Shifting Perceptions of the Locals after Reclamation: The Ternate Historic Coastal City, Indonesia

Khaerunnisa, Nurfanda Septiwati J. Wua, Israni Silvia Sujarmanto, & Brigitta Michelle
Department of Architecture, Universitas Atma Jaya Yogyakarta,
Indonesia
Email: khaerunnisa@uajy.ac.id

Abstract

Land reclamation played a vital role in the spice trade since the 15th century because of nutmegs and cloves, resulting in the fortresses built by the European traders in Ternate, Indonesia. In the early 2000s, the government conducted a large-scale restoration of land to boost the economy of the city. Measuring the changes in the city image due to the alteration of physical setting is essential to identify its impact on the integrity, predominantly on historical cities.

This research examines the social and cultural impactions of land reclamation and city development. It was carried out by interviewing the older (<50 years old) and the younger (>20 years old) generations. The result shows that several elements in the non-reclaimed area lost their significance, while the relevance of some persisted. This study reveals that the shifting perceptions of the younger people about new city elements in the reclamation area has a tendency to merge the integrity of the original old city with the reclamation area.

Keywords: city image, reclamation, historic coastal city

Introduction

The spatial configuration of a city affects its perceived image. According to Kevin Lynch, the 5 elements that determine and create a perceived image of a city include paths, edges, districts, nodes, and landmarks (Lynch, 1960). Lynch also stated that a city image is public and that it is an overlapping image of individuals (Meenar, Afzalan, & Hajrasouliha, 2019). The city image is vital for wayfinding, which describes how people create mental maps for directions. It also affects the legibility of the city or influences people to feel more engaged. Moreover, as a city with a long history and cultural footprint, the integrity of Kota Tua Ternate needs to be maintained to support the wholeness of the natural and cultural heritage as well as its attributes.

A city image is a character that portrays how inhabitants can recognize and describe the physical and non-physical aspects of their surroundings (Atik, Çakir, & Benian, 2009). Paths are roads and pathways, edges are the boundaries between two areas, and districts are regions with contrasting features such as physical, functional, or historical nature from their surroundings. Meanwhile, nodes are strategic spots along paths, including stations, intersections, and open spaces. Landmarks are usually physical spaces that support visitors or dwellers to identify and recognize a place (Harisdani, et.al., 2020).

In Indonesia, Ternate is a historic island city with a vital role in the spice trade, especially nutmeg and cloves, since the 16th century. The city has experienced influences from the local sultanate, European traders and national development. Moreover, the Sultanate of Ternate emerged in the 13th century and played a role in spice production and trade with European countries. There are many parts of historical buildings in Ternate, which include Portuguese fortresses to control the spice trade. For instance, Fort Oranje, initially named Fort Melayu was built in 1607 by the Portuguese before the Dutch took over in 1609 (Amal, 2010). Since Indonesia's independence in 1945, the city's economy has focused on trading alongside farming and fishing. Outstanding Universal Value (OUV) means cultural and/or natural significance that is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity (UNESCO World Heritage Center, 2011). With a long history of trading and culture, ternate has the potential to pass universal values through generations.

1890   **1943**   **2013**

Fig. 1: Ternate City in 1890 (Taylor, 2018), 1943 and 2013 (Maulana, 2018)

Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes (UNESCO World Heritage Center, 2011). Since 2001, Ternate has passed through large-scale land reclamation as indicated in Fig. 1 (Laming & Rahim, 2020) to expand the economic sector. These include shopping districts, public spaces, mosques, and streets, bringing new layers to the historic landscape of the area. Taylor (2018) identified buildings in the city of Ternate Old Town based on F.S.A. de Clercq's Bijdragen tot de Kennis der Residentie Ternate (1890). These buildings were the Fort Oranje, the port, the pier, the Ternate Sultanate Palace, and the Protestant church. The document stated that the boundaries

of the Ternate Old Town are the lower slope of the mountain ridge and the avenue along the shore. Residencies such as the nine Kampongs, the Capital City, and the Sultanate area are also among the three distinctive districts. The paths such as wide roads connected by wooden bridges which include Toboko, Bastion, Talangami, and Short Kalapa roads have been identified.

This shows that the older and younger generations might have different perspectives on the city's elements that may influence the district's integrity. The former had better insights into the historic non-reclaimed area before the land reclamation, while the younger generation can pinpoint the most popular area.

This research investigates how land reclamation impacted the historic city image in Ternate by analyzing the older and younger generations. In particular, this research aims to identify and compare the local's perception of the city's elements that alter before and after the reclamations. These differences are utilized to show the tendency to alter the historical coastal district's integrity over time.

