Promoting Mahogany Trees as the Landscape Heritage in Metro City onto Achieving SDG 11

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Abstract: Metro City in Lampung Province was started from an area established from the policy of colonization from Java Island carried out by the Dutch East Indies colonial government. This program in addition to relocating residents from the island of Java also "relocated" an element of the urban landscape with a distinctive physical character, which is a row of Mahogany Trees. In Metro City, Mahogany Trees have grown well along Jl. AH. Nasution which is the axis of Metro's spatial structure. Through virtual observations and documentation using Google Maps data from 2015, 2018, and 2019 by utilizing the Streetview, it was known that there were 161 Mahogany trees along this road. By knowing the current condition of the row of Mahogany Trees, the importance of immediate conservation efforts can be identified. There are four conservation components that need to be implemented, namely community participation, knowledge, and skills, as well as good planning, regulations and institutions, and also financing. If conservation can be done well, landscape heritage will not only become a sustainable urban identity but will also act as a catalyst for socio-economic development through tourism and trade, and of course the health of residents and their natural environment in accordance with Goal 11 Sustainable Development Goals (SDGs).

Keywords: Landscape, Colonization, Urban Identity, Metro, Conservation

1. Introduction

Colonization carried out by the Dutch East Indies colonial government initially was aimed to control the natural wealth i.e., spices, in the archipelago. The government, better known by its original name, Vereenigde Oost Indische Compagnie (VOC) which literally means the East India Company Association, then controlled almost the entire territory of the country, including the Lampung region, which is at the southern tip of Sumatra Island. This control then led to the suffering of the indigenous population, inequality in welfare, over-exploitation of natural resources, and other humanitarian problems which later became the trigger for the birth of the colonial government policy known as the Ethical Policy. This policy was fully supported by a Dutch legal expert and government adviser named C. Th. van Deventer so that when it was later legalized as a government program, it was named as Trias van Deventer after the name of the legal expert. Although based on humanitarian reasons, this program also aims to achieve economic benefits through improving human resources and infrastructure.[1]

[1] Ricklefs, M. C. (2007). Sejarah Indonesia Modern 1200-2004 (H. Syawie & M. C. Ricklefs (eds.); 3rd ed.). PT Serambi Ilmu Semesta.

The Trias van Deventer program was enacted by Queen Wilhelmina in the Netherlands on September 17, 1901, then to be implemented in the colonies, especially in the Dutch East Indies. This program contains three policies, namely: resident relocation, education, and irrigation. On the island of Java, the policy of relocation which came to be known as "colonization" was aimed at reducing its very large population. Meanwhile in the field of education, teacher schools, civil service schools, and doctor schools began to be opened and expanded. Finally, policies in the field of irrigation were realized by building dams and irrigation canals to increase the agricultural output of the indigenous population at that time.

Colonization was carried out by relocating residents from Java to outside Java. The first colonization began in 1905 with Lampung as the destination. The first group of the colonization program was placed in the Pesawaran Regency, Lampung Province, precisely in the Gedongtataan area. In the colonized area, the Dutch East Indies colonial government at that time continued to apply the original orders of local government in the form of kepasirahan or indigenous communities which gave the colonial government the freedom to control the community and reorganize the structure of the customary law community. Through such an approach, they were finally able to control a large area, stretching from Bakauheni to Liwa, Blambangan Umpu, and Mesuji.[2]

Figure 1. The arrival of the first colonists in Lampung.[3]

[2] Saroso, O., & Saifuddin, R. (2013). Lukman Hakim: Jejak Anak Kolonis (2nd ed.). Perhimpunan Lampung Media Center.

[3] Pemerintah Kota Metro. (n.d.). Metro Tempoe Doeloe. Retrieved August 4, 2021, from https://info.metrokota.go.id/metro-tempoe-doeloe/

In Metro City, the first group of colonists arrived in 1936, where then one member of the colonists, Dastro Gono Wardoyo, was appointed by the Dutch Colonial government as the Head of Metro Village. Because of its rapid growth, on Wednesday, June 9, 1937, Metro was made as the office of *Wedana* Assistant (head of district) and as the administrative center of Onder District Metro. The Dutch appointed Mas Sudarto as Metro's first *Wedana* Assistant. The location of the colonization area of the forerunner of Metro at that time was right in the middle of the Central Lampung region (before the separation) which was precisely between Adipuro, Trimurjo District, Central Lampung Regency and Rancangpurwo, Pekalongan District, East Lampung Regency.[4]

As an integral part of this relocation program, the Dutch East Indies colonial government also built road infrastructure and settlements which were built with very careful calculations as in the Netherlands in the newly colonized areas. In these areas, an orderly and well-ordered urban spatial structure was built as a settlement area for immigrants from Java or also known as "colonists" who would later grow (to become cities) with agriculture as the main support for the lives of their citizens. This agricultural land was then equipped with an irrigation system or irrigation which was another part of the Trias van Deventer. Not to forget the construction of schools and educational facilities to increase the capacity of human resources.

