,000 laborers in total had been brought to the region under the system [16].

The Chinese population was concentrated in the commercial districts of Medan, particularly in areas close to the central market and trading hubs, for example Kesawan and Glugur [16]. This strategic placement reflected their role as traders, shopkeepers, and intermediaries in the plantation economy [16]. The Javanese laborers brought under the koeli kontrak system were typically housed near the plantations where they worked [17]. These settlements were often in rural areas, far from the city center, for example in Deli Serdang Region such as Deli Tua and Tebing Tinggi [17]. Some Javanese communities also lived in the outskirts of Medan. The Indian laborers, primarily Tamils, were also settled near the plantations but had distinct quarters separate from the Javanese [18]. They were brought mainly to work on rubber and palm oil plantations. A smaller number of Indians, particularly those who transitioned into other professions like clerks or merchants, settled in urban areas, close to markets [18].

Colonial cities were often designed to reflect Western dominance over the East. The colonial city center was deliberately planned to exhibit Western supremacy, creating a stark contrast with the Eastern elements [19]. In Medan, the Dutch colonial administration strategically designed their residential and office areas to reflect their authority, prestige, and functionality [20]. These areas were distinct and separate from the local and laborer quarters, aligned with the colonial practice of racial and social segregation [21]. Locations for Dutch Residential and Office Areas were around Esplanade or Lapangan Merdeka. Structures such as the Medan City Hall (Balai Kota Medan) and Governor's Residence were located here [22]. Other locations were Kesawan, Polonia, and a location near the Deli River, taking advantage of the scenic views and cooler air [21] (Figure 1).

By using a map originated from Leiden University [23] and conducting a field observation, we plot a map for this study. The origin Malays settled in an area called Kota Matsum at the south of Kesawan [24]. The Istana Puri (Puri Palace), also known as the Istana Sultan Deli Lama or the Old Deli Palace, located at Jalan Puri now, was the earlier royal palace of the Deli Sultanate before the construction of the more famous Istana Maimun (Maimun Palace) at Paleis Weg (now Jalan Bridjen Katamso). By 1888, with the completion of Istana Maimun, Istana Puri was largely relegated to simply a ceremonial role or as a secondary palace, though it retained significant symbolic importance [25]. On March 3, 1946, Istana Puri was attacked by revolutionary forces, known as 1946 Social Revolution, comprised largely of local peasants and laborers [25]. The palace was burned down and demolished as a direct act of rebellion against the Sultanate and its association with colonial rule and aristocratic oppression [26].

The area, once home to the Puri Palace, eventually became a settlement for various ethnic groups who sought to reside and earn a livelihood [27]. Following Indonesia's independence, the increasing influx of migrants into Medan led to the diminishing prominence of the native Malays. This shift is particularly evident in the spatial dynamics, where traditional Malay residential areas, originally inhabited by the indigenous population of Medan, experienced a decline in their role, spatial dominance, and architectural identity (Figure 2). Iconic Malay stilt houses have become increasingly rare [28]. Kota Matsum, neighborhood once а distinctly characterized by its Malay heritage, has transformed into an ordinary area, devoid of Malay traits and identity [29].

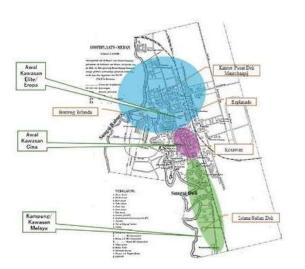


Figure 1. Racial settlement by Dutch colonial in Medan, 1895 [23].



Figure 2. Malay village in Labuhan Deli in 1875 [30].

This research aims to analyze the morphological changes in the traditional Malay *kampung* in Medan, with a focus on the area surrounding the former Puri

Palace in Kota Matsum III subdistrict. These morphological changes are believed to reflect the social dynamics of Medan's community from the Dutch colonial period to the present day [31]. The study employs the typo-morphology method, an approach within urban morphology that examines a city through its physical forms, formation processes, and transformations, thereby shaping its identity [32]. Spatial elements of urban morphology, such as streets, open spaces, and buildings, serve as key variables in this research [31][33].

