

Creating Sustainable Vernacular Settlements: Insights from Sustainable Urban Tourism in Kampong Batik, Semarang, Indonesia

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Abstract

Kampong Batik Semarang is a Thematic Kampong in the city of Semarang that faces sustainability threats, especially because of the inefficient waste disposal process in batik production. There is a serious question as to how to balance the economic aspects of batik production with environmental and socio-cultural aspects.

This study aims to formulate strategies for Sustainable Urban Tourism (SUT) in the context of the problems of tourism management in Kampong Batik Semarang. The research was conducted from 2019 to 2022, involving interviews with 97 respondents. The SWOT and IFAS/EFAS Matrix analysis were used to help in formulating the SUT strategy with a priority scale. 26 strategies were discovered. They were dominated by proposals to strengthen the system of development, management, and re-structuring the industry to become multi-sectoral.

Keywords: Sustainable Urban Tourism (SUT), Kampong Batik Semarang, Thematic Kampong, Tourism Management, SUT Strategies.

Introduction

Urban tourism is one of the most promising sectors of recent times. Based on data obtained from the European Commission (2020), urban areas increased rapidly from 1975 to 2015 with 48% of the world's population living in urban areas. In addition, the very diverse characteristics of urban areas globally increasingly provide a great opportunity for urban tourism. Over time, urban tourism activities have shown a massive increase so much so the term massive tourism is formed due to easy access to information and communication (Theng, Qiong, & Tatar, 2015).

Indonesian tourism shows unique characteristics because most of it relies on the natural resources as one of the attractions and wealth of the nation (Prakasa, 2019). According to Malik and Bath (2015), this is both a challenge and an opportunity for the development of tourism in Indonesia. Because if an error occurs during its development, it will cause severe environmental degradation and disrupt natural ecosystems and human life. Therefore, the current concept of sustainable tourism is very important to minimize the negative impacts due to recent massive tourism activities. This concept opens a new perspective on how urban tourism should be

Consequently, this study seeks to respond to sustainability problems that have occurred for a long time in Kampoeng Batik Semarang, starting from the Pre Pandemic COVID-19 to Post Pandemic COVID-19. Environmental problems such as the poor Batik waste management system to the economic instability of the tourism sector due to restrictions on tourism activities during the COVID-19 have caused a drastic decrease in income for the community. Moreover, people who live in Kampoeng Kota are low-income communities. In addition, low resource optimization is still found in the study locations.

Therefore, this study aims to find out how the optimization of regional resources can shape the concept of Sustainable Urban Tourism (SUT) in Kampoeng Batik Semarang through recommendations on various aspects of sustainability. It seeks to identify the condition of the SUT elements in Kampoeng Batik Semarang to find the characteristics, potentials and problems of the study location. It also seeks to assess the SUT indicator through the perception of visitors in Kampung Batik Semarang as well as the condition of tourism in Indonesia. The study forms a SWOT matrix from SUT to formulate a strategy implementation scheme based on the potentials and problems in Kampoeng Batik Semarang.

Sustainable Urban Tourism: The Theoretical Basis

Urban tourism is a type of tourism that concentrates on areas within the city as well as connected tourism objects and complements (Rogerson, 2016; Law, 2000). Its development is the impact of an increase in global tourism interest so that the urban component is designed to accommodate the need for community tourism activities both locally and globally (Garbea, 2013). Urban tourism is defined as a group of tourist activities centered on urban spaces (European Commission, 2000). However, nowadays, the boundaries between urban and suburban areas are not clearly visible, especially in developing countries such as Indonesia.

Asian cities have different urban tourism characteristics compared to European cities. For example, in India and Malaysia, popular urban tourism is cultural tourism, tradition tourism, culinary tourism, costume tourism and art tourism, although the average city in Asia still has problems with access to transportation and communication network systems (Hanafiah et al., 2021; Dharmwani, 2013). In Malaysia, the greatest impact of tourism lies in the socio-cultural and economic aspects compared to the impact obtained by the environmental aspects. Therefore, it is not uncommon for tourism activities to create new problems for urban communities. Meanwhile, cities in Europe mostly face problems in the form of conflicts between the wishes of tourists and local communities (Alvarez-Sousa, 2018; Zmysłony & Kowalczyk-Aniol, 2019). Some historical areas that have been inhabited by the local people for years have undergone spatial changes that disrupt long-standing traditions.

Urban Kampoengs are urban objects that have complete components based on the needs of tourists who want experiences in various fields ranging from culture to culinary. Urban Kampoengs have environmental characteristics that are still identical to those of rural areas, which can be seen from their traditional characteristics although some have shifted to more modern conditions (Herlianto, 1986). If viewed from their physical characteristics, Urban Kampoengs are settlements located in urban areas and identical with slum areas with low infrastructure quality (Wirjomartono, 1995). Thus, it can be concluded that the Urban Kampoeng is a settlement in an urban area that still has similar characteristics to rural areas with infrastructure conditions that tend to be low. Nevertheless, Urban Kampoengs are currently a leading tourist destination for developing countries that can support the country's economy, one of which is the provision of thematic Kampoengs.

An example of the successful application of sustainable elements for traditional communities that can be applied to urban villages (urban kampoeng) is the development of the Rio Coco Geopark. They have a high effort in maintaining ancestral traditions and culture as a means of maintaining sustainability of various aspects of life. Aspects of customary knowledge are used and applied in everyday life, especially in decision making (Paskova, 2018). This has become an important practice for urban kampoeng communities in Indonesia. This is because the urban village is one of the historical heritages that are rich in the meaning of local wisdom and the nation's ancestral heritage.

In addition, another success of the implementation of urban tourism is the formation of the image and branding of the area, included in government regulations (Tapardel & Alexe, 2012). This is very important to attract more tourists who visit to the era of advances in information technology as it is today. Promotion on social media has proven to be able to help disseminate information about a particular location or activity. Of course, an increase in the number of visits will be a good source of income for the local community's economy. City governments can work with stakeholders to develop appropriate strategies to support Urban tourism (Zamfir & Popescu, 2011). Based on the Table 1, there are various indicators and supporting variables that can be used as benchmarks and considerations in drafting the concept of urban tourism development in accordance with local conditions, especially in rural areas.

