Analysis of support capacity of Kota Lama tourism for the development of cultural tourism in Semarang

C S Lukito 1, A B Santoso 1, and E Kurniawan 1
1 Department of Geography Universitas Negeri Semarang Kampus Sekaran Gunungpati Semarang, Middle Java, Indonesia 50229.

* shintaclara96@gmail.com

Abstract. Tourism development in the Kota Lama Semarang was conducted to prepare for the 2020 World Heritage from UNESCO. Based on this, the tourism potentials in the Kota Lama Semarang need to be improved to attract tourists to come. As a tourism area, the harmony between the number of tourists with the provided capacity is indispensable for providing pleasure for the coming tourists. The aims of this study are 1. To identify the cultural tourism potential of Kota Lama, 2. To calculate the support capacity of the Kota Lama as a tourist destination in Semarang, and 3. To analyze the development of cultural tourism. The data analysis used is descriptive and the calculation of support capacity using the Douglas method (1975) in Fandeli (2001). Based on the results of the study, it found that the effective support capacity of the Dream Zone Museum was 96, the 3D & Trick Art Museum was 447, Art Contemporary Gallery was 5,997 and the Kota Lama Park was 25. The results showed that the attractions in Kota Lama Semarang have different support capacity. The Dream Zone Museum and the Kota Lama Park are need to be developed because of the high support capability value. Whereas, the 3D & Trick Art Museum and Art Contemporary Gallery are included in the exceeded support capacity, so that there is a need of control and arrangement in the development.

1. Introduction
Tourism is one of the potential sectors that can be developed as a source of regional income by utilizing the exist resources and potencies. The development is expected to give contribution for the development regional and national economic because tourism is seen as a multidimensional activity from a series of development processes. Development of the tourism sector can advance and generalize the economic development because through tourism activities there are many jobs in such a way that income will be increased [1].

Tourism is the journey of a person/group to an area which is not their temporary place of domicile. The encouragement of tourism activities can come from various interests such as economic, social, cultural, political, religious, health interests or just adding experience and learning new things (Gamal, 1997: 3). Tourism activities are also carried out to learn new things and to relax from the denseness activities that are being done.

The aim of tourism is to gain profits for tourists and local residents, especially in the economic field. The development of tourism is done through providing a place as a tourist destination by maintaining a culture and history that can provide a unique experience for tourists [2]. This is in line with Law No. 10 of 2009 about Tourism which states that the organizer of tourism is intended to increase national income in order to improve the welfare and prosperity of the people, expand and generalize business and employment opportunities, support regional development, introduce and utilize objects and attractiveness of tourist destinations in Indonesia and foster sense of love for the country and strengthen friendship between nations.

Tourism development is essentially developing and utilizing tourist attraction objects in the form of natural wealth, diversity of flora and fauna, cultural arts and pluralism. Tourism development can provide a standard life to the local people through economic activities carried out in the tourist attractions [2].

Semarang is one of the Provincial capitals in Indonesia, the Capital of Central Java. Semarang is one of cities that has a cultural heritage which is still preserved and maintained till now and one of the tourist destinations that has many tourist attractions both natural tourism, cultural tourism and historical heritage. One of the cultural attractions in Semarang is the Kota Lama. The Kota Lama or commonly...
called Outstadt is a Dutch-style building of European architects which used as a trading center. The Kota Lama was also called the Little Netherland because of the water canals which built around showed like miniature of Dutch in Semarang.

At first, the Kota Lama was filled with luxurious buildings which used as Dutch offices. Until now, these European-style buildings have been retained as the relics of Dutch colonial period. Some of ancient buildings in the Kota Lama are utilized while some are just abandoned. The total number of buildings used for offices and settlements are 157 units, empty buildings whether treated or not are 87 units, buildings that for rent are 28 units and 2 units are sold [3].