The typo-morphological analysis involves the study of the form and structure of buildings, streets, and spaces between buildings, both historically and geographically. This approach aims to identify how physical elements and socio-cultural aspects are interconnected. Such an analysis provides insights into how the environment was constructed and evolved to support the social life within it [33]. In addition to highlighting the rise and decline of the Malay ethnic group in Medan, this study also explores the historical background of Medan's title as a "Multi-Cultural City" from the perspective of urban morphology.

The results of this study are expected to provide an explanation of how the physical elements of a city develop and are influenced by the socio-cultural life of its community. This understanding can be beneficial for urban planning and the conservation of cultural heritage, ensuring responsiveness to contemporary developments and changes over time.

Method

According to [34], the Malay traditional *kampung* is characterized by dispersed and irregular building layouts. There are no clear boundaries between one building and another, making it difficult to discern a definitive pattern. The area identified by [34] as the traditional Malay *kampung* in Medan is located in Kota Matsum III district in Medan, North Sumatra. This area was formerly the site of the oldest Sultan's palace, known as Istana Puri (Puri Palace). This palace was the first constructed by the Malay Sultanate before the establishment of more popular Istana Maimun in 1888 [35][36] (Figure 3).

The research area is geographically bounded as follows: to the north by Jalan Rahmadsyah, to the south by Jalan Amaliun, to the west by Jalan Sisingamangaraja, and to the east by Jalan Laksana (Figure 4).



Figure 3. The Malay traditional kampung area defined by [34]. The original source does not give name of the streets [34].



Figure 4. Research's location [37].

The selection of morphological map periods was based on the availability of comprehensive historical map documentation from various sources, particularly from [34], the KITLV Digital Library, and the administrative maps of Medan. These sources reveal that the oldest and most complete historical map dates back to 1913, followed by maps from 1925 and 1950. The 2005 map was obtained from the Department of Spatial Planning and Building of Medan City, while the 2024 map was sourced from Google Earth by overlaying the 1913, 1925, and 1950 maps.

Spatial data for the traditional Malay *kampung* was gathered from various sources, including literature reviews, field observations, and interviews with 2 government officials, 1 Malay community leader, and 5 local residents who have lived in the area for more than 30 years. One of the long-time local residents, eventually a historian, Azhari G. Putra, is author of several historical books on Medan, Malay culture and community, and the development of Medan from Dutch period till current years. The analysis was carried out through cross-referencing several theories, including the theories of traditional Malay settlement morphology, urban settlement theory, and area history (Figure 5).

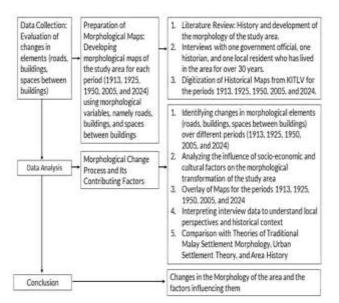


Figure 5. Research methodology flow.

This study applies morphological theory to analyze spatial transformations using an overlay method on maps from the periods of 1913, 1925, 1950, 2005, and the 2024. This approach enables the identification of changes in street patterns, buildings, and spaces between buildings over time, which are then correlated with the socio-cultural dynamics of the community in each period [33]. By integrating morphological analysis with historical data, this research reveals how physical changes in settlements reflect societal adaptations to social, economic, and cultural developments, ultimately shaping the spatial character of the settlement in the present day.

Results and Discussion

History Of the Traditional Malay Kampung in Kota Matsum

In 1870, the foundation of Medan's urban spatial planning began with the establishment of Medan Poetri *kampung* and later Kesawan [11]. Alongside its role as a colonial city—serving as an economic and political center—Medan was also notably characterized by its strong Chinese influence and its close connections to settlements in British Malaya and the Chinese homeland [11].