Table 1: Synthesis of Sustainable Urban Tourism Indicators

Source: Author

Code.	Aspects	Description	Relevant Study	Num	Indicators				
A.	Environment	<ul style="list-style-type: none"> Protect the environment such as preserving natural assets and their supporting components. Renewable energy and protection of air resources. Minimize the occurrence of pollution and environmental pollution. Prevention and management of environmental disasters. Landscape conservation through stabilization of land use for tourism and conservation activities. 	Durovic & Lovrentjev (2014)	1	Promotion considering environmental aspects				
				2	There is the implementation of a renewable energy program				
				3	There is an integrated waste management system				
				4	There is a program to control the use of clean water to be safe in quantity, quality and continuity/sustainability.				
				5	There is a program to increase the use of environmentally friendly transportation				
				6	There are alternative tour packages if the weather changes				
B.	Social-Cultural	<ul style="list-style-type: none"> Management of the influence of tourism activities on local communities. Provision of a quality security system and management of activities. Improving people's quality of life. Conservation of cultural heritage through the protection of local traditions and customs. Education on cultural heritage conservation to the public and tourist visitors. Making regulations for cultural protection. The use of cultural resources as a tourist attraction. 	Durovic & Lovrentjev (2014)	7	Promotion considers social aspects				
				8	There is community participation in tourism management				
				9	Promoting gender equality				
				10	Have written regulations regarding the code of conduct in tourism villages				
				11	There are tourist activities that involve tourists				
			Durovic & Lovrentjev (2014)	12	Promotion takes into account cultural aspects				
				13	Have a story/story telling about each tourist attraction				
				14	Have craft activities based on local resources				
				15	Having local specialties as a tourist attraction				
				C.	Economy	<ul style="list-style-type: none"> Economic benefits obtained for the whole community. Considering tourist satisfaction in the provision of tourism activities. Take into account the opportunities for seasonal tourist activity. 	Durovic & Lovrentjev (2014)	16	Promotion considering the economic aspect
								17	There is an increase in people's income from the tourism sector
18	The existence of a village regulation on job opportunities and a payroll system in								

Code.	Aspects	Description	Relevant Study	Num	Indicators
		<ul style="list-style-type: none"> Strong government regulations in support of increasing the tourism economy. 		19	accordance with applicable regulations, and trying to manage tourism objects that are the same for all and local/indigenous communities There is monitoring and evaluation in the form of an annual tourist village financial report
D.	Health and Safety	<ul style="list-style-type: none"> A good disaster prevention and management system. Implementation of health protocols and availability of health facilities for tourists and local communities. Promote and support green transport and infrastructure. Provision of supporting facilities for the protection of tourists for all activities. 	Handbook Destination CHSE (2020)	20	Installing hazard warning signs and disaster response SOPs
				21	Implement 3M health protocols (wash hands, wear masks, and maintain distance)
				22	There is a health service room
				23	There is an SOP in case of an accident
				24	Providing shelter, such as shelter
				25	Provide personal protective equipment, such as umbrellas, first aid kits, etc.
				26	Adequate, clean and safe sanitation is served
				27	Provision of special lanes for the disabled
				28	Provision of special paths for pedestrians
				29	Provision of special bicycle lanes
E.	Tourism	Optimization of the physical elements of the design of tourist destinations to support tourist activities.	Febriani and Arsandrie (2018)	30	Tourism Facility Management
				31	Greener of Tourism Area
				32	Signage of Tourism Area
				33	Circulation of Tourism Area

Study Location: Kampoeng Batik Semarang

Kampoeng Batik Semarang is one of the kampoengs located in Rejomulyo Village, East Semarang District, Semarang City, Indonesia. This location has an area of 6.52 Ha and consists of 10 *Rukun Tetangga* (Neighborhood Association/Blocks). Kampoeng Batik Semarang has a long history that describes the struggle of the community in carrying out trading activities to survive in the colonial period. This location is designated as a cultural heritage area in the City of Semarang based on the Regional Regulation of the City of Semarang Number 6 (2004) concerning the Detailed Spatial Planning of the City of Semarang for the City Area 1. If viewed from the demographic structure, this location is occupied by approximately 821 inhabitants and consists of 20 batik craftsmen who are still active today.

Kampoeng Batik Semarang has gone through various changes, one of the biggest changes being the tragedy of the residential fire that occurred during the 5-Day Battle in Semarang in 1945. This caused many native batik craftsmen in that location to move to other areas to save themselves. Based on the results of interviews conducted in 2019, this incident became one of the forerunners to the spread of Semarang batik motifs to other areas in the island of Java. During the Japanese colonial period in 1942, Kampoeng Batik Semarang experienced a heyday. In the 1980s, improvements were made to the area and efforts were made to revive local community batik activities. Then, in 2006, the area revitalization process was carried out by the Semarang City Government, which had an impact on the revival of the

activities of local batik craftsmen. Currently, Kampoeng Batik Semarang has become one of the leading tourist destinations in the city of Semarang, which provides historical education and the process of making local batik. In 2016, this location was designated as a Thematic Kampoeng in Semarang City, which further supports tourism development in Kampoeng Batik.

Research Methods

Strategy Matrix SWOT Method

This study was conducted from 2019 to 2022 through various data collection methods ranging from primary and secondary data collection. Primary data was collected through field observations, distributing questionnaires to approximately 100 respondents and interviews with community leaders. Meanwhile, secondary data were obtained through the collection of relevant literature and various regulations that support the development of the Kampoeng Batik Semarang area.

Data analysis was carried out using an observational descriptive analysis process on the results of field observations and qualitative descriptions by utilizing data tabulation, scoring to describe pictures or diagrams. In realizing the goal of obtaining the concept of implementing sustainable tourism in accordance with local conditions, the SWOT (Strength, Weakness, Opportunity, Threat) method and the EFAS and IFAS Matrix are used in forming a concept diagram of regional development.

The SWOT method is a well-known technique for making decisions based on internal and external factors (Rangkuti, 2006). This method will generate appropriate solutions to problems and maximize potential. Meanwhile, the EFAS and IFAS Matrix are advanced SWOT analysis methods that result in the division of strategies into matrix boxes based on their urgency and priority. This matrix will then issue the weight and value for each strategy so that it can facilitate the process of implementing a program in the future.

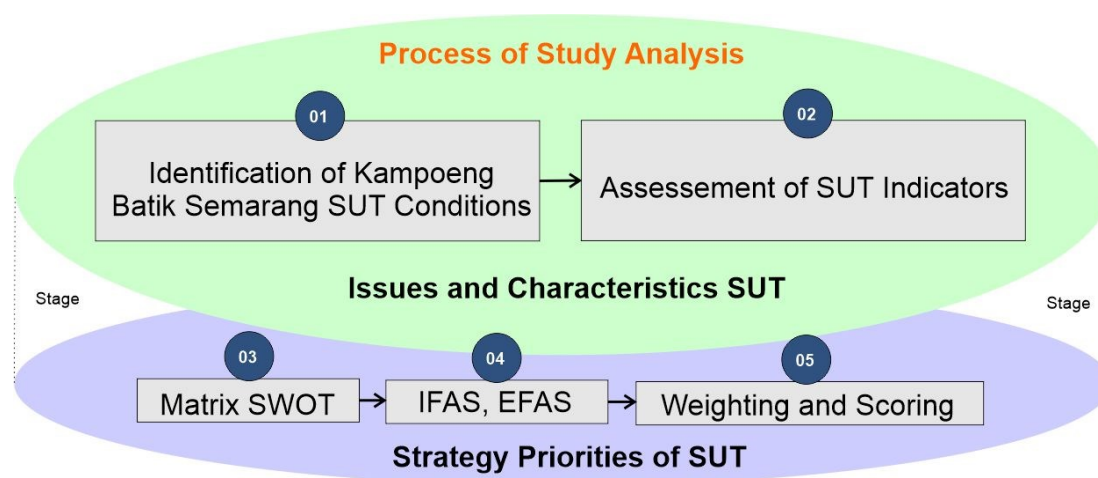


Fig. 2: The study analysis methods diagram

Source: Author

Fig. 2 shows the stages used in the research analysis to achieve the objectives. The first stage is the formulation of the issues and characteristics of the SUT in Kampoeng Batik Semarang using two components of analysis, namely the identification of the existing conditions of SUT Kampoeng Batik Semarang from the results of field observations that describe the condition of the economic, environmental, socio-cultural, and tourism components. Afterwards, the SUT indicator assessment process was carried out based on the perceptions of the community and visitors to get the quality and scale of SUT implementation in Kampoeng Batik Semarang. This is followed by the second stage in the form of formulating a priority strategy for implementing SUT in accordance with the issues and characteristics of Kampoeng Batik Semarang. This stage consists of making a SWOT matrix, compiling IFAS and EFAS