Even though it’s located in the very busy city, but not all places in the Kota Lama are crowded. Some places look quiet, dark and rarely visited because the buildings are abandoned, damaged and not maintained. So that tourists only visiting crowded and maintained places such as Blenduk Church, Srigunting Park, Jiwasraya Insurance and Ikan Bakar Cianjur (IBC). Based on these conditions, the Semarang Government issued Peraturan Daerah Kota Semarang Number 8 Year 2003 about the Plan of Building and Environmental Management of Kota Lama which explained the rules that shaded the Kota Lama of Semarang to be more directed on its growth and development. The aim is to develop tourism in order to attract tourists to visit.

Tourism development that is being carried out in Kota Lama is repairing the buildings, creating Wi-Fi areas, improving infrastructure and transportation networks. In addition, it offers new tourist attractions such as the Semarang UMKM Museum, Dream Museum Zone and the Old 3D Trick Art Museum. However, there are still lack of facilities such as the availability of bathrooms, trash bins, food stands and narrow place of souvenir centers.

This study has the following objectives:

a. To identify the cultural tourism potential of Kota Lama.

b. To calculate the support capacity of the Kota Lama as a tourist destination in Semarang.

c. To analyze the development of cultural tourism in the Kota Lama Semarang.

2. Methods

The location of this study is Bandarharjo, North Semarang, which is a cultural tourism area in the Kota Lama Semarang. The population in this study were visitors, managers and residents around the Kota Lama Semarang. Based on the data from the City of Semarang in 2016 showed that the number of visitors in the Kota Lama is around four million for a year. The sample in this study were as much as 50 visitors, managers and residents who work as traders and parking attendants. The sampling technique used in this study is incidental sampling to retrieve data from visitors and purposive sampling to retrieve data from the manager. The data collection methods used are:

a. Documentation is carried out to obtain data on the number of visiting tourists, the development of Kota Lama tourism from the Semarang City Tourism Office.

b. Interviews are conducted by asking directly to the informant who is the manager and resident around the Kota Lama of Semarang to find out the management of objects, tourist attractions, efforts in developing tourism objects and the exist obstacles.

c. Questionnaire is done to obtain data from visitors / tourists.

d. Observations carried out directly in the Kota Lama Semarang to find a clear description and explanation of the support capacity of any attractions in the Kota Lama such as the condition of parking, roads and the availability of clean water.

The data analysis used in this study is descriptive analysis and the calculation of tourism support capacity.

3. Results and Discussion

3.1. Kota Lama Tourism Potential

Tourism potential can be in the form of naturally or artificially objects/grows through the process of creation with aspects of modernization. Culture-based tourist destinations grow through natural and artificial processes. So that tourism development can be done by presenting attractions with uniqueness of pristine tourist objects and new attractions that has been developed.
The condition of the building is the main object which be the basic of cultural-based tourist attraction because of the uniqueness of the building and its physical form that distinguishes it from other tourist areas. The condition of the original building is a very strong potential for the development of cultural tourism. In addition, the uniqueness of the building combined with modern tourism and local wisdom can be a tourist attraction. This can provide positive impact on the people around.

The Kota Lama of Semarang is located in Bandarharjo, North Semarang. The wide area of Kota Lama is about ± 31 hectares which is directly adjacent to Ronggowersito Road on the east, Pendowo Road on the south, Mpu Tantular Road on the west, and Tawang Station on the north.

The Kota Lama Semarang is a visual image that presents the grandeur of European architecture in the past. Many exotic ancient buildings and magnificent relics of Dutch Colonial. Water canals which built around the Kota Lama still can be seen today, although not maintained. This caused the Kota Lama also called Little Netherlands. The location is separate, similar to cities in Europe and the canals surrounding make the Kota Lama like a miniature Netherlands in Semarang.

Tourism potential developed in the Kota Lama of Semarang is by utilizing empty buildings so that new attractions can be created. New attractions in the Kota Lama of Semarang are Kota Lama Park, Dream Zone Museum, Art Contemporary Gallery, 3D & Trick Art Museum, Semarang UMKM Center and new cafes. Besides, the authenticity of the building is also become a tourist attraction such as Blenduk Church, Srigunting Park, Jiwasraya Insurance and Ikan Bakar Cianjur (IBC).