In 1873, Sultan Mahmud Perkasa Alam who leaded the Deli Sultanate in Medan, passed away and was succeeded by his son, Sultan Ma'mun Al-Rasyid Perkasa Alamsyah. The policy of his predecessor, which granted concessions to tobacco entrepreneurs, continued. As the plantation area expanded, the Sultan's family gained increasing profits from land compensation and rent [38]. In 1875, to address the shortage of laborers, *koeli kontrak* or contract workers were brought in from Java, India, and China [39]. The Dutch appointed leaders from these communities to oversee their activities. By 1874, there were four ethnic groups in Medan: Malays (including Batak, Minangkabau, and Aceh), Chinese, Europeans, and Asians (Arabs, Indians, and Siamese) [11][40].

From the 1870s to around 1900 (Figure 6), the city grew from a small *kampung* into a major commercial, political, and financial hub. The first spatial structures in Medan were established in the 1880s including the headquarters of the Deli Maatschappij, the oldest commercial street at Kesawan, and the Sultan's palace named Puri Palace at the south of Kesawan [11]. In 1888, another palace named Maimun Palace had finished building and Sultan it as his official residence making Puri Palace as a secondary and moreceremonial palace. During this period, Chinese merchants began to settle in Medan [11].

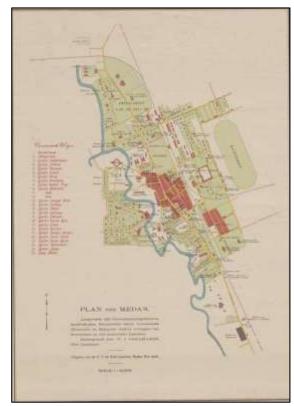


Figure 6. Plan of Medan in 1887 [41].

On April 4, 1909, Medan was granted the status of a "gementee" (municipality) with autonomous governance by the Dutch colonial government. Sultan Deli donated his land within the municipality, except for the areas of Kota Matsum and Sungai Kera, which remained under his control [42].

After the independence era from 1945 to the 1960s, Medan became an important city. It underwent rapid urbanization, let the city's transformation into an administrative and commercial center [43]. From 1970 to the present, Medan has become the largest city in Sumatra, the third largest city in Indonesia, with its main port in Belawan and Polonia Airport serving as an international transportation hub (Polonia later moves to Kuala Namu). Malay culture remains the foundation of Medan's history, and its cultural diversity has become a major tourist attraction, particularly the colonial heritage [44].

Morphological Changes in The Traditional Malay Kampung of Kota Matsum

1. Year 1913

The street pattern formed in 1913 was a grid or rectangular pattern, resulting from the tobacco plantations managed by Deli Maatschappij [14]. These streets were known as Jalan Radja (now Jalan Sisingamangaraja) to the north, Jalan Djapari (now Jalan Rahmadsyah) to the north, Jalan Amalioen to the south, and Jalan Laksana to the east.

In 1913, the space between buildings in this area initially consisted of *kampung* land, the grounds of the Puri Palace, and oil palm plantation land. The settlement pattern was irregularly scattered. In Area B (the royal palace area), there was one palace building and 10 other buildings (4 houses made of stone, 4 houses made of wood, and 2 houses made of bamboo), arranged in a rectangular shape, opposite the palace. In Area C (the oil palm plantation area), there were five buildings.

The residents who settled in this area were the native Malay group, specifically the Sultan and his family and the Malay people working in the palace [45]. The houses were spaced far apart from each other, with each house having a yard but no fences separating the properties. Traditional Malay houses did not have fences to demarcate the boundaries between homes [46] (Figure 7).

The function of buildings during this period was primarily residential. For the noble family, these included palace (Figure 8) or houses with brick and triple or pyramid-shaped roofs. Meanwhile, the ordinary people's houses were traditional stilt houses made of wood.