Figure 2. The beginning of villages and markets in Metro City.[5]

[4] Saroso, O., & Saifuddin, R. (2013). *Loc.Cit.*
[5] Pemerintah Kota Metro. (n.d.). *Loc.Cit.*

This program in addition to relocating residents from Java, it also "relocated" an element of the urban landscape with a distinctive physical character which is the urban tree. On the island of Borneo, for example, there is the city of Barabai which is dubbed the "Bandoeng van Borneo" or the Bandung of Borneo. Apart from the cool air and calm atmosphere of the city, this nickname also refers to the shady streets in the city center due to the presence of a row of shady Mahogany Trees. This tree by the local people referred to as the walnut tree. These trees were planted by the Dutch East Indies colonial government and are well maintained by the residents of the city of Barabai until now.[6]

Based on a reference[7], in Mataram City, West Nusa Tenggara, rows of walnut trees and mahogany trees also adorn the edges of the main road sections and become a separate identity for the city's spatial planning. The existence of these trees is even regulated by the Regulation of the Mayor of Mataram Number 24 of 2009 concerning Garden Arrangements and City Decorations. Rows of trees are even made part of a city tour package. While on the island of Java, the relics of the colonial city with its unique landscape character can be seen in the city of Malang, precisely in the Ijen area. The landscape of the Ijen area is decorated with a combination of Raja Palm (Roystonea regia), Mahogany (Swietenia mahagoni) and Bungur (Lagerstroemia speciosa) which are more than 50 years old on the edge of the road, so this area is considered to have the highest socio-cultural aspect value.[8]

Figure 3. Rows of Mahogany Trees in a market in Barabai City during Colonization.[9]

[6] Solihin, A. (n.d.). Sebagian Kecil tentang Sejarah Kota Barabai Kalsel. Retrieved August 5, 2021, from https://indoborneonatural.blogspot.com/2015/12/sebagian-kecil-tentang-sejarah-tentang.html

[7] Anwar, K. (2016). Pohon Kenari Tua di Kota Mataram yang Bikin Penasaran Rombongan Turis Belanda. Tribunnews.Com. https://www.tribunnews.com/travel/2016/02/05/pohon-kenari-tua-di-kota-mataram-yang-bikin-penasaran-rombongan-turis-belanda?page=all

[8] Budiyono, D., & Thomas, H. (2012). Lanskap Kota Malang Sebagai Obyek Wisata Sejarah Kolonial. Jurnal Lanskap Indonesia, 4(1), 43–50. https://doi.org/10.29244/jli.2012.4.1.%p

[9] Solihin, A. (n.d.). *Loc.Cit.*

In Metro City, the Dutch East Indies colonial government built various supporting infrastructure for villages to complement the area where the colonists who arrived from Java lived. Centered on agricultural land that relies on an irrigation system from the Argo Guruh Dam, located in Bumi Agung Village, Natar District, South Lampung Regency, in what is Metro City now, markets, clinics, police stations, telecommunications offices, and large fields that resemble square (*alun-alun*) in Java, were also built. Roads had also been built to make it easier for residents to access.[10]

One of the characteristics of the new roads built by the Dutch East Indies colonial government is the presence of a row of Mahogany Trees planted along the side of the main access road. One of them is along Jalan A.H. Nasution who crosses Metro City until now. The characteristics of planting trees like this can also be found on the island of Java, where Mahogany trees, banyan trees, and other old trees have been planted on the roadside as shade since the colonial era of the Dutch East Indies. Streetscape characters like this are one of the elements of landscape heritage found in Indonesia, especially in Metro City which has the potential to become the identity of this city.

Figure 4. Development of residential areas in the Metro City area now.[11]

2. Hypothesis

Currently Metro City has a population of 169,940 people with an administrative area of 68.74 square kilometers or 6,874 hectares[12] and is located in the central part of Lampung Province. The population density in Metro City

[10] Saroso, O., & Saifuddin, R. (2013). *Loc.Cit.*

[11] Pemerintah Kota Metro. (n.d.). *Loc.Cit.*.