3.2. Support Capacity of the Kota Lama Semarang

The value of tourism support capacity is based on factors that affect a tourist attraction. Each attraction has the same factors that influence the value of support capacity, but the value of the factors in each attraction is different so the value of tourism support capacity in each tourist attraction is difference.

The calculation of the support capacity of the tourism is used to determine the classification of the tourist attraction into a high support capacity, exceeded or optimal. To determine the classification, calculations are carried out using the following formula:

a. Physical Carrying Capacity

\[ PCC = A \times \frac{1}{B} \times Rf \]  \hspace{1cm} (1)

Notes:

A = area to travel
B = visitor area per m²
Rf = turnover rotation factor in tourist activities, the average time of travel divided by the length of the tourist area opened in one day

Calculation of Tourism Objects by using Physical Support Capacity to determine the value of Tourism Support Capacity.

| No | Name of Objects            | A (ha) | B (ha) | Rf  | PCC  |
|----|----------------------------|--------|--------|-----|------|
| 1  | Dream Zone Museum          | 31     | 0,35   | 1,8 | 159,4 |
| 2  | 3D & Trick Art Museum      | 31     | 0,1    | 1,8 | 558  |
| 3  | Art Contemporary Gallery   | 31     | 0,01   | 2,9 | 8,990 |
| 4  | Kota Lama Park             | 31     | 0,8    | 1,6 | 62   |

Source: Primary Data, 2018

b. Effective Support Capacity

\[ ECC = PCC \times MC \]  \hspace{1cm} (2)

Notes:

ECC = effective support capacity
PCC = physical support capacity
MC = area management capacity

\[ MC = \frac{Rn}{Rt} \times 100\% \]  \hspace{1cm} (3)
Notes:
Rn = number of existing management officers
Rt = number of management officers needed

Table 2. Management Capacity in Tourism Objects of the Kota Lama of Semarang

| No | Name of Objects       | Rn (org) | Rt (org) | MC (%) |
|----|-----------------------|----------|----------|--------|
| 1  | Dream Zone Museum     | 30       | 50       | 60     |
| 2  | 3D & Trick Art Museum | 40       | 50       | 80     |
| 3  | Art Contemporary Gallery | 20     | 30       | 66.7   |
| 4  | Taman Kota Lama       | 40       | 100      | 40     |

Source: Primary Data, 2018

Table 3. Effective Support Capacity in Tourism Attractions of the Kota Lama Semarang

| No | Name of Objects       | PCC   | MC (%) | ECC   | Jkr (org) |
|----|-----------------------|-------|--------|-------|-----------|
| 1  | Dream Zone Museum     | 159.4 | 60     | 96    | 100       |
| 2  | 3D & Trick Art Museum | 558   | 80     | 447   | 100       |
| 3  | Art Contemporary Gallery | 8,990 | 66.7   | 5,997 | 50        |
| 4  | Taman Kota Lama       | 62    | 40     | 25    | 40        |

Source: Primary Data, 2018

Table 4. Classification of support capacity.

| No | Support Capacity | Classification of Support Capacity |
|----|------------------|-----------------------------------|
| 1  | ECC>JKr          | High                              |
| 2  | ECC<JKr          | Exceeded                          |
| 3  | ECC=JKr          | Optimal                           |

Source: Lutfi Muta'ali

Based on the results of the calculations, ECC obtained on Dream Zone Museum attractions is 96, so that it is classified as Exceeded Support Capacity because ECC is smaller than the actual number of visits. With that classification, visitors in the Dream Zone Museum are still below the support capacity of tourism attractions so that the managers of the Dream Zone Museum can be developed so that the number of tourists meets the available tourist support capacity in every day.