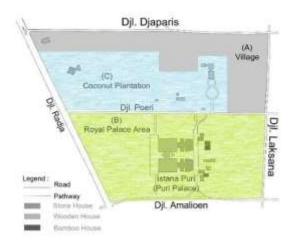


Figure 7. Malay traditional *kampung* in 1913 was redrawn from the 1913 Medan City Map [47].



Figure 8. Istana Puri (Puri Palace) [23].

2. Year 1925

In 1925, the area did not experience significant changes compared to the previous period. The existing streets remained the same, with no changes in their pattern or additions. However, the 1925 map of Medan from the KITLV shows the installation of barbed wire fences to the east of the Puri Palace area, while the western side was enclosed by a plant fence. Barbed wire fences were also visible around buildings from the previous period, which housed the Sultan's family and relatives. The purpose of these fences was to mark property boundaries, provide privacy, enhance security, and contribute to the natural aesthetics of the surrounding environment [36].

At that time, Jalan Draja was the main road connecting Medan to south Tapanuli and Padang. South Tapanuli is the origin of Mandailing group while Padang in west Sumatra province is the origin of Minangkabau group. On Jalan Amaliun (or Amalioen), there was a bus terminal routing from Medan to Sipirok in Tapanuli and Padang. This route played an important role that brought Mandailing and Minangkabau. Interestingly, these groups known for their Islamic religious-teachings. Simultaneously, modernization was occurring in nearly every aspect of Malay life, such as the use

of glass, brick, and stone replacing wood and bamboo in building construction. This 'modernization' attracted the Minangkabau and Mandailing groups, who moved in large numbers to settle in the area [36]. Most of them worked as traders [28]. Some also worked as religious teachers for the children of the Malay ethnic group [35]. This group of people who worked as Islamic religious teachers were allocated land around Jalan Laksana (currently part of Gang Ali and Gang Penghulu, noted that gang means alley or lane). Migrant traders resided on Jalan Djaparis, intermingling with the ordinary Malay people (Figure 9).



Figure 9. Malay traditional *kampung* in 1925 was redrawn from the 1925 Medan City Map [47].

3. Year 1950

The Puri Palace did not undergo many changes, but part of the western courtyard of the palace was transformed into a settlement area. Several houses made of wood and bamboo appeared around Jalan Djaparis and Jalan Laksana, indicating that the residents were commoners, as stone-built houses were only owned by the nobility at that time.

The Malay ethnic group, as the indigenous population, rejected working as laborers or contract workers [11]. They had access to local natural resources such as forests, rivers, and fields, which they could utilize for their livelihood. As a result, they felt no need to depend on wages from plantation work. Their agricultural traditions produced export commodities such as nutmeg, pepper, areca nut, and tamarind, in addition to cultivating rice and secondary crops for daily consumption. With the proceeds from these agricultural products, they were able to live prosperously [48].

After their lands were converted into plantations, the Dutch provided them with strip land that could

be used for seasonal crops. This change impacted their way of life, as they no longer cleared forests for export crops (such as nutmeg or pepper) but instead waited for the tobacco season to end before using the strip land. This shift led to a more passive lifestyle, where they became dependent on others and adopted a laid-back attitude [49]. The Malays were once "people of ease" (economically capable residents), while the laborers were of Chinese, Javanese, and Indian descent [35]. The Malays no longer had jobs but owned land. There were no more sultans, the Dutch had been expelled, Indonesia was independent, and they no longer received land rent from the plantations—source.

In 1946, during the social revolution, unrest led to the burning of the Puri Palace and the murder of the Sultan and Malay nobility. This had a significant impact on the Malay ethnic group, as they lost their leadership figures, strategic positions in government and trade, and sources of income [45]. This situation forced them to sell their land to immigrants and migrate, some of them to Belawan, where they worked as fishermen [50].