[12] BPS - Statistics of Metro Municipality. (2021). Metro Municipality in Figures 2021. BPS - Statistics of Metro Municipality.

based on data[13] reaches 2,466 people/square kilometers. If at first it was dominated by agricultural land, currently the area of agricultural land in Metro City is only 2,926 hectares[14], less than half of the urban area. The same condition can also be seen in the existence of Green Open Space (RTH) or urban vegetation that is threatened with decreasing trends along with the increasing area of land built for both settlements and as public, commercial, and industrial areas. Included in this threatened category are a row of Mahogany Trees which have become a distinctive character on the main roads in Metro City and create special memories for Metro City residents or who have lived for some time in this city and are not found in other cities or regencies in the Province. Lampung.

According to Lynch[15], the image of a city can be identified through five elements, namely: path, edge, node, district, and landmark. Path is a route that is always traversed by the observer. This path can be a highway, a path, a railway line, a waterway, and so on. For some, these elements greatly affect their visual perception. When they pass through the city's inner lane, other city elements will automatically be related to form the city's image. The visual formation of a road segment and the surrounding area that is still natural or has been engineered by humans in an urban environment can be referred to as a streetscape or streetscape.

An example of a landscape along the street that has character and then becomes part of the image of the city is Orchard Road in Singapore. This road was originally part of a plantation which later developed into a shopping and tourist center area until now where one of the main attractions is the presence of large shade trees. Another example is Ra Lambla which is a 1.2 kilometer long pedestrian path in the center of Barcelona and is a street that is always crowded with tourists because of its various art attractions and souvenir stalls.

Figure 5. Orchard Road in Singapore which is a shopping and tourist center.[16]

[13] BPS - Statistics of Metro Municipality. (2020). Metro Municipality in Figures 2020. BPS - Statistics of Metro Municipality.

[14] BPS - Statistics of Metro Municipality. (2018). Metro Municipality in Figures 2018. BPS - Statistics of Metro Municipality.

[15] Lynch, K. (1960). The Image of the City (G. Bridge & S. Watson (eds.); Vol. 21, Issue October). MIT Press. http://www.amazon.com/dp/0262620014

[16] Urban Redevelopment Authority. (2021). Orchard Road: The Continuing Evolution of Orchard Road. https://www.ura.gov.sg/Corporate/Planning/Master-Plan/Regional-Highlights/Central-Area/Orchard-Road

Based on the ICOMOS study[17], landscape heritage includes a combination of natural environmental heritage and cultural heritage with reference to historical values. A roadway is a part of a landscape. When this road span can shape the image of the city, this road span has more value that can be maintained as a landscape heritage. The history of colonization, for example, can be shown through the heritage of the natural environment and its cultural heritage, for example, which can be found along Jalan Ijen, Jalan Semeru, Jalan Agung Suprato, and Jalan Basuki Rahmat in Malang City. There are buildings with colonial-style architectural designs and typical tree rows along Jalan Ijen that have existed since the colonial period of the Dutch East Indies. [18]

Figure 6. Typical scenery along Jalan Ijen, Malang City.[19]

In the context of the road landscape in Metro City, the heritage of the natural environment can be seen through the distinctive vegetation, namely the Mahogany Tree, while the cultural heritage is related to the original purpose of the existence of the stretch of road which was part of the policy of the Dutch

[17] Goodchild, P. H. (2007). Landscape Heritage, Biosphere Change, Climate Change and Conservation: A General Approach and an Agenda. In Heritage at Risk 2006/2007.

[18] Budiyono, D., & Thomas, H. (2012). *Loc.Cit.*

[19] *Ibid.*

East Indies colonial government. Through the presence of the Mahogany Tree, it can be seen that one of the main elements of this road span is the plant, or more specifically, the tree plant, which according to reference[20], must be planned, designed and cared for properly for the convenience of road users. Aside from being a shade and pollutant filter, trees also have an aesthetic function and create a unique visual identity of a road landscape.[21]

Mahogany tree (Swietenia mahagoni) is a long-lived tropical plant that is suitable for cultivation in Indonesia because it can grow in places exposed to direct sunlight so that it can be used as a shade plant, for natural medicines and pesticides, furniture and handicrafts. good hands, as well as a very prominent streetscape element due to its physical character which can reach a height of up to 30 meters with a large trunk diameter.[22]

In Metro City, Mahogany Trees grow well along Jalan A.H. Nasution. This road section divides the Metro City spatial structure in line with the west-east direction and stretches from the westernmost road end which is located in the city center which is directly adjacent to Merdeka Park and Jalan Jenderal Sudirman to the easternmost road end which is directly adjacent to the Pekalongan District area , East Lampung Regency. The spatial structure pattern of Metro City is a legacy of the Dutch East Indies colonial government which is characterized by a spatial structure with a symmetrical grid complete with a city center (city center) in the middle, namely Merdeka Park and Taqwa Great Mosque, Metro City typical of cities in the Netherlands in particular or in Europe. in general. Also seen Jalan A.H. Nasution is a road segment that is in the axial position or the axis of the symmetrical spatial structure.