ECC on the 3D & Trick Art Museum is 447, it was classified as High Support Capacity because ECC was greater than the number of real visits. With this classification, visitors in 3D & the Trick Art Museum have surpassed the support capacity of the available tourist attractions so that the managers of the 3D & Trick Art Museum need to improve management in order that the number of tourists arriving does not exceed the available support capacity of each day.

ECC on the Art Contemporary Gallery amounted to 5,997, it was classified as High Support Capacity because ECC was greater than the number of real visits. With this classification, visitors to the Art Contemporary Gallery have surpassed the support capacity of available tourist objects so that managers of Art Contemporary Gallery need to improve management in order that the number of tourists who come does not exceed the available support capacity of each day.

ECC in Taman Kota Lama is 25, it was classified as Exceeded Support Capacity because ECC is smaller than the actual number of visits. With this classification, visitors in the Kota Lama Park are still below the support capacity of tourism attractions so that managers of the Kota Lama Park can be developed in order that the number of tourists meets the available tourist support capacity every day.

c. Parking Capacity

\[ KP = \frac{S}{D} \]  
(4)
Notes:
KP = Parking Capacity (vehicle / hour)
S = Number of plots available
D = Average parking time (hours / vehicle)

Table 5. Parking capacity to the west of the DMZ.

| Type     | S  | D   | KP |
|----------|----|-----|----|
| Motorcycle | 30 | 2.5 | 12 |
| Car      | 50 | 3   | 17 |

Source: Primary Data, 2018

Table 6. Parking capacity to Taman Kota Lama.

| Type     | S  | D   | KP |
|----------|----|-----|----|
| Motorcycle | 100| 3   | 34 |
| Car      | 200| 4.6 | 45 |

Source: Primary Data, 2018

Based on these data it can be seen that the parking location in the Kota Lama Park has a greater parking capacity than the parking location in the west of the DMZ. This is because the land area and the number of plots found in the parking area of the Kota Lama Park are larger and more numerous than the parking location in the west of the DMZ. In addition, the parking location located in the Kota Lama Park is close to cafes and food stands so many people choose to park at that location in order that they can take a culinary tour and stop in at the cafes around for relaxing. Whereas if you want to go to a tourist attraction, many people choose to park on the west side of the DMZ because the parking location is close to the attractions so there is no need to walk away from the parking location to the tourist attraction.

3.3. Tourism Development

Tourism development in the Kota Lama Semarang is directly led by the Deputy Mayor of Semarang. In the implementation of tourism development which adjusted to the master plan that has been stated in the Peraturan Daerah Kota Semarang Number 8 Year 2003 about the Building and Environmental Management Plan of Kota Lama. The development of tourism in the Kota Lama Semarang is intended to get the World Heritage from UNESCO in 2020.

Spatial planning has also been carried out since 2015, especially in the arrangement of ROB by returning the functions of gutters around the Kota Lama. Before 2015, the gutters were carelessly used by street vendors so that waste and garbage were dumped into gutters.

The existing facilities in the Kota Lama also increasing which did not meet at the first till become fulfilled such as parking lots and roads so that visitors could comfortably enjoy the facilities. Improvement and development are carried out in various sectors such as in tourism attractions, facilities and infrastructures, economy, transportation and roads. Hence, there are still lacks of facilities such as mosques, bathrooms and ATM Centers.

4. Conclusions

Tourism development in the Kota Lama Semarang is directly led by the Deputy Mayor of Semarang. In the implementation of tourism development which adjusted to the master plan that has been stated in the Peraturan Daerah Kota Semarang Number 8 Year 2003 about the Building and Environmental Management Plan of Kota Lama Area. The development of tourism in the Kota Lama Semarang is intended to get the World Heritage from UNESCO in 2020. Improvement and development are carried out in various sectors such as attractions, facilities and infrastructures, economy, transportation and roads. But there are still lacks of facilities such as mosques, bathrooms and ATM Centers.