Review of Literature

Port cities with a colonial past generated strong regional and spatial effects on the urban morphology, and became the basic changing force for the urban spatial reconstructions (Zhao, Wong and Hanafi, 2019). Several investigations have been conducted about historical areas and current developments (Khaerunnisa, Shibata, & Sawaki, 2014) in other countries. These include the land reclamation of Lake Biwa in Japan, which show that the green spaces near the reclaimed shores can increase people's awareness of Nature (Zeballos & Yamaguchi, 2011).

A study also examined the land reclamation in Hong Kong and the effects on the environment (Jiao, Wang, & Nandy, 2006), while another compared its impacts in Penang on the reclaimed and non-reclaimed coastlines (Chee et. Al., 2017).

The previous research shows that land reclamation plays a role in the historical evolution of waterfront architecture and planning, especially in the historic port towns (Heathcott 2022). Land reclamations also shift the landscape (Tenzon 2019), leading to ecological, social shifts and cultural connection loss to the sea (Powell 2021). They have also revealed that reclamation brings value to the society and the economy, leading to developments (Didia, Gobo and Brown, 2022).

However, there is a limited research on how land reclamation has impacted the images of cities according to the inhabitants. Meanwhile, investigating the effect on Ternate can bring various stakeholders to consider a suitable approach to overcome this challenge. In historic areas, this process can negatively impact the area's significance.

Research Methods

This research used a quantitative–non-experimental approach and the respondents were interviewed by filling out questionnaires. As shown in Fig. 2, the location area was ± 3.75 Ha with a total of 123 buildings in the non-reclaimed area, while the reclaimed area was ± 20.34 Ha.

The surrounding area   - - - - The shoreline before land reclamation
The reclaimed area

Fig. 2: The spatial scope of the study
Source: Author

The group sampling was based on two age categories as presented in Table 1, namely less than 20 years old (after the reclamation) and more than 50 years old (before the reclamation). The younger group did not physically experience the area before the reclamation and were able to give insights without sentiment, while the older group offered their perceptions. The analysis utilized the theory of Kevin Lynch to examine the perception changes of the city image that are influenced by the physical elements, namely paths, edges, districts, nodes and landmarks (Lynch, 1960).

Table 1. The respondent groups
Source: Author

Respondents	Size	Characteristics
Less than 20 years old	50 people	15 to 20 years old and live in Ternate. The average respondents are students from or come to Ternate.
More than 50 years old	50 people	45-61 and lived in Ternate for more than 30 years

Findings and Analysis
This research maps all the elements of the city based on the interviews with the respondents. The results are compared between two categories to identify any significant city image alterations in the area.

Paths
There were two perceived main paths before the reclamation as shown in Fig. 3. Approximately 62% of the older group selected the Pahlawan Revolusi Street as the main road, and 38% selected the Hasan Boesoeri Street as the main road. The Gamalama Market was the most popular in the area because it was close to the Pahlawan Revolusi Street. Based on the Fig. 4, many younger respondents (64%) selected the Sultan M Djabir Sjah Street, the Pahlawan Revolusi Street had 30%, while 6% voted for the Nukila Street, a path in the non-reclaimed area.
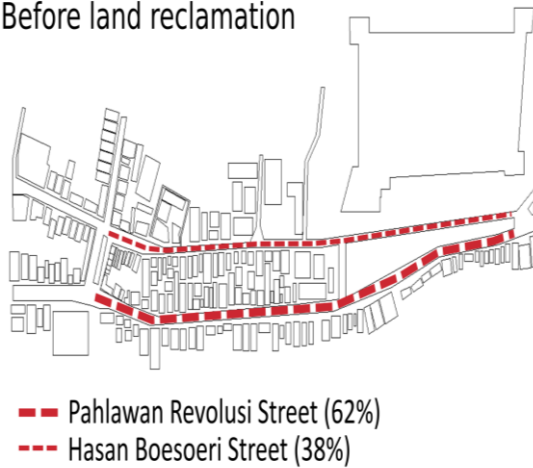
Before land reclamation

-- Pahlawan Revolusi Street (62%)
--- Hasan Boesoeri Street (38%)