Figure 7. Rows of Mahogany Trees along Jl. AH. Nasution.

[20] Rahman, A., Najoan, J., & Polii, M. G. M. (2015). Evaluasi Aspek Fungsi Tanaman pada Lanskap Jalan Kampus Universitas Ratulangi. Cocos, 6(17), 10.

[21] Carpenter, P. L., & Walker, T. D. (1998). Plants in the Landscape. Waveland Pr Inc.

[22] Sutarni, M. S. (1995). Flora Eksotika Tanaman Peneduh. Penerbit Kanisius.

The level of traffic density that passes on Jalan A.H. Nasution is increasing from year to year. Likewise, land use is increasingly diversed and is starting to be dominated by economic activities or functions and offices. The construction of public facilities is also increasing, starting from pedestrian paths to educational and health facilities. This trend also has a direct impact on the condition of the streetscape along Jalan A.H. This Nasution. A study argued that in urban areas, development of road networks and increased use of private vehicles creates a disastrous cycle.[23]

Furthermore, under the framework of the Sustainable Development Goals (SDGs) specifically on Goals 11: Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable, this issue could reflect on two targets, which are: target 11.3 (By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries) and target 11.4 (Strengthen efforts to protect and safeguard the world's cultural and natural heritage). The row of Mahogany Trees potentially plays important role in sustainable urbanization as cultural and natural heritage. Therefore, it is necessary to re-promote its values by introducing a comprehensive conservation effort of the Mahogany Trees before exploring more opportunities to develop it as the future capital.

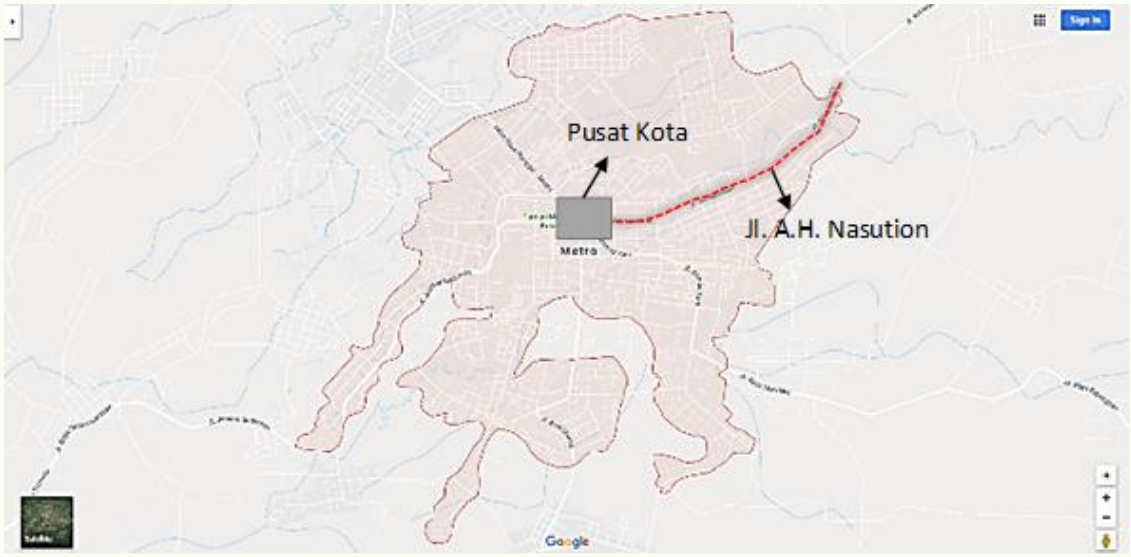


Figure 8. Position Jl. AH. Nasution in the Metro City area.[24]

[23] Nuzir, F. A., & Dewancker, B. J. (2014). From Sustainable to Low Carbon City : Zero Emission Urban Mobility in Japanese Cities. Proceedings of the 11th International Conference of Asia Institute of Urban Environment.

[24] Nuzir, F. A. (2018). The Mahogany Trees as Urban Landscape Heritage and Fine Image of Metro City. JAILCD, S2-13–16. http://ci.nii.ac.jp/naid/40021613262/en/

3. Method

There were 14 road sections identified in the virtual observation and documentation process using Google Maps data from 2015, 2018, and 2019 using the streetview method. The definition of a road section is a segment between one intersection and the next intersection. as can be seen in Figure 9. The limitations of this virtual observation and documentation are from the road section closest to Merdeka Park to the road section on adjacent to Pekalongan. All Mahogany Trees observed are located on the south side of the road.