Based on the results of the calculation of support capacity, the tourist manager of the Dream Zone Museum and the Kota Lama Park needs to be developed so that the number of tourists who come is more numerous in order that can meet the available tourist support capacity. Whereas in the 3D & Trick Art Museum attractions and Art Contemporary Gallery, the management of tourist attractions needs to
improve management and policy so that the number of tourists who come does not exceed the available tourist support capacity. The government and managers need to complete the facilities in the form of bathrooms, mosques, centralized souvenir centers and ATM centers so that visitors who come feel satisfied and have the desire to return to the Kota Lama Area of Semarang.

Acknowledgement
We thank to all participants voluntarily. We also thank to people who helps us in finishing the paper.

References
[1] Spillane James J 1985 Pariwisata Indonesia Yogyakarta: Kanisius.
[2] Marpaung Happy and Herman Bahar 2009 Pengantar Pariwisata Bandung: Alfbeta.
[3] Grand Design Kota Lama Semarang Tahun 2011
[4] Adi Suyatmin Waskito and Edy Purwo Saputro 2017 Potensi Daya Tarik Wisata Sejarah Budaya Solo: UMS.
[5] Hayati Rahma 2013 Model Ambang Batas Fisik dalam Perencanaan Kapasitas Area Wisata Berwawasan Konservasi di Kompleks Candi Gedong Songo Kabupaten Semarang Jurnal Vol 10, No. 2: UNNES.
[6] Husaeni Mahsun 2010 Analisis Karakteristik dan Kebutuhan Parkir di Pasar Kreneng Jurnal Vol 14, No.2: Universitas Udayana.
[7] Muflih Akrom Achmad Fahrudin and Yusli Wardianto 2015 Kesesuaian dan Daya Dukung Wisata Pesisir Tanjung Pasir dan Pulau Untung Jawa Jurnal Vol 20, No. 2: IPB.
[8] Peraturan Daerah Kota Semarang Nomor 8 Tahun 2003 tentang Rencana Tata Bangunan dan Lingkungan (RTBL) Kawasan Kota Lama.
[9] Purwanto Sigit Lailan Syaufina and Andi Gunawan 2014 Kajian Potensi dan Daya Dukung Taman Wisata Alam Bukit Kelam untuk Strategi Pengembangan Ekowisata Jurnal Vol. 4, No.2: IPB.
[10] Sari Ika Dewi Retno 2012 Kota Lama Semarang (Situs Sejarah yang Terpinggirkan) Jurnal Vol 32.
[11] Sari Suzanna Ratih Arnis and Hermin Pelestarian dan Pengembangan Kawasan Wisata Kota Lama sebagai Landasan Budaya Kota Semarang Jurnal Vol.17: UNDIP.
[12] Santoso Apik Budi 2006 Geografi Pariwisata Semarang: FIS UNNES.
[13] Santoso Apik Budi and Achmad RP Daya Dukung Lingkungan Terhadap Perkembangan Objek Wisata Air Terjun Curug Lawe di Desa Sutopati Jurnal Vol 6, No.2: UNNES.
[14] Setyowati Dewi Luesnoor Rini Puji Sugeng Aris Jayusman Eko and Edi 2016 Panduan Penulisan Skripsi Semarang: FIS UNNES.
[15] Suwanto Gamal 1997 Dasar-Dasar Pariwisata Yogyakarta: Andi.
[16] Tika and Moh. Pabundu 2005 Metode Penelitian Geografi Jakarta: Bumi Aksara.
[17] Undang-Undang Nomor 10 Tahun 2009 Tentang Kepariwisataan.
[18] Undang-Undang Nomor 10 Tahun 2010 Tentang Cagar Budaya.
[19] Wilopo Khusnul Khotimah and Luchman Hakim 2017 Strategi Pengembangan Destinasi Pariwisata Budaya Jurnal Vol 41, No. 1 Malang: Universitas Brawijaya.
[20] Yoeti Oka A 1990 Pengantar Ilmu Pariwisata Bandung: Angkasa.