Fig. 3: Paths according to the older age
group
Source: Based on the Questionnaire Survey
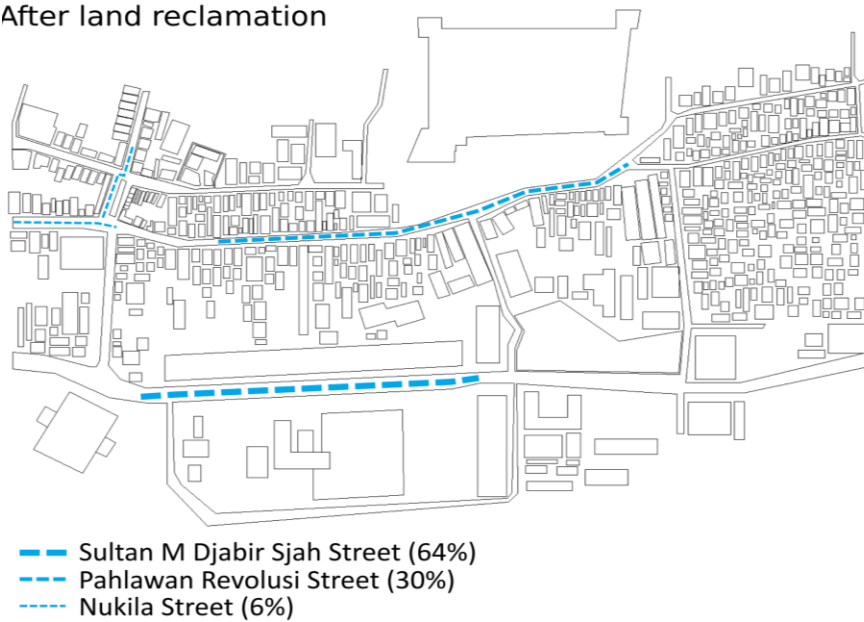by the Author, 2020

After land reclamation

-- Sultan M Djabir Sjah Street (64%)
--- Pahlawan Revolusi Street (30%)
---- Nukila Street (6%)

Fig. 4: Paths according to the younger age group
Source: Based on the Questionnaire Survey by the Author, 2020
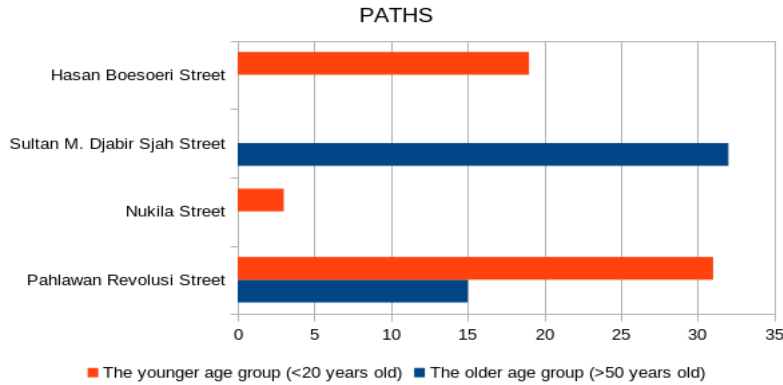
PATHS

Fig. 5: Questionnaire results on paths
Source: Author, 2020

Fig. 6: Hasan Boesoeri Street, a path in the non-reclaimed area
Source: Google Street View, 2022

Fig. 7: Sultan M Djabir Sjah Street, a path in the reclaimed area
Source: Field Survey by Author 2020

Fig. 5 shows that there were significant changes before and after the reclamation. It was reported that Pahlawan Revolusi Street lost its significance on a larger scale. The Nukila Street was only mentioned by the younger group and not Hasan Boesoeri. A significant segment of the street had been too narrow for cars to enter and merged with the Fort Oranje area. Meanwhile, there were similarities in both areas, where the non-reclaimed and reclaimed lands had the same materials. All the observed paths had no street furniture other than streetlights and those in the reclaimed area were wider, especially Sultan M Djabir Sjah. As presented in Fig. 6, Pahlawan Revolusi and Hasan Boesoeri Streets were narrower than Sultan M Djabir Sjah Street which has 2 segments, making it easy for pedestrian movement (Fig. 7).

Moreover, the buildings' architectural style in the path was newer than those in the non-reclaimed area. There was also a large shopping mall since destinations and visual elements can determine a path's popularity (Harisdani et al., 2020). This made the younger respondents choose the Sultan M Djabir Sjah Street the most. The reclaimed area's popularity also affected the non-reclaimed area. The decrease of crowds in the Hasan Boesoeri Street impacted shop owners in the area, impacting the local economy.

Edges

The older age group selected four edges as presented in Fig. 8. The shoreline before the reclamation had the most votes, namely 40%, while Fort Oranje had 24% that was moot in front of the fort. According to the interviewers, the moot bridged the visual difference between the fort and its surroundings. Meanwhile, 20% of the older group voted for the East