The area of the former Puri Palace, which was burned down, developed into a settlement for the Mandailing ethnic group. The palace grounds on Jalan Radja were transformed into large buildings. At the corner of Jalan Amaliun and Jalan Nusantara, a hotel was erected. The former palace grounds on Jalan Laksana were converted into settlements for the Mandailing and Minangkabau ethnic groups. The footpath, which had previously been enclosed by barbed wire, transformed into Gang Tengah, while new alleys such as Gang Ali and Gang Penghulu appeared along Jalan Puri.

The settlement pattern in 1950 remained irregular, although the addition of houses followed the main road's direction. Rows of shophouses emerged along Jalan Djaparis, which were owned by the Sultan and rented out to the Chinese ethnic group [35]. This phenomenon marked the beginning of Chinese settlement in the area.

In 1950, the function of buildings in the study area included residential houses and single-story shophouses, which were used for business. The open spaces between buildings, which had previously been vacant, became increasingly filled with new constructions, and the former grounds of the Puri Palace had been transformed into residential areas (Figure 10).



Figure 10. Malay traditional kampung in 1950 [34].

4. Year 2005

The main routes in this area continued to serve as the primary circulation paths for the settlement. Internal roads evolved into a more complex network due to the increasing density of the settlement. Several new roads appeared in the study area, including Jalan Kemala II, Gang Dalam, Gang Batery, Gang Pelita, Gang Karya, Gang Paten, Gang Piano, and Gang Genteng. These alleyways were narrow, about 1 to 1.5 meters wide. The settlement remained dispersed without a regular pattern, with houses lining the roads. Along Jalan Djaparis/Rahmadsyah, rows of two-story shophouses, each 3-4 meters wide and extending up to 20 meters in length, were built. The shophouses facing Jalan Rahmadsyah served dual purposes: the ground floor was used for business, while the upper floor functioned as residential space. In contrast, the shophouses located further inside Jalan Rahmadsyah were solely used as residences.

Traditional wooden stilt houses were still visible on Jalan Puri, Gang Pribadi, with one unit remaining. This structure had undergone adaptive transformation, with the space underneath the house now used for the residents' activities. Other buildings had evolved into wooden or stone structures built directly on the ground, without stilts or with modern support structures. Decorative bee-shaped ornaments hung at the front of the houses. The buildings' colors were dominated by green and yellow, the proud colors of the Malay ethnic group. By 2005, the spaces between buildings had narrowed due to the high density of settlement, except in certain areas with larger plots of land that still retained private yards (non-public) as open spaces between buildings (Figure 11).



Figure 11. Traditional wooden still house still exists on Jalan Puri, Gang Pribadi.

In 2005, the road network within the settlement continued to expand. This began with the emergence of Jalan Kemala 1, Gang Keluarga, Gang Merpati, and Gang K. Alimun, followed by Gang Wasono and Gang Genteng around the 1970s-1980s [35]. The name "Kemala" was taken from one of Sultan Ma'mun Al Rasyid Perkasa Alam's (1858–1873) children, Tengku Eria Kamala [35]. These roads connected the settlements to the main routes such as Jalan Sisingamangaraja, Rahmadsvah, and Puri in the north, as well as Jalan Laksana and Jalan Amaliun in the south. Around the 1970s, a bus terminal/pool for the Aceh-Medan route was located on Jalan Laksana, marking the beginning of Acehnese settlements and businesses (small shops and eateries) around Jalan Laksana, Jalan Puri, and Jalan Nusantara.