matrices, as well as weighting and scoring used for modeling the SUT strategy. The following is the determination of the scale value in the weighting of the SUT strategy (Formula 1).

$$\text{Scale/Interval} = \frac{\text{Highest Value} - \text{Lowest Value}}{\text{Number of Scale}} \rightarrow \text{will get groups according to the number of scales*} \quad [1]$$

Conditions of Kampoeng Batik Semarang

Kampoeng Batik Semarang has a very strategic location, which is in the centre of the development of trade and services in the city of Semarang. This area is adjacent to the important cultural heritage blocks such as Semarang Old Town, Kampoeng Pekojan and others. If seen based on Fig. 3, it shows that Kampoeng Batik Semarang consists of 9 kampoeng blocks (Neighborhood Associations). The division of village blocks is based on the number of neighborhood units and the characteristics of batik products produced from each region. Regional tourism activities are centred in the central kampoeng, namely Kampoeng Djadoel as one of the main tourist centers in this area (Syafira & Wijaya, 2019). This location presents tourist activities in the form of past tours or historical tours that describe the condition of the area at a certain period. Various kinds of antiques are exhibited as an attraction for tourists.

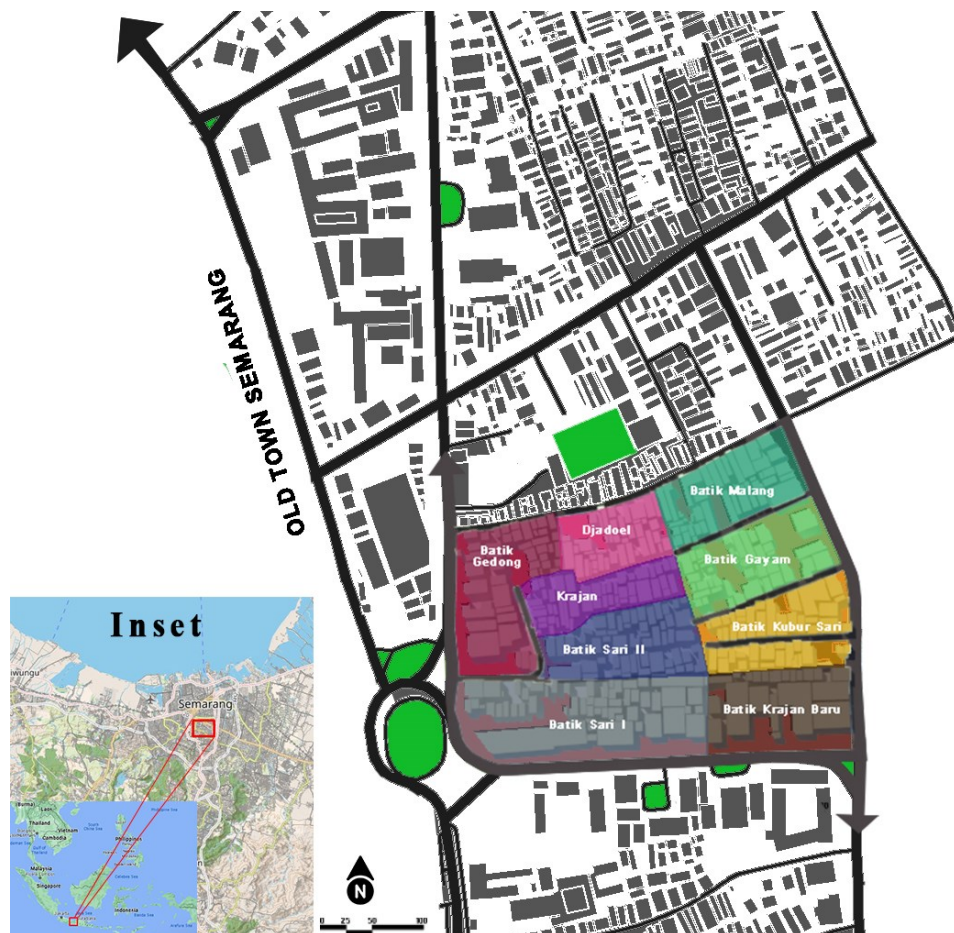


Fig. 3: Distribution of blocks in Kampoeng Batik Semarang

Source: author

Kampoeng Batik Semarang is one of the areas included in the Thematic Kampoeng program in the city of Semarang. This program was implemented in 2016 by the Semarang City Government with the aim of developing the community's economy through the utilization of local potential. Kampoeng Batik was chosen as one of the locations for the implementation of Thematic Kampoengs in the city of Semarang because it has several potentials for development

as a centre of economic activity as well as a tourist attraction for the city. The Semarang City Government also collaborates with various stakeholders such as the State Electricity Company in an effort to hold Corporate Social Responsibility (CSR) in Kampoeng Batik and other Thematic Kampoengs.

Based on its location (Fig. 4), Kampoeng Batik Semarang can be combined with other nearby tourist areas such as Kota Tua, Kampoeng Melayu, Kampoeng Pekojan, Chinatown, and so on. This is further enhanced by its proximity to Johar Market, one of the city's most important economic centres. This is certainly an opportunity to make it easier in the process of marketing batik clothes from batik producers to consumers.



Fig. 4: Current condition of Kampoeng Batik Semarang

Source: author

1. Environmental Conditions

The existing condition of Kampoeng Batik Semarang can be seen from the environmental, economic, socio-cultural, and tourism support aspects. The environmental aspect emphasizes the process of disposing of waste from batik production. So far, batik activities produce liquid waste as a result of the coloring process and wax. Previously, batik producers in Kampoeng Batik Semarang dumped their waste into sewers, polluting the environment. This is because the batik craftsmen in this kampoeng still work on a small scale and the dyeing process is still done traditionally.

According to the findings of a 2019 interview with one of the batik craftsmen, the reason for the craftsmen throwing waste into the sewers was due to the high cost of making special containers for waste disposal. The low public awareness of the importance of preserving the environment has exacerbated the level of pollution. Meanwhile, Sari, Hartini, and Sudarno (2015) discovered that waste from batik productions discharged directly into the canal without prior filtering can pollute the surrounding settlements, reduce environmental quality, increase COD (Chemical Oxygen Demand), and cause the death of aquatic biota.