Makassarese settlement as an edge. This is because it has a border between the settlement, shopping district, and market. Approximately 16% selected Lelong, a beach on the East side of the East Makassarese settlement before the reclamation. From Fig. 9, it was discovered that the younger age group selected several 6 edges. Lelong had the most votes, 34%, the new shoreline had 28%, while Tapak Beach, the shoreline on the East side of Lelong, had 4%. Sultan M Djabir Sjah and Gamalama Market, located near the reclaimed area, was dominant in size compared to its surroundings and had 2% of the votes.
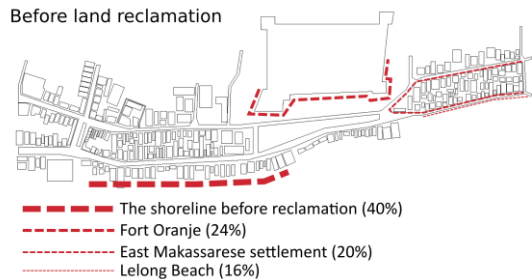

Before land reclamation

- The shoreline before reclamation (40%)
- Fort Oranje (24%)
- East Makassarese settlement (20%)
- Lelong Beach (16%)

After land reclamation

- Lelong (34%)
- The shoreline after reclamation (28%)
- The shoreline before reclamation (16%)
- Fort Oranje and East Makassarese settlement (6%)
- Tapak Beach (4%)
- Gamalama Market area, , bay near the market, Sultan M. Djabir Syah Street (2%)

Fig. 8: Edges according to the older age group
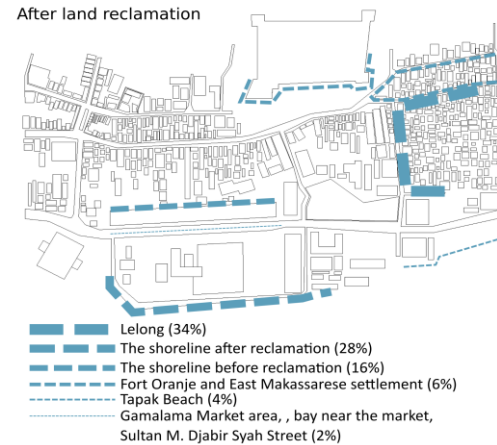Source: Based on Questionnaire Survey by Author, 2020

Fig. 9: Edges according to the younger age group
Source: Based on Questionnaire Survey by Author, 2020
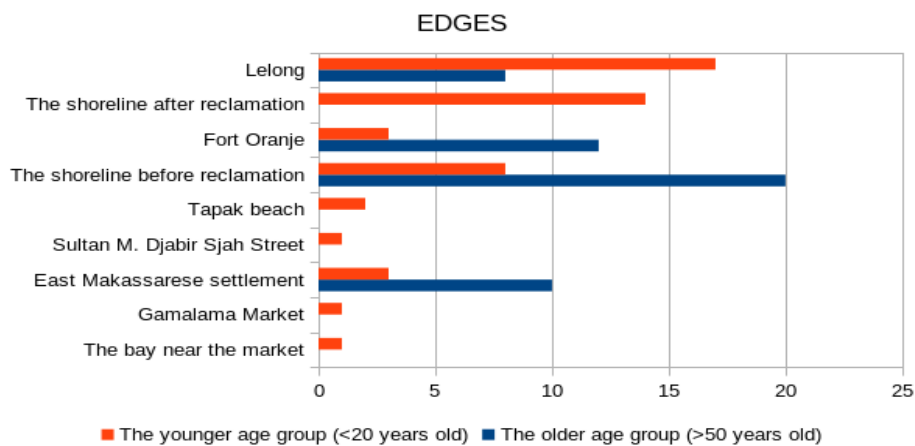

Fig. 10: Questionnaire results on edges
Source: Based on Questionnaire Survey by Author, 2020

Fig. 10 shows that there were significant changes before and after the reclamation. Although the shoreline was now in the reclaimed area, the younger group still perceived the previous shoreline as an edge. The East Makassarese settlement, which is more spacious, had fewer votes than Lelong.

Fig. 11: Moot in Fort Oranje, an edge in the surrounding area
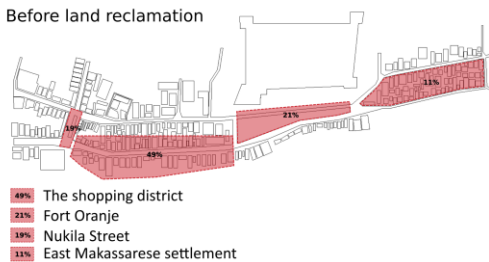Source: Modified from(Jacky 2021)

Fig. 12: Shoreline, an edge in the reclaimed area
Source: Modified from (Himura 2022)