As an addition to the virtual observation and documentation and for validation of the virtual documentation, direct observations were made by walking along Jl. AH. Nasution on July 24, 2021. Then literature review on previous research and studies was conducted to suggest and conclude on appropriate strategies for the conservation effort which is in line with the achievement of the SDGs Goal 11. For this purpose, the SDG Interlinkages Analysis & Visualization Tool (V4.0) developed by the Institute for Global Environmental Strategies (IGES) was utilized for completing the exercise.[25]

4. Results

From the results of these observations and documentation, the author notes that there are as many as 161 Mahogany Trees along this road. Assuming that these trees were planted during the Colonization period, the age of the trees has reached more than half a century. The highest canopy height reaches more than 20 meters and the average trunk diameter is about one meter.

Figure 9. Rows of Mahogany Trees along Jl. AH. Nasution.

[25] Zhou, X., & Moinuddin, M. (2017). Sustainable Development Goals Interlinkages and Network Analysis: A practical tool for SDG integration and policy coherence. In The Institute for Global Environmental Strategies (IGES) (Issue June). https://sdginterlinkages.iges.jp/files/IGES_Research Report_SDG Interlinkages_Printing Version.pdf

Table 1. Mahogany Tree lineup documentation 2015, 2018, and 2019.

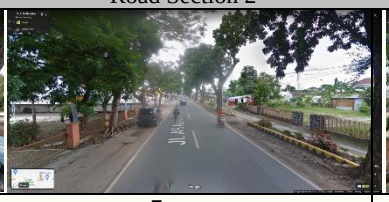
2015	2018	2019
Road Section 1		
		
3 trees	3 trees	3 trees
Road Section 2		
		
7 trees	7 trees	7 trees
Road Section 3		
		
10 trees	10 trees	10 trees
Road Section 4		
		
9 trees	9 trees	9 trees
Road Section 5		
		
14 trees	14 trees	14 trees
Road Section 6		
		
14 trees	14 trees	14 trees
Road Section 7		
		
14 trees	14 trees	14 trees

Table 1 (ctd). Mahogany Tree lineup documentation 2015, 2018, and 2019.

Road Section 8		
		
14 trees	14 trees	14 trees
Road Section 9		
		
9 trees	9 trees	9 trees
Road Section 10		
		
8 trees	8 trees	8 trees
Road Section 11		
		
14 trees	14 trees	14 trees
Road Section 12		
	Data not available.	
15 trees	15 trees	15 trees
Road Section 13		
	Data not available.	
5 trees	5 trees	5 trees
Road Section 14		
	Data not available.	
25 trees	25 trees	25 trees

For validation of the virtual documentation, direct observations were made by walking along Jl. AH. Nasution on July 24, 2021. It is known from 161 Mahogany Trees, it turns out that there are three trees that have been lost, leaving only their marks. In Figures 10, 11, and 12, the author compares Google Maps data per 2019 with these direct observations.