However, currently, there are various assistance and collaborations with various parties in the procurement of Wastewater Management Installations. The results of this collaboration have provided a Wastewater Management Installation for batik production whose function is to neutralize water containing dyes and waxes. The procurement of waste disposal installations is also assisted by the CSR program from PT PLN (Indonesian Power Generation Institute) and

cooperation with several universities such as Diponegoro University to conduct several studies and guidance related to environmental conservation to the community.

According to Fig. 4, several regional blocks have been arranged in accordance with the image that Kampoeng Batik wishes to create for tourists who will visit. Among them is a typical gate made of bamboo and coconut leaves at the entrance, which represents the historical life of the past in this area. In addition, the arrangement of several vegetation components has been seen in several areas such as the residential roads and main destinations in Kampoeng Batik such as Kampoeng Djadoel. As one form of environmental conservation efforts, the people of Kampoeng Batik Semarang have formed a Community Self-Help Group, which aims to coordinate the cleanliness and environmental sustainability in Kampoeng Batik Semarang. The institution mobilizes the community to do community service every week, making simple plants, painting walls, and other activities.

Based on several previous studies (Arifiani & Mussadun, 2016; Asmaelash & Kumar, 2019) environmental sustainability can be realized when tourism development activities do not have a negative impact on the environment. Integration between tourism supporting facilities is necessary in this regard. Until now, the waste management installations from batik production has not been able to meet the needs of the amount of waste produced by batik producers. Thus, environmental sustainability is still a big problem for the development of Kampoeng Batik Semarang.

2. Local Economic Conditions

The implementation of sustainable tourism places great emphasis on the principle of tourism that takes into account the long-term economic benefits, especially for the local communities. Tourism development in Kampoeng Batik Semarang is a form of community empowerment, especially for the batik producers. Based on interviews conducted in 2019, it is currently very difficult to maintain the batik craftsmen due to limited resources. Most people tend to think that batik is a job that is not promising and seems old-fashioned.

Most economic activities in Kampoeng Batik Semarang are in the form of small and medium enterprises or independent home-based businesses. Based on Table 2, it can be seen that there are approximately 17 batik entrepreneurs consisting of 6 batik craftsmen, 11 batik traders, and 1 batik tailor. According to the results of interviews and field observations from 2019 to 2022, there are a total of 20 batik producers, but some of them still do not have patents or brands.

In addition to batik business activities, the community also has other types of businesses such as stall businesses, milkfish presto, food processing, and photocopying businesses. Therefore, improving the quality of the economy is not only felt by batik producers, but the whole community. They can feel the impact of tourism activities in the area. Visitors come not only to see or shop for batik but can also do other activities. On the other hand, according to Rahman and Novitasari (2019), the quality of life of the community will increase in line with the improvement of environmental infrastructure. This is proven by the real impact resulting from the implementation of the Thematic Kampoeng program since 2016 in Kampoeng Batik Semarang. The demands of tourists' needs make many facilities such as roads, lighting, public spaces, and green areas getting better from year to year.

Kampoeng Batik Semarang Tourism has been able to help the process of realizing a sustainable local economy. This is because, according to research conducted by Somuncu and Uzun (2015), the magnitude of the influence on the welfare of local communities is the benchmark for the sustainability of a tourist destination when viewed from an ecological standpoint. In Kampoeng Batik Semarang, the economic benefits are not only felt by batik producers, but the whole community can feel the impact of tourism activities. Therefore, good cooperation is needed for various parties to realize sustainable tourism in Kampoeng Batik Semarang.

Table 2: List of batik entrepreneurs in Kampoeng Batik Semarang

Source: Author

Num.	Name	Business Type	Store Name/Batik Merk	Batik Production
1	Eko Hariyanto	Batik Crafts	Cinta Batik Semarang	
2	Rini	Batik Crafts	Batik Handayani	
3	Dodo Budiman	Hand-painted	Batik Djago	
4	Elizabeth	Batik Crafts	Batik Eli	
5	Yayuk	Batik Crafts	Batik Rusyda	
6	Tri	Batik Crafts	Batik Ngesti Pandawa	
7	Oktavia Ningrum	Batik Trader	Batik Temawon	
8	Tumi Welas	Batik Trader	Batik Kurnia	
9	Monica	Batik Trader	Batik Arjuna	
10	Rohmah	Batik Trader	Batik Nurayumi	
11	Heru	Batik Trader	Batik Puspita	
12	Maemunah	Batik Trader	Batik Djabra	
13	Supardan	Batik Trader	Ono Batik	
14	Balqis	Batik Trader	Batik Balqis	
15	Ida Purwati	Pedagang Batik	Batik Anggraini	
16	Bahrul	Pedagang Batik	Batik Sandangan Barokah	
17	Diana	Penjahit Batik	Batik Gedong	

3. Socio-Cultural Conditions

Socio-cultural aspect of sustainability can be interpreted as a form of respect for social identity and social capital, community culture and assets, as well as strengthening cohesiveness and community pride (Choi & Sirakaya, 2005). The development of Kampoeng Batik Semarang as a tourist destination is expected to help in the process of preserving local culture and introducing it to the wider community. The Thematic Kampoeng Program then goes hand in hand with the preservation of cultural heritage through efforts to protect cultural heritage in Kampoeng Batik Semarang.

Kunasekaran et al. (2017) say that cultural preservation can be done well. One of the ways is the development of tourism, through the process of introducing local culture to visitors and developing it into tourism products. Kampoeng Batik Semarang has made efforts to preserve culture by including it as a major tourist attraction, which is expected to be able to revive the history and identity of the region. The urge to improve and develop in all fields also continues to emerge among the people of Kampoeng Batik Semarang.

Batik activities are carried out not only for the sake of production, but can involve tourists in the process. Among them are batik classes and batik-making education to local communities and tourists. Usually, batik training is held by the Kampoeng Batik Semarang Association. The relationship that is still close in the community also fosters other tourist attractions in the form of the tradition of eating together which is carried out regularly every

week or during important events. Tourists are frequently invited to participate in the traditional eating experience of Kampong Batik Semarang.

According to Prevorsek et al. (2020), social sustainability is not only about the protection of cultural assets, but also related to the conditions of local community social activities. The improvement in these conditions is related to strengthening infrastructure, developing additional tourism products as part of the offer, as well as strengthening local community social interaction forums. The relationship between communities in Kampong Batik Semarang is getting stronger after the implementation of the Kampong Batik tourism development program. This is certainly a very valuable social capital for future regional development. However, there is still a need for an even distribution of the impact of activities from the tourism activities to the edge blocks so that jealousy does not arise in the future.