There were similarities in both areas, with buildings as edges and notable differences. Edges in the non-reclaimed areas were man-made (Fig. 11), while the reclaimed area had the sea bordering the edges (Fig. 12).
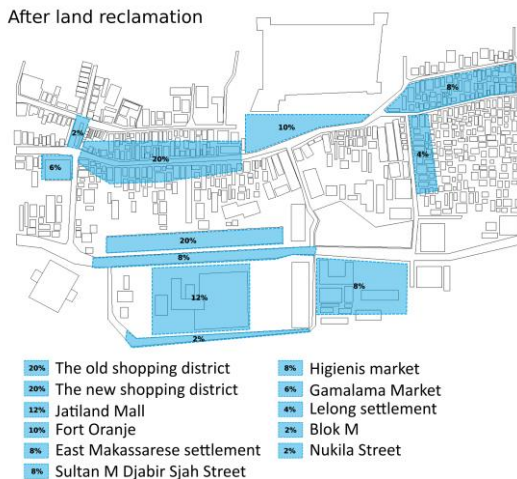
Districts

Fig. 13: Districts according to the older age group
Source: Based on Questionnaire Survey by Author, 2020

Fig. 14: Districts according to the younger age group
Source: Based on Questionnaire Survey by Author, 2020

There were 4 perceived districts before the reclamation (Fig. 13), where the old shopping district had the most votes, with 49%. The older group perceived the place to have a significant historical background. They also held nostalgic memories of the shopping district because most of their recreational time was spent there. All the buildings in the old shopping district were stores and the locals had renovated some to appear more modern.

Meanwhile, the Fort Oranje area had 21% of the votes. It was voted by the older group because the fort had a distinct historical background, was built by the European traders, was a massive and plain shape, and functions as a tourist center from its surroundings. Meanwhile, Nukila Street and East Makassarese settlement had 19% of the votes. Nukila Street was one of the most crowded districts in the non-reclaimed area because of the dual four-way intersections.

The East Makassarese settlement held a distinct subculture compared to its surroundings because the inhabitants were not from the Ternate Island. There were 5 new

districts in the reclaimed area after the reclamation (Fig. 14). The new shopping district in the reclaimed area had 20% of the votes, which is similar to the old one in the non-reclaimed area. The district's minimalistic architectural style gave a more modern facade. Jatiland Mall, a big shopping mall in the reclaimed area had 12%, while Sultan M Djabir Sjah Street and Higienis Market had 8%. The former was the main road in the reclaimed area, while the latter was a relocated market from the non-reclaimed land. Gamalama Market, the oldest market in the area had 6% votes from the younger generation and the other had 5%. Lelong, a settlement in the reclaimed area had 4%, while the Nukila Street and Blok M got 2% of the votes. The Nukila Street was in the non-reclaimed area, while Blok M was a culinary district in the non-reclaimed area.
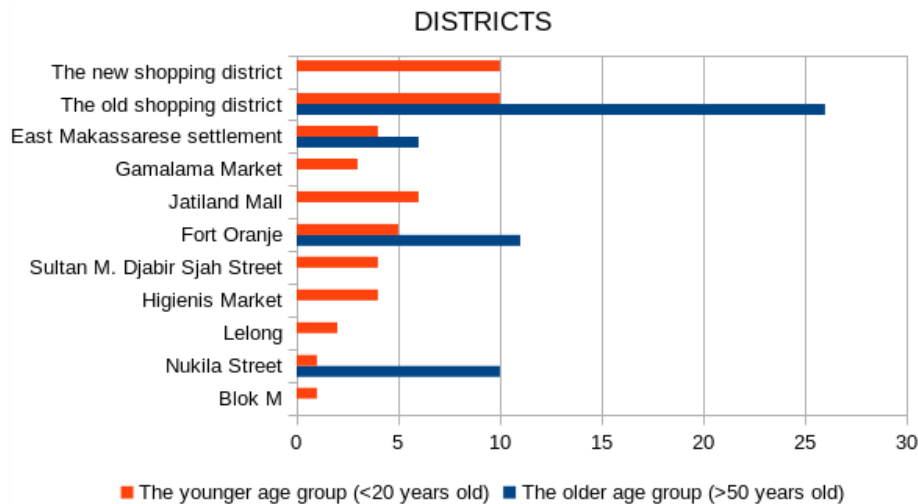

Fig. 15. Questionnaire results on districts
Source: Based on Questionnaire Survey by Author, 2020

Fig. 15 shows that there were significant changes before and after the reclamation. The old shopping district had fewer votes, although its importance is still maintained in the area. Nukila Street and Fort Oranje significantly had fewer votes after the reclamation because both the younger generation did not recognize the districts. Therefore, they were identified as other elements such as landmarks because the area was wider due to the reclamation. There was no significant reduction of votes in the East Makassarese settlement. The districts in the non-reclaimed area were more recognized by the younger group because they held distinct functions and more variety from their surroundings.