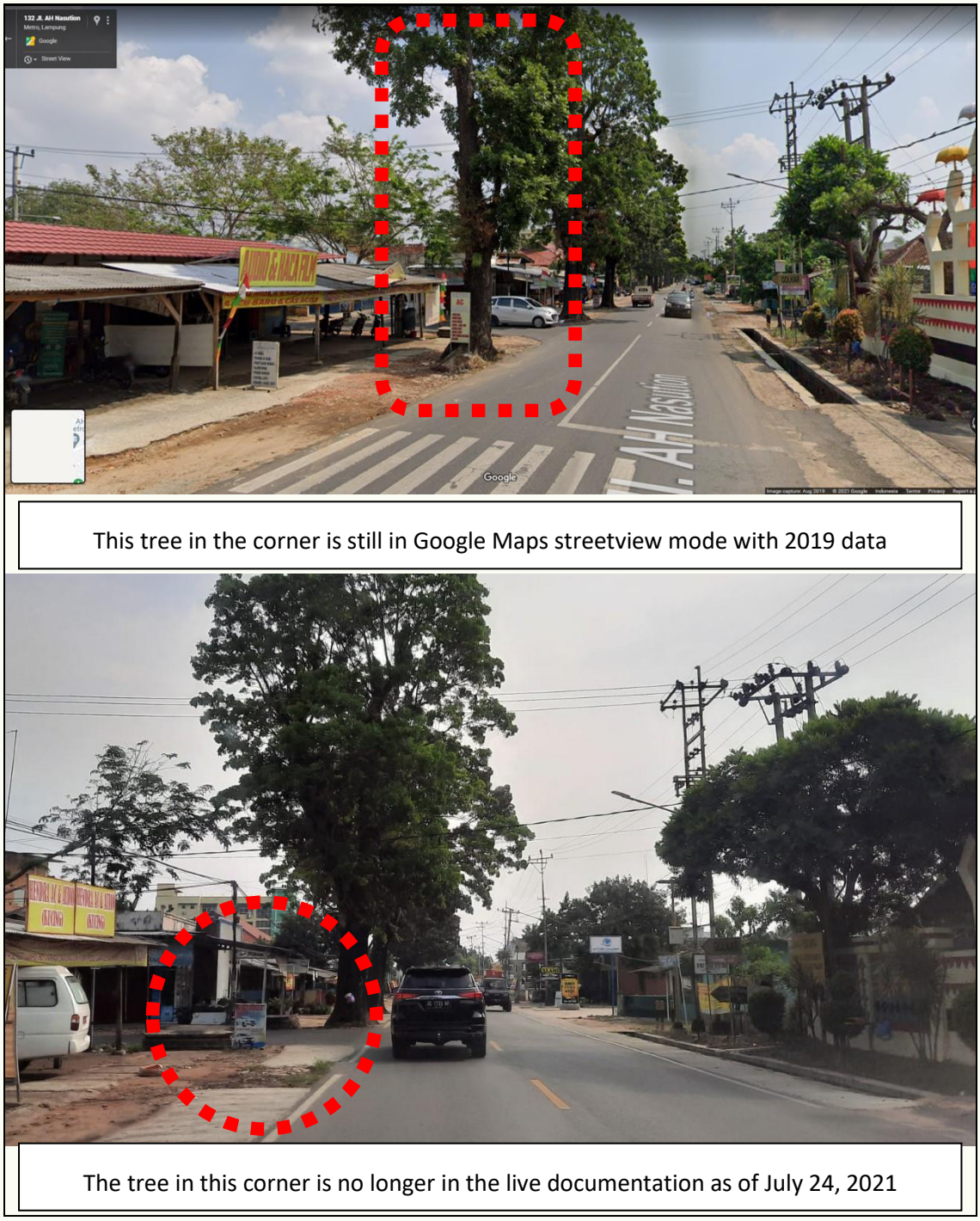


Figure 10. Google Map data, above; photo of direct observation of street 7, below (see Fig. 9).

At the corner of the road section number 7 or rather at the corner of the T-junction between Jl. AH. Nasution with Jl. Cob, it turns out that there is one tree that is still in Google Maps streetview mode with 2019 data, but on direct documentation as of July 24, 2021, this tree is no longer visible. The cut stem is completely gone and only visible traces of where it grew.

This tree is still in Google Maps streetview mode with 2019 data

Only the root part is truncated in the live documentation as of July 24, 2021

Figure 11. Google Map data, above; photo of direct observation of street 11, below (see Fig. 9).

Meanwhile, on road section 11 or rather near the Pertamina 21 Yosodadi gas station, it turns out that there is another tree that is still in Google Maps streetview mode with 2019 data, but on direct documentation as of July 24, 2021, this tree is no longer visible. Leaving only a small part of the bottom of the stem and visible marks cut.

This tree in the corner is still in Google Maps streetview mode with 2019 data

Only the root part is truncated in the live documentation as of July 24, 2021

Figure 12. Google Map data, above; photo of direct observation near RSIM, below (see Fig. 9).

And the third one is still at road section number 11 or rather at the corner of the T-junction near the Metro Islam Hospital (RSIM), it turns out that there is one tree that is still in Google Maps streetview mode with 2019 data, but again on direct documentation as of the 24th July 2021, this tree is no longer seen. What remains is only a small part of the bottom of the stem and looks neat cut marks. From this finding it can be concluded that the results of observations and virtual documentation that recorded as many as 161 trees need to be revised to 158 mahogany trees that still survive along Jl. AH. Nasution, Metro City.

5. Discussion

The three examples of the disappearance of the Mahogany Tree have not been able to fully confirm the cause and to the best of the author's knowledge there is no news in the media, both print and online, that reports about the incidents of cutting the trees, There was only one news in online media dated March 6, 2021[26], which alludes to the burning of a tree which is most likely the tree in Figure 11. However, in the photo in the media, the tree in question was still standing. Not to mention the problems that occur repeatedly but receive less attention are the occurrence of acts of vandalism against tree trunks that are still alive, such as the installation of banners or posters by nailing directly to the tree trunks, installing promotional tools for business premises such as cable lights that wrapped around tree trunks, covering the soil surface adjacent to the Mahogany Tree roots with a layer of cement, and so on, also have the potential to damage the physical condition of the tree.