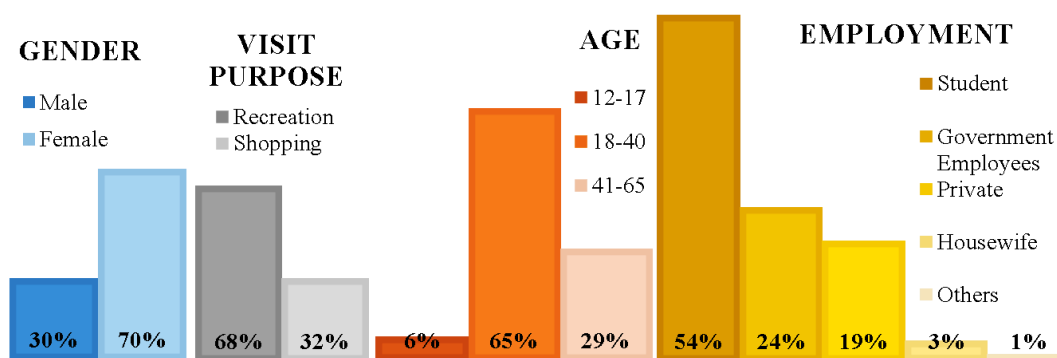


Fig. 5: Visitor characteristics of Kampong Batik Semarang
Source: author

The amenities in Kampong Batik Semarang has been reorganized, especially in complementary tourist facilities such as information posts, vegetation arrangement, lighting, gazebos or shelters, and others. Fig. 4 depicts some vehicles that are still parked haphazardly in alleys or on roads around the area. Furthermore, green open spaces are limited to ornamental plant reforestation and do not yet have green open spaces that can accommodate community interactions as well as water catchment spaces. This is due to Semarang's vulnerability to flooding, particularly in areas close to the sea, such as Kampong Batik Semarang. Therefore, green open space facilities significantly aid in the process of reforestation and groundwater absorption. Other facilities such as solid waste and drainage are available but not evenly distributed.

The concept of batik education is one of the main attractions in this area. By taking a batik class for 20 thousand IDR to 35 thousand IDR, visitors can enjoy the experience of making batik typical of Semarang directly from the local craftsmen. This is in accordance with tourism trends that are currently developing, presenting tourist experiences that are not just visiting but also getting experience and learning something (Wisudawati, 2018). In addition to education on the manufacture of written batik, tourists can also shop for batik products produced by local communities with various types of products ranging from clothes, bags, shoes, and others. Other attractions offered are photo spots in Kampong Djadoel. This location explains how visitors can experience the area's history in the past. A local tour guide will lead visitors to several wall paintings depicting folklore and the history of the formation of Batik Semarang, which is unquestionably an important part of cultural preservation.

Accessibility of Kampong Batik Semarang is relatively good. The location of Kampong Batik Semarang, which is in the centre of Semarang City, is one of the advantages for tourism development in this location. It is passed by the Trans Semarang Bus and is also equipped with a refuelling centre not far from the kampoeng location. The field observations

found that complementary road facilities such as sign boards were available, such as location maps to sign boards for directions to Kampoeng Batik Semarang. However, on major roads, there is still minimal information about the whereabouts of Kampoeng Batik Semarang. In addition, the problem of parking spaces is still problematic to improve the accessibility of the area.

On the other hand, the local community has a role as the main actor in the implementation of the development of Kampoeng Batik Semarang as a tourist area. Paguyuban Kampoeng Batik becomes a driving force for the process of empowerment, preservation, and development of batik products. Then, the Semarang City Government plays a role in providing stimulus and assistance according to the needs of regional development. In addition, the private sector or other companies that play a role in providing assistance through the Corporate Social Responsibility (CSR). CSR is a community empowerment program provided by large companies in the city of Semarang, both in the form of capital, public education, and the provision of supporting facilities. The whole indicates the high role of each stakeholder in the development of Kampoeng Batik Semarang.

Tourism Villages in Indonesia vs Kampoeng Batik Semarang

Based on the self-assessment collection process from the BCA Desa Wisata Award (2021) program for 261 sample village tourism, the value of the sustainability of villages and tourism villages, including those in Central Java Province, was obtained. Table 3 shows that the condition of the cultural elements in Indonesia occupies the highest level compared to other elements, especially in the indicator of storytelling and promotion of culture to tourists and the wider community. Meanwhile, environmental or ecological components are still a big task for all tourism villages or kampoengs in Indonesia, including in Central Java. The lowest indicator of tourism sustainability in Indonesia is the implementation of renewable energy. This shows that the environmental component is still very concerning and threatens the sustainability of life in the future. Therefore, the implementation of sustainable tourism must be carried out by every tourist destination in Indonesia, including Kampoeng Batik Semarang.

The results of the assessment were compared with the availability and conditions in Kampoeng Batik Semarang. The same problem occurs in Kampoeng Batik Semarang about how environmental conditions are still very low quality. This is one of the benchmarks for regulations. State conditions are factors that can affect the quality of tourism provision in various locations, including Kampoeng Batik Semarang. In general, of the 29 indicators, only 13 are currently owned by Kampoeng Batik Semarang. This means that the implementation of tourism in Kampoeng Batik Semarang still does not have 50% of the general indicators of organizing tourism villages and tourism villages in Indonesia.

Table 3: Conditions of tourism sustainability elements in Indonesian Villages

Source: Author

Num.	Aspects of SUT	Indicators	Accumulation Result			Available in Kp. Batik Semarang
			Indicator Value	Aspects Value	Scale	
1.	Environment	Promotion considering environmental aspects	0.90	0.55 (Overall Med)	High	X
		There is the implementation of a renewable energy program	0.30		Low	X
		There is an integrated waste management system	0.50		Med	V
		There is a program to control the use of clean water to be safe in quantity, quality and continuity/sustainability.	0.50		Med	X
		There is a program to increase the use of environmentally friendly transportation	0.50		Med	X

Num.	Aspects of SUT	Indicators	Accumulation Result			Available in Kp. Batik Semarang
			Indicator Value	Aspects Value	Scale	
		There are alternative tour packages if the weather changes	0.60		Med	X
2.	Social-Cultural	Promotion considers social aspects	1.00	0.90 (Overall High)	High	V
		There is community participation in tourism management	0.90		High	V
		Promoting gender equality	1.00		High	V
		Have written regulations regarding the code of conduct in tourism villages	0.70		High	X
		There are tourist activities that involve tourists	0.80		High	V
		Promotion takes into account cultural aspects	1.00		High	V
		Have a story/story telling about each tourist attraction	1.00		High	V
		Have craft activities based on local resources	0.70		High	V
		Having local specialties as a tourist attraction	1.00		High	V
3.	Economy	Promotion considering the economic aspect	1.00		0.70 (Overall High)	High
		There is an increase in people's income from the tourism sector	0.80	High		V
		The existence of a village regulation on job opportunities and a payroll system in accordance with applicable regulations, and trying to manage tourism objects that are the same for all and local/indigenous communities	0.50	Med		X
		There is monitoring and evaluation in the form of an annual tourist village financial report	0.50	Med		X
4.	Health and Safety	Installing hazard warning signs and disaster response SOPs	0.40	0.64 (Overall Med)		Med
		Implement 3M health protocols (wash hands, wear masks, and maintain distance)	1.00		High	V
		There is a health service room	0.40		Med	X
		There is an SOP in case of an accident	0.60		Med	X
		Providing shelter, such as shelter	0.80		High	V
		Provide personal protective equipment, such as umbrellas, first aid kits, etc.	0.90		High	X
		Adequate, clean and safe sanitation is served	0.90		High	V
		Provision of special lanes for the disabled	0.20		Low	X
		Provision of special paths for pedestrians	0.70		High	X
		Provision of special bicycle lanes	0.50		Med	X

Sources: Based on Self Assessment of Tourism Village on BCA Desa Wisata Award (2021); Observation, 2022. Notes: Not Available in Kampoeng Batik Semarang (X); Available in Kampoeng Batik Semarang (V).