Additional roads appeared in the following years, including Jalan Kemala II, Gang Dalam, Gang Batery, Gang Pelita, Gang Karya, Gang Paten, Gang Piano, and Gang Genteng, characterized by winding and narrow paths measuring approximately 1-1.5 meters in width. These additions were driven by population growth, resulting in buildings being divided into smaller units, which increased the area's density. The scattered building pattern without clusters was a primary factor behind the formation of these small alleys, which adjusted to leftover yard spaces or plots repurposed for shared circulation paths. Other roads that were added include Jalan Ramlan Yatim and Jalan Medan Putera, with road patterns resembling an inverted "A." Additionally, Jalan Nusantara, which had a perpendicular layout relative to Jalan Puri and Jalan Amaliun, reappeared. This road had existed during the 1913 and 1925 periods but disappeared around 1950 following the burning of Puri Palace.

The ethnic composition of residents also became increasingly diverse. Along Jalan Rahmadsyah and Jalan Laksana, the Chinese ethnic group predominantly settled, occupying shophouse (ruko) structures used for both business and residence. Gang Dalam I, Gang Dalam II, Gang Maimun, Gang Merpati, Jalan Kemala I, Jalan Kemala II, Gang Batery, Gang Pelita, and Gang Karya were also inhabited by the Chinese, characterized by similar shophouse buildings primarily used as residences. Gang Keluarga was dominated by the Malay and Mandailing ethnic groups, while Gang Tukang and Gang Wasono were primarily home to Javanese residents. Jalan Nusantara, Jalan Ramlan Yatim, and Jalan Medan Putera were predominantly inhabited by the Mandailing ethnic group. Meanwhile, other roads featured a mix of Acehnese, Malay, Mandailing, and Minangkabau ethnic groups (Figure 12).



Figure 12. Malay traditional *kampung* in 2005.

5. Year 2024

The settlement pattern developed without a specific structure, with each building ultimately orienting itself towards the roads and turning its back on others. The internal roads of the settlement were designed to meet the accessibility needs of residents, dividing plots into smaller parcels. Several small alleys were added or underwent changes in their layout. For instance, Gang Dalam II was created with an irregular pattern connecting Jalan Rahmadsyah to Gang Keluarga. Gang Merpati formed smaller pathways to link residential areas to the mosque located at the corner of Gang Keluarga, following a winding and irregular pattern. This morphological changed also similarly mentioned by Ginting and Fitri (2024) when they researched the changes in Kesawan area [51].

Changes in street patterns were also seen in Gang Penghulu and Gang Ali; while in 2005, these roads ran straight, connecting Jalan Puri to Gang Ali, by 2024, Gang Penghulu had slightly curved to the left. Additionally, Gang Dalam, Gang Merpati, Gang Kemala I, Gang Kemala II, Gang Batery, and Gang Pelita each added branches to the east to accommodate circulation in the increasingly dense inner settlement areas.

The settlement pattern in 2024 was not significantly different from 2005, except for its increasing density and scattered, irregular layout. Building blocks carried a dual burden, facing away from each other, with buildings oriented towards the roads. Building functions became more diverse, including residential houses, shophouses, combined shophouseresidences, eateries, small shops, and commercial buildings such as hotels, supermarkets, and government/private offices that were not commercially oriented. The spatial distribution of buildings followed their function and intended use. Commercial buildings and business-oriented establishments were concentrated along the main roads: Jalan Sisingamangaraja, Jalan Rahmadsyah, Jalan Laksana, Amalioen Road, and the western section of Jalan Puri. Meanwhile, residential buildings were located deeper within the settlement's interior (Figure 13).



Figure 13. Malay traditional kampung in 2024.

In 2024, the spaces between buildings in some areas were transformed into vacant lots or parking spaces to support the functions of structures such as hotels and supermarkets. Malay architectural features are scarcely found, except in Madani Hotel, which incorporates traditional Malay ornaments and the iconic yellow color. The entrance of Madani Hotel takes inspiration from the entrance of Istana Maimun, featuring a black dome. This modern building, Madani Hotel, blends traditional Malay architecture with an Islamic atmosphere, reflecting a fusion of historical and contemporary design elements (Figure 14).