Figure 13. The area around the tree roots has been covered with a layer of cement.

The loss of the three trees and the various acts of vandalism that occurred are certainly a threat to the existence of the colonial landscape heritage in Metro City. The lack of information about these events and the lack of maximum efforts to educate and inform the public about the importance of the existence of

[26] Pohon Mahoni Dijalan AH.Nasution Dibakar Oleh Orang Tak Di Kenal. (2021). Etalaseinfo.Com. https://lampung.siberindo.co/06/03/2021/pohon-mahoni-dijalan-ah-nasution-dibakar-oleh-orang-tak-di-kenal/

Mahogany Trees in Metro City shows that the value and potential of this tree line has not been fully realized. Efforts to observe and maintain minimal as part of the preservation of the city's environment must be seriously carried out. Of course, this is the responsibility of the local government. However, there is nothing wrong if residents can also play a role in observing and reporting on the current condition of the trees. By knowing the current condition of the row of Mahogany Trees, it can be seen the importance of immediately making conservation efforts. This conservation effort is very important to be carried out as part of the appreciation of the Colonization landscape heritage which has very important cultural and environmental values.[27]

Efforts to preserve a landscape heritage are not only in the form of observation and maintenance. Moreover, in the urban context, the preservation of landscape heritage should be part of the big agenda to maintain the identity and image of the city and improve the quality of the urban environment. Which if it can be done then the existing potential can certainly have a good impact on sustainable urban development. There are four conservation components that need to be implemented, namely community participation, capacity for knowledge and skills as well as good planning, regulations and institutions, and financing.[28]

Community participation in the digital era as it is today can be done by optimizing the use of technology that is popular with the community, especially the younger generation who incidentally represents a fairly large proportion of the population in Metro City. As did the Play the City Foundation for the City of Istanbul which introduced a game in urban decision-making. The same technology can also be used to build the knowledge capacity and skills of residents, for example related to the type and age of Mahogany Trees, the physical condition of the trees, their historical values and stories, their functions and aesthetics, to finally together with other elements of the city produce a good plan. good for preservation.[29]

Figure 14. Several profiles of Mahogany Trees on Jl. AH. Nasution.

[27] Akbar, M. A. H., & Nurhayati, H. S. A. (2018). Preservation of heritage trees on the de Groote Postweg Lane in Bogor City. IOP Conference Series: Earth and Environmental Science, 203(1). https://doi.org/10.1088/1755-1315/203/1/012007

[28] Asriana, N., & Sesotyaningtyas, M. (2018). Pendekatan Historic Urban Landscape Untuk Pelestarian. Temu Ilmiah Ikatan Peneliti Lingkungan Binaan Indonesia (IPLBI) 7, 51–57.

[29] Akbar, M. A. H., & Nurhayati, H. S. A. (2018). *Loc.Cit.*

Regulations also need to be completed and enforced by the Metro City Government, especially those directly related to the existence of the row of Mahogany Trees as was done in the City of Mataram. And detailed and measurable regulations or policies regarding conservation guidelines and directions so that the development carried out does not damage or even eliminate the historic tree line. Focused and professional institutions can be the key to the successful implementation of regulations and policies made. The last component of financing certainly plays a very important role. One successful example can be seen in the efforts of Friends of the High Line to manage The High Line, a public open space built on a historic railroad line that hovers over Manhattan's West Side streets in New York City. The park is owned by the New York City Government, but Friends of the High Line, founded by a local community of residents, has managed to raise private funds to support more than 90 percent of the park's annual operating budget.[30]

Figure 15. The High Line, warisan lanskap bersejarah di Kota New York.[31]

When referring to the guidelines from UNESCO (22), the existence of the Colonization landscape heritage in the form of a row of Mahogany Trees in Metro City has shown a clear direction that the planning, design and implementation of urban development must be able to integrate environmental, social, and cultural issues to achieve a balance between development and development. economy, preservation of history and culture, and the livability of the city. If it can be done well, the legacy of the landscape will not only be the