Sustainable Urban Tourism Based on Tourist Perceptions

Based on the results of the identification of assessments and comparisons between the sustainability indicators of tourism villages in Indonesia previously, it was found that ecological or environmental elements are still the main problems that must be resolved in implementing sustainability in Kampong Batik Semarang. Table 4 presents the assessment of tourism indicators in Kampong Batik Semarang based on the perceptions of 97 visitors. It is dominated by an assessment of the physical components of the environment supporting tourism activities. This is an additional aspect used to approach the assessment of visitor satisfaction specifically on tourist attractions and supporting indicators. The tourism aspect has basically been spread over the previous 5 aspects. However, it has not referred to the conditions of tourist attractions specifically so that the tourism aspect can be a complement in the preparation of the SUT concept in Kampong Batik Semarang. The circulation variable has the lowest value compared to other variables. In this variable, vehicle regulation, road width, and special lane separation between pedestrians and vehicles still have the lowest perceived satisfaction value compared to other indicators in the circulation variable.

In addition, visitors consider tourism support facilities having the second lowest value after circulation, especially in the variable location distribution of village blocks and the availability of other public transportation besides the Trans Semarang Bus. However, the overall value of the resulting variable is quite high. The sub-variable of street lighting availability is the lowest sub-variable value compared to other sub-variables. Based on the results of field observations, Kampong Batik Semarang tends to have busy activities from morning to evening. However, at night, it decreases due to street lighting conditions that do not support tourism activities. A tourist location must have a variety of attractions and activities that can take place from morning till night as an effort to optimize the community's source of income from all its potential.

Paskova (2018) states that harmony and balance between tourist activities, local communities, tourism actors, private sector and others can increase the success of implementing Sustainable Tourism. That is, the assessment through the perceptions of all stakeholders can be used as an evaluation material in determining the policies and goals of the next development. The results of the assessment of several tourist visitors at Kampong Batik Semarang show the high sense created by the local tourist attraction for visitors. However, this result will continue to experience dynamics and changes from time to time because it is strongly influenced by the tourism climate.

Table 4: Samples of visitors' perceptions on tourism aspect

Source: Author

Asp	Indicators	Criteria of Assessment	Indicators Value	Aspect Value	Scale
Tourism	Tourism Facility	Community and tourist activity center	0.66	0.74 (Overall High)	High
		Marketing and shopping facilities	(Overall High)		Med
		Food stalls			High
		Public toilet			High
		Location of Batik Block			Med
		Public transportation			Med
		Parking space			High
	Greener of Tourism Area	Greenery around the entrance	0.86	0.86 (Overall High)	High
		Reforestation around Djadhoel Block	(Overall High)		High
	Street Furniture of Tourism Area	Seat	0.75	0.75 (Overall High)	High
Hand Washing Facilities		(Overall High)	High		
Rubbish bin			High		
Street Lighting			Low		

Asp	Indicators	Criteria of Assessment	Indicators Value	Aspect Value	Scale
Signage of Tourism Area		Information signage outside the KampoengBatik area	0.83 (Overall High)		High
		Area plan			High
		area gate			High
Circulation of Tourism Area		Vehicle rules/restrictions	0.61 (Overall High)		High
		Road widening			Med
		Special lane for motorized vehicles			Med

Sustainable Urban Tourism (SUT) Matrix for Kampoeng Batik Semarang

SWOT analysis is used to accumulate the potential and problems that exist in Kampoeng Batik Semarang. This method aims to find several issues that arise in the implementation of Sustainable Urban Tourism based on their existing conditions. Table 5 shows that there are 17 kinds of issue formulations formed from Opportunities and Strengths (OS). Meanwhile, the formulation of issues resulting from the meeting between Opportunity and Weakness (OW) is as many as 10 issues. Then, as many as 9 issues were found from the results of the meeting between the Threats and Strength (TS) components. The Threats and Weakness (TW) component produces 10 issues.

The characteristics of the implementation of Sustainable Urban Tourism in Kampoeng Batik Semarang are integrated in batik production activities, tourism activities, historical development, and regional planning. It is the same as what was found in studies on Sustainable Tourism in previous studies, which found that the main topic widely raised related to Sustainable Tourism was development (Roblek et al., 2021). This is consistent with the results (Dharmwani, 2013; Hanafiah et al., 2021) which show that Urban tourism destinations in Asia on average experience problems in aspects of complementary tourism facilities such as transportation and communication networks. Meanwhile, the aspects that are the focus of development and tourist attraction are culture, local traditions, culinary arts and other arts.

Table 5: SWOT analysis based on SUT aspects

Source: Author

Aspect	Strength (S)	Weakness (W)	
Opportunity (O)	Environment	OS.1 An area with a high historical story	OW.1 Densely populated residential area
		OS.2 There are already collaborations with various parties for batik waste management	OW.2 Does not have environmentally friendly energy management
		OS.3 There are environmental conservation self-help groups	OW.3 There is no regulation on environmental preservation
	Socio-Cultural	OS.4 Has an important historical story for the development of Batik in Semarang City	OW.4 Batik stalls at the front of the area
		OS.5 Close community relations	
		OS.6 There are community leaders who play a role in area management	
		OS.7 Defined as a cultural heritage of Semarang City	
		OS.8 Has a story telling	
	Economy	OS.9 Excellent product in the form of Semarang Batik with distinctive motifs	OW.5 The lack of the next generation of batik craftsmen

Aspect		Strength (S)	Weakness (W)
		OS.10 There are 17 batik producers	OW.6 There is no integrated economic management system for batik producers
		OS.11 Regional tourism activities	
		OS.12 Different types of community businesses	
		OS.13 Thematic Kampoeng Program	
Health and Safety	OS.14 Several health support facilities such as hand washing facilities are available.	OW.7 Some health facilities are not maintained and non functional.	
Tourism	OS.15 Has various tourist attractions	OW.8 Involvement of tourists in tourism activities	
	OS.16 There is a tour manager	OW.9 The road area is made of paving and is relatively narrow	
	OS.17 Tourism involves local community participation	OW.10 Tourism activities are still centralized	
Threats (T)	Environment	TS.1 Strategically located in the center of Semarang City	TW.1 Pollution of batik production waste
		TS.2 Connected to the public transport network	TW.2 Limited space for tourism and other activities
	Socio-cultural	TS.3 Domination of the elderly population in batik production and business management	TW.3 There is no regulation on behavior in the area
		TS.4 The many historical stories of the region	TW.4 The number of immigrants
		TS.5 Urban modernization	TW.5 Low knowledge of young people about area management
	Economy	TS.6 Batik Kampoeng Tourism	TW.6 Inequality of economic impact of each regional block
		TS.7 The number of stamped batik craftsmen	TW.7 Conventional batik production
			TW.8 Lack of product marketing
	Health and Safety	TS.8 There are regulations Post COVID-19 Pandemic in the form of New Normal Regulations	TW.9 There are no supporting facilities for visitor safety such as fire extinguishers and evacuation routes
	Tourism	TS.9 There is no regulation on behavior in the area	TW.10 Tourism support facilities are still incomplete
		TS.10 The number of immigrants	TW.11 There are no organized tour packages
TS.11 Low knowledge of young people about area management		TW.12 Limitations of the next generation of tourism management	