Figure 14. a) Madani hotel, b) Maimun palace [52][53].

Amaliun Food Court located on Jalan Amaliun is another example. The green-shade building with Islamic geometric ornaments shows a blending style of Malay and Islam identity. Malay identity also appears in the form of alley gate on Jalan Sisingamangaraja Gang Keluarga. A strong yellow and green colors written "Masjid Muallimin MDTA" with two small mosque-dome-style pairs the alley clearly reflects Islamic Malay identity of the alley (Figure 15).

In general, the changes in the spatial pattern of the Traditional Malay kampung in Medan are summarized in Table 1.



Figure 15. a) Amaliun Food Court, b) Gate "Masjid Muallimin MDTA" at Gang Keluarga [54].

Factors Influencing the Morphological Changes in The Malay Traditional *Kampung*

Period of 1913–1925. During this time, Puri Palace served as the center of Malay power. The settlement pattern around the palace was highly structured, with areas segregated based on ethnicity to maintain the exclusivity of Malay settlements. This separation created clear boundaries between the Malay community and immigrants. Pathways dominated as the primary infrastructure, producing organic settlement patterns that followed the shape and natural conditions of the area. The social hierarchy and Malay power structure influenced the choice of settlement locations and the spatial arrangement around the palace. Major changes occurred after the quarter system (ethnic-based residential segregation) ended in 1918, coinciding with Medan's status upgrade to a "Gementee" (municipality) in the same year. This opened opportunities for other ethnic groups, especially the Mandailing and Minangkabau, to settle in the area. The Sultan and his relatives, as landowners, began granting residence permits to immigrants in vacant areas previously used for plantations. Fences delineated these spaces, marking clear social boundaries between natives and immigrants, and led to a scattered and irregular settlement pattern.

Period of 1950-2005. After Indonesia's independence and the social revolution in 1946, the Malay ethnic group was marginalized, losing strategic positions in government and the economy. To sustain their lifestyle, many Malays sold their land to immigrants, particularly the Minangkabau, who worked as traders. The area's connection to the Chinese district and its accessibility via the trans-Sumatra route made it increasingly crowded and rapidly developed, especially with the establishment of Pajak Sambas in 1969. Consequently, the area became a settlement destination for migrants seeking economic opportunities.

Period of 2005-2024. Medan's rapid economic growth transformed the area into a denser neighborhood. The vicinity of Istana Maimun, Taman Sri Deli, and Al Mashun Mosque became popular Malay cultural tourist attractions, enhancing the area's appeal. Improved accessibility and tourism attractions drew more migrants from both out of town and other regions to settle here. Spatial patterns evolved further with increasingly dense immigrant settlements, adapting to rapid economic growth and rising housing demand.

The spatial changes in the *kampung* in 2024 resulted from a complex interaction of economic growth, landuse changes, improved accessibility, and decades of socio-cultural dynamics. Medan's rapid economic development spurred urbanization, increasing population density and tighter settlement patterns. Many buildings were converted into shophouses, and supermarkets. Infrastructure hotels, improvements and enhanced accessibility facilitated the influx of newcomers, accelerating the settlement development process. The growing ethnic diversity in the area enriched social dynamics, shaping a more heterogeneous settlement pattern.