Fig. 16: Nukila Street, a district in the non-reclaimed area
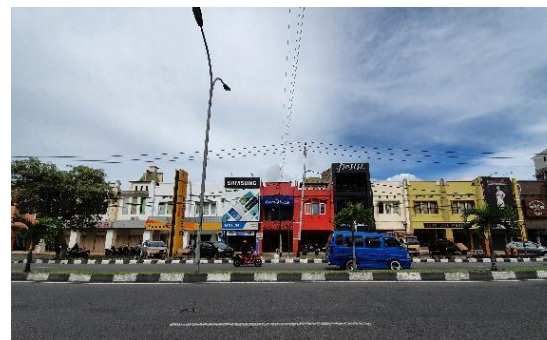Source: Author, 2020

Fig. 17: Jatiland shopping district, a district in the reclaimed area
Source: Author, 2020

There are some similarities, which include shopping districts and the architectural style of the old one (Fig. 16) was less modern than the minimalistic shopping district in the reclaimed area (Fig. 17). Based on the differences, new districts in the reclaimed area had more types such as the shopping malls and the traditional markets. They also had a more modern architectural style than districts in the non-reclaimed area.

Nodes

Fig. 18. Nodes according to the older age group
Source:Based on Questionnaire and Field Survey by Author, 2020

Fig. 19: Nodes according to the younger age group
Source: Based on Questionnaire and Field Survey by Author, 2020

Fig. 18 shows nodes before the reclamation. It was discovered that the node near the Gamalama Market had the most votes, with 38%, due to the market activities. The guard post in the Nukila Street intersection had 30%, as the road was busy across the market area. The node closer to the Makmur Utama shop had 20% of the votes, connecting nearby settlements with the old shopping district. The nodes near the Muhajirin Mosque and the East Makassarese settlement had 6% of the votes. The intersection near the mosque was on the Nukila Street, which was previously one of the main roads before the reclamation. Meanwhile, the node near the settlement connected several settlements in the area.

The nodes in both areas according to the younger age group are shown in Fig. 19, where the Grand Mosque had 44% of the votes. Its location was also strategic, next to the Sultan M Djabir Sjah Street. The four-way intersection next to the terminal had 12% of the votes, connecting Sultan M Djabir Sjah, Lelong, and Tapak Streets. Meanwhile, 4% voted for Sultan M Djabir Sjah Street, which was the Grand Mosque and the four-way market intersection. The rest of the nodes had two percent of the votes.

There were significant changes before and after the reclamation as shown in Fig. 20. New nodes were found in the reclaimed area, while drastic changes were in the non-reclaimed area. The younger group did not mention the East Makassarese settlement and the Mutaqin Mosque. The guardhouse, the intersection in front of the Makmur Utama Shop, and the one next to the Gamalama Market significantly lost their votes after the reclamation. Meanwhile, there was a similarity after reclamation, where the nodes in both areas were intersections and the differences were their size. The nodes in the non-reclaimed area facilitated fewer commutes because they only had one road segment.
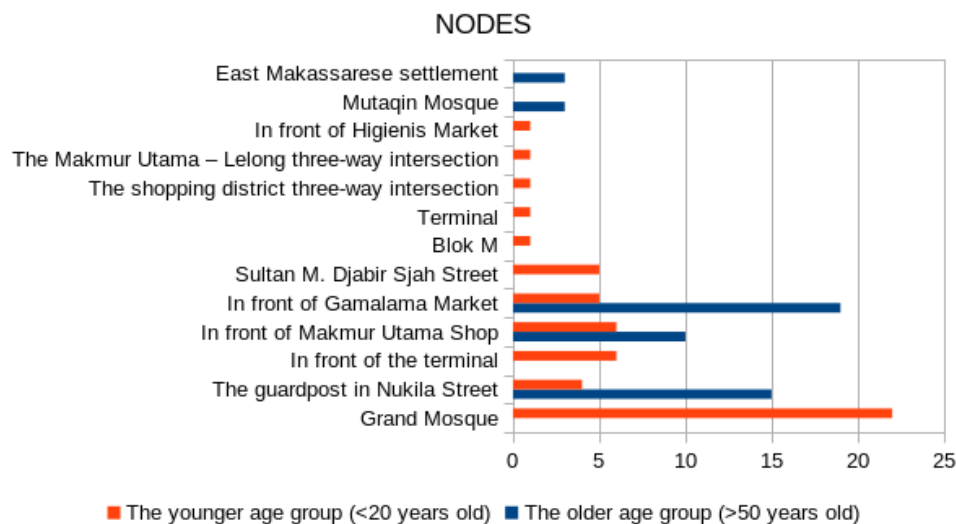

Fig. 20: Questionnaire results on nodes.
Source :Based on Questionnaire Survey by Author, 2020

Landmarks

There were 5 perceived landmarks before the reclamation as presented in Fig. 21. The Gamalama Market, the first traditional market in the area, had the most votes, which is 40%. The market's construction was before 1960 and was next to the Nukila Street. Other landmarks significantly had fewer votes, while the Fort Oranje, a guard post in the Nukila Street, and the Benteng cinema received 16%. Fort Oranje was a historical location in the observed area and the guard post, which has been demolished, was in the four-way intersection next to Nukila Street. Furthermore, Benteng Theater was the first cinema in Ternate City. The vegetable market, which is the second oldest in the area, had the smallest number of votes with a total of 12%.