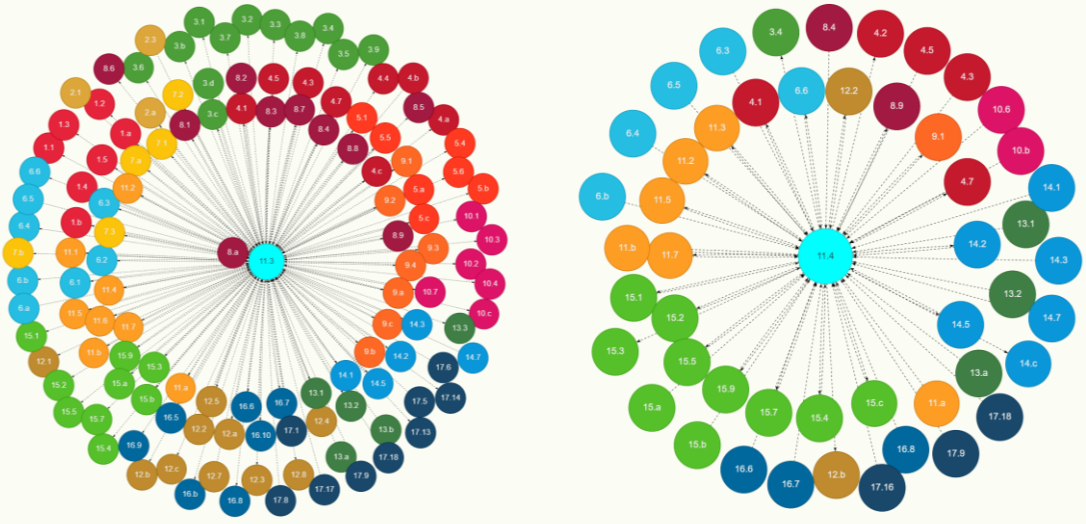
[30] UNESCO. (2013). Nafas Baru Kota Bersejarah: Penjelasan tentang Pendekatan Lanskap Kota Bersejarah.

[31] *Ibid.*

face of a good city but will also act as a catalyst for socio-economic development through tourism and trade, and of course the health of citizens and their natural environment. To make it happen, it is necessary to take concrete and gradual implementation steps from all urban stakeholders.

The first step is to conduct a complete study of the city's natural, cultural, and human resources. Second, using participatory planning and consultation with various stakeholders to set goals and stages of conservation. The third step is to assess the vulnerability of the landscape heritage to social, economic, and climate change impacts, as well as the current pandemic. The next step is to integrate the value and potential of landscape heritage into a broader urban development framework. Followed by the fifth step, namely prioritizing policies, and stages of preservation in each development reference document. The next step is to establish an appropriate Public and Private Partnership (PPP) scheme. And the last is to develop a coordination mechanism in various activities between different actors through strong institutions.[32]

As the final exercise, the SDGs Interlinkages tool was utilized to understand the relevant factors on achieving SDGs Goal 11 especially targets 11.3 and 11.4. From the result as shown in Figure 16 below, it could be seen that target 11.3 has more interlinkages with other targets under different goals. While target 11.4 has more limited interlinkages with other targets under different goals. However unfortunately it also could be understood that based on the tool, the interlinkages are all indicated in dotted lines. Dotted lines indicate that the indicator-level data is not available for the targets. This could be seen as a challenge in the process to measure the achievement of both targets.



Target 11.3 Targets 11.4

Figure 16. The visualization of the SDG interlinkages on targets 11.3 and 11.4.

[32] UNESCO. (2013). *Loc.Cit.*

6. Conclusion

Rows of Mahogany Trees along the main city route, namely Jl. AH. Nasution in Metro City is a landscape heritage that records the early history of the city as an area formed by the policies of the Dutch East Indies colonial government. There is no doubt about its potential as the identity, image, identity, and face of Metro City which always appears in the memories of every citizen or anyone who has lived or just stopped in the city. The challenge is how all parties involved in the development of Metro City starting from the government, academia, private sector, media, and community can show their commitment and seriousness in maintaining, preserving, preserving, and making this landscape heritage a major part of sustainable development in Metro City. This can be achieved if this grand agenda of landscape heritage preservation can bring about community participation, knowledge, and skill capacity as well as good planning, regulation, and institutions, as well as financing.

To achieve this, there are several strategic steps that can be taken. Starting from comprehensive assessments, participatory planning, mitigation, and adaptation efforts, making landscape heritage a development priority, implementing conservation policies and guidelines, Public and Private Partnerships, and strong institutions. If these steps can be taken, it is very likely that the preservation of landscape heritage in Metro City will pave the way towards achieving the Sustainable Development Goals (SDGs) especially in Goal 11 "Making Cities and Settlements Inclusive, Safe, Resilient and Sustainable", especially through the Target 11.4 namely promoting and preserving the world's cultural heritage and the world's natural heritage. Although the availability of data still becomes the main challenge on this matter.

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