Islam and the Identity of Medan Multi-ethnic and Multi-cultural

No	Spatial element	1913	1925	1950	2005	2024
1	Layout					
2	Malay Identity	Istana Puri (Puri Palace)	Istana Puri (Puri Palace)	N/A (the Puri Palace was burnt)	Madani Hotel	Madani Hotel and Amaliun Food Court
		Street names such as Radja (meaning King), Poeri or Puri (meaning palace), and Amalioen or Amaliun (derived from the name Tengku Amaludin)	Street names such as Radja (meaning King), Poeri or Puri (meaning palace), and Amalioen or Amaliun (derived from the name Tengku Amaludin)	Street name Kemala (the name of the Sultan's granddaughter), and Maimun alley (named after the Maimun Palace	Street name Kemala (the name of the Sultan's granddaughter), and Maimun alley (named after the Maimun Palace	Street name Kemala (the name of the Sultan's granddaughter), and Maimun alley (named after the Maimun Palace
3	Function of the area	Coconut plantations, Malay village, and the area of the Malay Sultan's palace along with his relatives.	Malay village, and the area of the Malay Sultan's palace along with his relatives.	Multi-ethnic housing with Malay, Mandailing, Minangkabau, Chinese, and Acehnese communities	Multi-ethnic residential areas, hotels, supermarkets, shophouses, shops, government and private offices	Housing, shops, traditional Malay hotels with an Islamic atmosphere, government offices, private offices, restaurants, stalls, cafes
4	Gate	No special gate	No special gate	No special gate	No special gate	Gate Gang Keluarga

Table 1. Morphological changes in the Malay traditional kampung settlement in Medan.

Islam is the official religion of the Malay group, and their social and cultural identity is closely tied to Islamic traditions [21]. The need for teachers for Malay children encouraged the arrival of immigrant ethnic groups such as the Minangkabau and Mandailing, who were known for their strong Islamic way of life [35]. Immigrants serving as teachers for the royal family were granted residence by the Sultan along Jalan Djaparis and Jalan Laksana, which were initially coconut plantations. Land allocations at that time did not follow a specific pattern, as the Sultan or his relatives simply designated plots and boundaries. This led to the area's irregular settlement pattern. Simultaneously, modernization influenced the daily lives of the Malay ethnic group, especially through the architecture of Istana Maimun and the mosque. The emergence of a new trading center (Pajak Sambas) adjacent to the spurred the growth of new settlements [49]. This trend was evident along Jalan Djaparis (now Jalan Rahmadsyah), marking the start of residential development in the research area. The Chinese and Minangkabau ethnic groups, known for their trading activities [49], dominated areas near trade centers or main roads. Meanwhile, the Malay and Mandailing ethnic groups, less involved in commerce, chose to reside in peripheral areas. This was evident along Jalan Rahmadsyah and Jalan Laksana, dominated by the Chinese, while the interior

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areas (e.g., Gang Keluarga) were predominantly occupied by Malays and Mandailing.

Conclusion

The morphological evolution of the traditional Malay kampung in Kota Matsum, Medan, can be analyzed through three key elements: streets, buildings, and space between buildings. Initially planned to support Dutch plantations in early 1900s, the streets began as linear paths and later transitioned into a grid-like arrangement. Between 2005 and 2024, additional streets emerged, extending from main roads into the kampung's interior, often ending in cul-de-sacs. These streets lack a systematic pattern and exhibit irregular structures. Buildings in the area have also undergone significant changes, shifting from royal residences, such as palaces, to housing for the general populace. Traditional stilt houses have mostly been replaced by attached structures, with one notable exception on Jalan Puri, Gang Pribadi. In earlier periods, the Malay identity was evident in structures like the Puri palace and other Malay-style buildings. However, by the 2000s, this architectural identity had largely faded, with few exceptions, such as the Madani Hotel at the intersection of Jalan Sisingamangaraja and Jalan Amaliun, Amaliun Food Court, and a gate at Gang Keluarga. Open space between buildings, once characterized by expansive courtyards, had significantly diminished by 2005 due to rising population density. This densification also led to functional changes, as streets like Jalan Rahmadsyah, Jalan Laksana, Jalan Sisingamangaraja, Jalan Amaliun, and Jalan Puri transitioned to commercial uses, while residential areas became concentrated in the kampung's interior.

Several factors have driven these morphological changes, including migration waves, particularly from the Minangkabau and Mandailing groups, postindependence development, modernization efforts, Medan's emergence as an economic hub in Sumatra and Malaysia, and the social revolution of 1946.

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