Before land reclamation
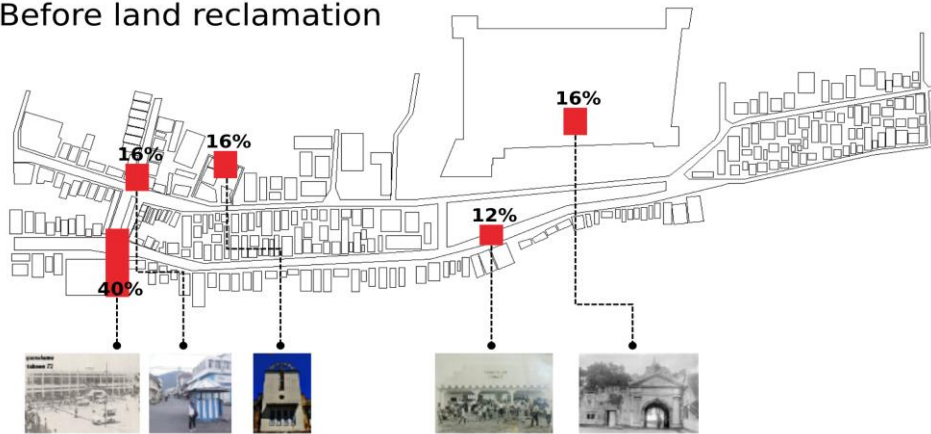
Fig. 21: Landmarks according to the older age group
Source: Based on Questionnaire and Field Survey by Author, 2020

Fig. 22 shows the new landmarks in both the non-reclaimed and reclaimed areas. Fort Oranje had the highest vote with 42%, while Jatiland Mall and the Grand Mosque had 28% and 20%, respectively. Meanwhile, the rest of the landmarks received fewer votes and the "Ternate Kotaku" signage had 4%. The public works department constructed the sign to show their program Kota Tanpa Kumuh, in Indonesian, cities without squatters near the Grand Mosque intersection. The Sidodadi Shop, the Higienis Market, and the Makmur Utama shop (MU) received 2% votes. The Sidodadi Shop located in the non-reclaimed land was the oldest shop, the Higienis Market was in the reclaimed area, next to settlements. Meanwhile, MU had a bright yellow and blue facade, contrasting its surroundings in the non-reclaimed area.

After land reclamation

Fig. 22. Landmarks according to the younger age group
Based on Questionnaire and Field Survey by Author, 2020

There were significant changes before and after the reclamation as shown in Fig. 23. Fort Oranje gained popularity after the reclamation and new landmarks were discovered in the reclaimed area. The shopping mall and the Grand Mosque were the most popular. The younger group did not mention the Gamalama Market, the Nukila Street, the Benteng Theater, and the vegetable market. This is because the Benteng Theater is no longer operated and the landmarks were perceived as different elements such as nodes. There was a similar theme in both areas, in which most of the landmarks were buildings.
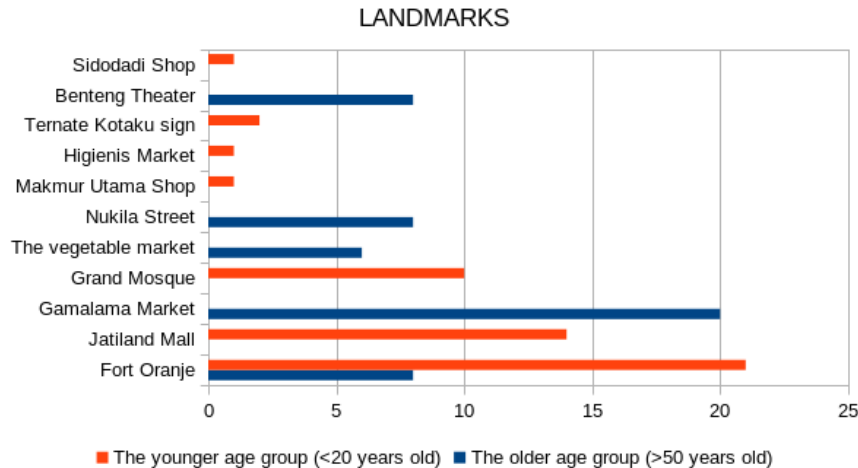

Fig. 23: Questionnaire results on landmarks
Source: Based on the Questionnaire Survey: Author, 2020

Discussion

There were several changes after the reclamation. These include an increase in the total recognized paths from two to three. This indirectly impacted the local economy because they host shopping districts. Furthermore, Sultan M Djabir Sjah Street in the reclaimed area was the busiest and was currently the most voted path by the younger group.