The results of the SWOT analysis are then carried out through the IFAS and EFAS analysis processes to develop the right strategy in implementing Sustainable Urban Tourism in Kampoeng Batik Semarang. There were 26 strategies in implementing Sustainable Urban Tourism in Kampoeng Batik Semarang. It consists of 14 IFAS strategies (Internal Strategy) and 12 EFAS strategies (External Strategy). These strategies are then subjected to a process of weighting, and rating to assessment. Scale 1 indicates the lowest level of importance and scale 4 indicates the highest level of importance in the weighting process. Meanwhile, a scale of 1 in the rating process indicates a low probability of implementation, while a scale of 4 indicates

the opposite. In the process of assessing the value generated from weighting and rating, multiplication is carried out to get the final value of each strategy.



Fig. 6: Pollution of Batik waste in settlements
Source: Author

Table 6 and Figure 7 show that the greatest value was obtained for the strategy of designing a waste and renewable energy management system as well as institutional strengthening and making regional tourism packages. These three things become priority strategies according to the needs and conditions of local communities and the environment. The waste management system is very important to be the focus because it has the potential to have a long-term negative impact on people's lives which is certainly not expected to occur. Waste management is also very closely related to the interests of many parties because of the nature of waste that easily spreads from one area to another through either air or water flow.

In line with that, Fig. 6 describes a condition of a drainage channel that has been contaminated with batik processing waste. This happens in almost all houses, especially of the batik craftsmen. When it rains and the water flow is high, this waste will be carried to large rivers and end up in the sea because it is located quite close to the Java Sea. This practice is very harmful because batik is the main tourist attraction in this village. Increased tourism activities will increase batik production as well as increase waste production even without proper handling. This is a big problem that will damage the environment, not only on a local scale but at a national scale.

Table 6: Determining the value of regional tourism development strategy
Source: Author

	Aspect	Code	Strategy	SWOT Integration	Weight (B)*	Rate (R)**	Value (N = B x R)
IFAS	Environment (E)	E1	Design of an Integrated Waste and Renewable Energy Management System	OS.1-OS.3; OW.1-OW.3	4	4	16
		E2	Strengthening professional environmental management institutions		4	4	16
Socio-Cultural (SC)		SC1	Batik Village literacy program	OS.4-OS.8; OW.4	4	2	8
		SC2	Making cultural heritage zoning		2	3	6
		SC3	Regional history guide book		4	3	12
Economy (M)		M1	Integrated local batik business arrangement program between blocks	OS.9-OS.13; OW.5-OW.6	3	2	6
		M2	Futures economic evaluation program		2	2	4

Aspect	Code	Strategy	SWOT Integration	Weight (B)*	Rate (R)**	Value (N = B x R)
	M3	Making a map of community business integration		1	4	4
	M4	Training for the younger generation related to batik production and business management		4	2	8
Health and Safety (HS)	HS1	Improvements and additions to Health and Safety supporting facilities at each tourist location	OS.14; OW.7	4	4	16
	HS2	Education on the use and maintenance of Health and Safety supporting facilities		4	4	16
Tourism (T)	T1	Making regional tour packages	OS.15-OS.17; OW.8-OW.10	4	4	16
	T2	Professional tour guide training		4	3	12
	T3	Optimization of the Thematic Kampong concept as a tourist attraction spread		3	3	9
EFAS Environment (E)	E3	Making special regulations for environmental conservation in Kampong Batik	TS.1-TS.2; TW.1-TW.2	4	2	8
	E4	Program to integrate travel network with important places in Semarang City		4	1	4
Socio-Cultural (SC)	SC4	Young generation scholarship program for batik schools	TS.3-TS.5; TW.3-TW.5	4	2	8
	SC5	Promotion and storytelling of history through national and international media		4	2	8
Economic (M)	M5	Increased marketing reach	TS.6-TS.7; TW.6-TW.8	4	1	4
	M6	Using technology in the product marketing process		3	3	9
	M7	Improvement of equipment or tools that help the batik production process		3	1	3
Health and Safety (HS)	HS3	Include the Health and Safety component in the Kampong tourism planning document	TS.8; TW.9	4	3	12
	HS4	Provision of safety support facilities, especially Fire Hydrants		4	2	8
Tourism (T)	T4	Creating a management concept using the DMO (Destination Management Organization) method	TS.9-TS.11; TW.10-TW.12	4	3	12
	T5	Increased tourism promotion through social media posts		3	4	12
	T6	Making tourism management regulations		2	3	6

Note: *Importance; **Applicable.

The overall results of the assessment of the strategy for implementing Sustainable Urban Tourism in Kampoeng Batik Semarang are then depicted in an adaptation diagram of the IFAS Matrix and EFAS SWOT method. This diagram summarizes the overall strategic value based on environmental, economic, socio-cultural aspects, and regional tourism development. Although many development strategies are in the category of low to medium urgency of implementation, several other strategies have a high level of urgency that can be used as the basis for the next development program. One of the strategies, namely the improvement of equipment or tools that help the batik production process has the lowest level of urgency of application compared to other strategies. This is because the use of equipment such as machines to assist production activities is still not needed by the community. The results of interviews in 2019 found that people still consider the traditional way as one of the advantages of the batik-making process, which makes the price of the resulting product more expensive compared to batik products using machines.

The results of the grouping of strategies in Fig. 7 also show that 6 of the 26 strategies (23%) formulated have a possible implementation value of 8 at a medium scale, while the values of 12 and 16 each get 5 strategies. This can be used as input for the regulatory system for tourism management in the city of Semarang in the coming year, especially in order of priorities and urgency of development. This condition occurs because the government system in Indonesia still uses the Top-Down model in determining decisions so that the priority system is still the standard for implementing development.

Onder and Wober (2017) have studied observations of the application of SUT elements in European cities. They have found that most cities in Europe have problems with the lack of managerial and political systems related to policy making in supporting tourism activities. These cities become inefficient in implementing SUT in supporting tourism due to the less optimal use of resources in achieving goals. This study also reveals the importance of Self Assessment and Management Assessment based on SUT supporting indicators that can be applied to urban tourism managers. One of them is through the application of DEA (Data Envelopment Analysis) which can be a tool in assessing the efficiency of SUT in urban tourism areas. However, this research was conducted before the COVID-19 Pandemic. Thus the indicators needed are also very possible to be improved.

Based on this study, the researchers improved the SUT assessment indicators in Kampoeng Batik Semarang, especially in the supporting indicators of the Post Pandemic Era such as CHSE (Cleanliness, Health, Safety, Environment Sustainability). This is to accommodate all the needs of sustainable tourism from changes in tourism patterns around the world which will continue to experience changes in the future.

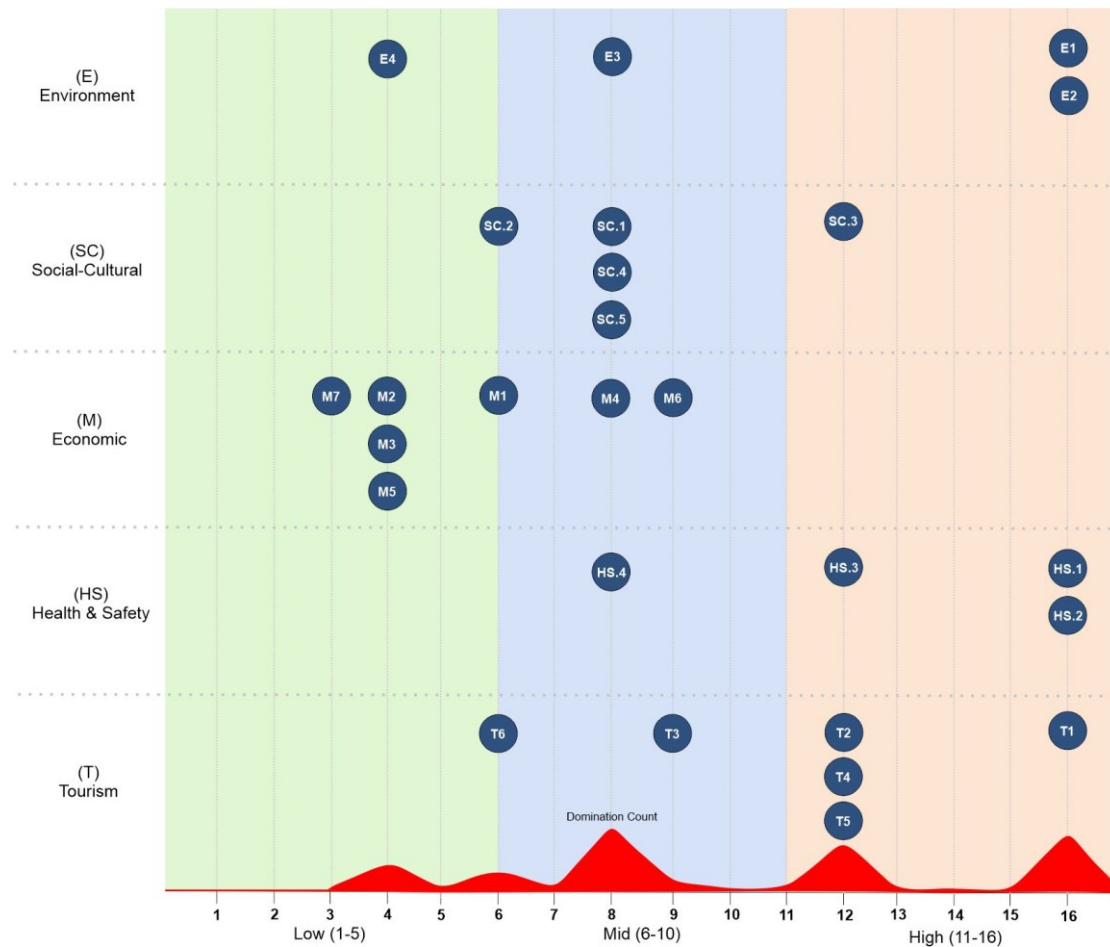


Fig. 7: Sustainable urban tourism strategy diagram for Kampong Batik Semarang
Source: Author

Conclusions

Batik is a major tourist attraction as well as a local economic generator. However, it also has the impact of high chemical waste pollution from batik production. If a common thread is drawn between the conditions of tourist villages in Indonesia, the environmental management system has the lowest value compared to other aspects (0.55 out of 1.00; Medium to Low). This is very influential on the development of tourism in Kampong Batik Semarang, because the tourist habits of visitors are almost the same throughout Indonesia. This is reinforced by the results of visitors' assessment of one aspect of sustainability, namely the environment. In this aspect, it was found that there are still many environmental components that need quality improvements, one of which is street lighting. This indicates that the location of Kampong Batik Semarang is still not safe and comfortable for tourists. It was found that the environmental conditions of Kampong Batik Semarang caused a decrease in the interest of tourist visitors which was exacerbated by the COVID-19 pandemic.

The study found that there was an organic growth from the aspects of Sustainable Urban Tourism (SUT) which continued to develop and caused an imbalance between the environmental and economic sectors of tourism activities. Therefore, there are many recommendations for strengthening the SUT element from the SWOT results, which lead to re-planning and making clear regulatory documents related to sustainable area management. This requires collaboration from all stakeholders, including the government, the private sector, local communities and tourists.

The government as a policy maker can strengthen regulations related to environmental management, both for batik activities to the formation of green tourism habits for visitors. This

can be in the form of making the concept of structuring and managing environment-based Kampong Tourism such as Eco-Urban Tourism or Community-based Green Tourism. Green tourism habits can also be applied to the concept of community tourism management, which can then be strengthened by the role of the private sector (such as NGOs) in providing education and understanding about its implementation for the community. This is clarified through a previous study by Cetinel and Yolal (2010) who theoretically found that education and public awareness are the main determinants for the realization of sustainable tourism development in a location.

Based on the results of the SWOT Matrix and other analyses, the following constitute the SUT strategies scheme that can be implemented in the near future at Kampong Batik Semarang:

- Construction of communal batik waste storage and provision of special household drains for batik waste (E1).
- Establishment of a professional community-based environmental manager to control waste disposal systems and other environmental problems (E2).
- Making a pocket book on the history of the area for the public and tourists (SC3).
- Optimizing the availability of security and health facilities such as the provision of health posts and disaster preparedness (HS1).
- Socialization and education on the use and maintenance of safety and health facilities for local communities (HS2).
- Include safety and health components in tourism management regulations (HS3).
- Making tour packages managed by the local community (T1).
- Tour guide training and certification by utilizing local resources (T2).
- Creating a professional tourism manager based on a Destination Management Organization (T4).
- Utilizing social media as a forum for environmental promotion and regional tourism (T5).

Although environmental and economic aspects are in the spotlight in the development of SUT in Kampong Batik Semarang, integration and balance between other aspects is very much needed. Kampong Batik Semarang can begin to carefully plan its sustainability aspects before it is too late. This is because the development movement of Semarang City is getting faster and changes in the pattern of tourism activities after COVID-19 will be a problem. Future research should analyze how changes in urban life patterns can affect sustainability of tourism in rural areas. This is very urgent because people in urban villages are middle class and very vulnerable to various forms of change.

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