The total recognized edges also increased from 4 to 9 after the reclamation, consisting of shorelines. This was similar in other port cities such as Famagusta and Limassol, where waterfronts were dominant as edges (Özgece, Edgü, & Ayıran, 2020). The shoreline in Ternate had moved closer to the reclaimed area, which might be a new economic opportunity and a tourist destination. However, Ternate's artisanal fishermen felt the negative impacts and held protests to prevent the reclamation (Duchlun, 2020). Marine habitat loss from the reclamation drastically impacted their catch and not every resident felt the positive effects.

The perceived nodes increased from 4 to 11 and the additional ones in the reclaimed land are mostly intersections caused by new roads. There was also a new terminal, while those in the non-reclaimed were less popular with the younger generation. They offered fewer activities compared to the ones housing a shopping mall and the biggest mosque in the area.

The total districts increased from 5 to 11 with a mix of colonial and modern architectural styles. It was not unusual in areas, where colonial influence was previously prevalent, including Bukittinggi (Nurgandarum & Anjani, 2020). However, the contrasting style was more distinct in the Ternate City because of the recent reclamation in 2006-2012. The architectural styles played a role in signifying each district, especially with the differences between shopping districts in the reclaimed and the non-reclaimed land. There were notable differences such as the recent buildings' style in the reclaimed area, while those in the non-reclaimed area were towards the colonial and post-colonial styles. Secondly, this large-scale constructed more planned land configuration. Activities of local people and cultural development (sultanate), colonial, and post-colonial periods, formed the non-reclaimed land for centuries. Several factors to consider in the questionnaire results also include the non-reclaimed

area that had some significance, although with additional districts. The equal popularity of the old and the new shopping districts in the non-reclaimed and reclaimed areas showed that the process did not overshadow its surrounding area.

Based on the results, the landmarks increased from 5 to 7. Fort Oranje in the non-reclaimed area was the most voted landmark after reclamation, which was previously held by the Gamalama Market. The former was both a historic site and a tourist destination and was not mentioned by the younger respondents. Although it was the oldest market in the area, they did not consider it a landmark due to a lack of heritage conservation. Fort Oranje can also suffer the same problem in the future when there is no proper mitigation. Many historical sites in the Ternate City lacked budgets for the maintenance and experts for adequate conservation (Duchlun, 2021). This also occurred in Jaipur, India (Jawaid, Pipralia, & Kumar, 2016), where a lack of maintenance in the landmarks affected their importance in the area, decreasing the locals' positive perceptions. Therefore, the locals did not consider the historic sites as landmarks in the future because of the deteriorating conditions.

Conclusions

The older generation showed imageability elements that are missing or losing value. Meanwhile, the younger generation showed what persisted, gained significance, and gained new as well as insight into the city's imageability before and after the land reclamation. Several characteristics that defined the landmarks as specific elements in both the non-reclaimed and reclaimed areas were identified. The paths were in the center of the commercial properties, constantly accommodating numerous activities. They also discovered the edges and bordered areas with different physical appearances and functions. The new nodes were the consequence of current paths, while landmarks were generally extensive or had distinctive facades.

All the elements increased after the reclamation, while the non-reclaimed area still held some significance, although no additional districts were in the reclaimed area. There were several elements in the non-reclaimed area such as the Hasan Boesoeri Street, which was not identified by the younger generation. Furthermore, they did not speak briefly of the East Makassarese settlement and Mutaqin Mosque as nodes, including the Benteng Theater, the Nukila Street, the vegetable market, and the Gamalama Market.

There were elements in the non-reclaimed area that the younger generation still recalled after the reclamation, leading to an increase in the votes for the Fort Oranje as a landmark. Several measures need to conserve the fort as a cultural heritage and a tourist attraction, thereby increasing its popularity. The younger generation also mentioned the Nukila Street as a path, which was not stated by the older generation. Although other elements persisted, their significance decreased due to various facilities in the reclaimed area. The younger generation still identified all the edges and districts in the non-reclaimed area after the reclamation and voted for the Pahlawan Revolusi Street as a path. The node that was mentioned includes the intersection in front of the Gamalama Market, the Makmur Utama Shop, and the guardhouse on the Nukila Street. This shows how the significance of the non-reclaimed area persisted after the reclamation that changed the integrity of the historical district.

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