The impact of historic building toward regional sustainability: Case study Menara Kudus, Indonesia

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Abstract. Menara Kudus area marks the beginning of Kudus City, Central Java, Indonesia. The area is famous for its many historic buildings, including Menara Kudus, Al Aqsa Mosque, the traditional Kudus house, and Sunan Kudus tomb complex. Menara Kudus area is an area visited by pilgrims and tourists. In addition, there are many “pesantrren” in the surrounding area that make this area never look deserted. Economic development thrives around the area but doesn’t necessarily change physical setting. This study was designed to describe the impact of historic buildings in Menara Kudus area on the sustainability of the surrounding area. The method used in this research is qualitative interpretive descriptive, which analyzes field data using 3 aspects of sustainability which is economic, social and environmental fields. The analysis phase is carried out through 3 stages. The first stage is the explanation and description of historic buildings around the Holy Tower. The second stage, discuss and describe the economic, social, and environmental aspects around the Menara Kudus. The third stage, interpretation to see the impact toward surrounding area. The results of this study show there are significant influence between historic buildings and the sustainability of the area, especially on the economic aspect. Crowds of pilgrims and tourists visiting the Menara Kudus area make economic activity in the surrounding area flourish. Likewise, with the presence of “santri” from outside the Kudus area which is in the vicinity of Menara Kudus. The existence of a institution that manages the Mosque, the Tomb, and Menara Kudus and the Kudus Cultural Heritage Team makes this area neatly arranged so that it supports the sustainability of the region.

1. Introduction
Historic buildings are buildings that have historical values, both physically and non-physically. Historic buildings mark important events that happened in their time, and also the architecture that developed in their time. Historic buildings manifest in the form of houses, worship buildings, public buildings, and others. In Kudus Old City, Central Java, there is an area in which there are several historic buildings clustered together. The area is called the Menara Kudus area. Specifically, the Menara Kudus area is located in the Kudus Old City, Kudus Regency, Central Java Province. Kudus Old City acts as a core area where Kudus City was founded. There are the Mosque, Menara Kudus, and historic houses inside Kudus Old City.

The mosque which is often referred to as the Menara Mosque or al Aqsha Mosque was founded in 1687 AD based on the inscriptions that exist in Javanese candra sengkala which reads the Gapura Rusak
Ewahing Jagad [1]. Menara Kudus area was originally a place for Walisongo, the equals of a saint in moslem, named Sunan Kudus. This area besides being called Kudus Old City, is also referred to as Kudus Kulon because it is located in the west of the river, Kaligelis. This river divides Kudus into two parts, namely Kudus Kulon and Kudus Wetan. Kudus Kulon is the Old City of Kudus, and Kudus Wetan is the development of the City and is the center of Kudus city today.

The Sunan Kudus heritage complex in this area has become a national level cultural heritage site with Ministerial Decree No 049 / M / 1999 which is a site under government / State ownership. In the book The Impact of Religious Tourism in the Sunan Kudus Mosque Area on Economy, Environment, and Socio-Culture, it is concluded that religious tourism at the Sunan Kudus Mosque has a positive impact on economic and socio-cultural sustainability. However, from an environmental perspective, it actually has a negative impact due to garbage, pollution, and threats to the preservation of cultural heritage [2].

The conclusion of the book is one of the important points of this research, to review the social and economic aspects of the environment towards the sustainability of the Menara Kudus area. There are different principles, in this study the researcher looked at the existence of historical buildings on the sustainability of the area, the focus was on historical buildings. Meanwhile, Martono's book focuses on religious tourism. Martono's research also does not look at the traditional houses of the Kudus around the Menara area, as architectural works that support the sustainability of the area.

Menara Kudus area is an area that is crowded with pilgrims, tourists, and is used as a center of knowledge for students who study at the surrounding pesantren. So you can see that the Menara Kudus area is busy all the time because of this activity. Apart from these two things, around the Menara Kudus area there are still traditional houses with artistic and historical value. From this it can be seen that the area that was built several hundred years ago until now can still show its existence with activities that have not changed much. This is the background of this research. This study aims to interpret the influence of the existence of historical buildings on the sustainability of the Menara Kudus area.

2. Methods
Research on the impact of historic buildings on the region’s sustainability uses interpretive descriptive methods. This method is used in data collection and analysis to interpret the impact. The research data are divided into two, namely primary and secondary data. Primary data in this study were obtained through field observations. Primary data collection through field observations was carried out from January to July 2019. The research location is in the Menara Kudus area which is in the center of the old town of Kudus. Whereas secondary data is taken through the study of relevant literature. Identification and description are ways to take field data.

The field data analysis phase is carried out in stages using a review of three aspects of sustainability. The aspects of regional sustainability that are used as analytical tools are economic, social, and environmental. The analysis phase is carried out through three stages. The first stage is the identification, description, and interpretation of historic buildings around the Menara Kudus. The second stage is the identification, description, and interpretation of economic, social, and environmental aspects around the Menara Kudus. The third stage is interpretation to see the impact. The location of the research is the Menara Kudus area with the scope of the Mosque-Menara-Tomb and the surrounding environment (See in figure 1).
Figure 1. Research location Kudus Old City [3].

Figure 2. Data analysis.

3. Results and discussion

3.1. Historical buildings

Historical buildings in the Kudus City, Central Java, Indonesia, as a whole are very numerous and can still be found today. This historic building marks an event that has happened in Kudus. Some historic buildings found standing alone (single) and some are clustered together. Besides mosques, tombs, towers, Kudus traditional houses, there are also Gedong houses (local house in European style), Kilungan houses, Omah Kapal Damaran, Omah Kembar Nitisemito, and several other buildings. This section will discuss historical building Menara Kudus area which includes the Mosque, the Tower (Menara Kudus), and the traditional Kudus House.

The mosque in the center of the Kudus Old City is now called the Al Aqsa Mosque, which was founded in 1687 AD. Al Aqsa Mosque has a unique architecture and is in an integrated complex with Menara Kudus and the Tomb of Sunan Kudus. The material widely used is brick. On the inside of the mosque, there are twin door made of bricks and has similar shape with a temple gate. As is the case with Menara Kudus that shaped similar to a temple. Ashadi [4] revealed that tower building besides being a “tetenger” (marker) was also a symbol of the unity of the worshipers of the ancient Holy community. The tower is the mundi axis, a cosmic pillar that connects the earth to heaven [4]. Figure 3 show Al Aqsha Mosque, Menara Kudus, and Kudus Traditional House.
3.2. Regional sustainability

The sustainability of Menara Kudus area in this study is analyzed using three pillars of sustainable development that is economic, social and environmental. These three pillars are used as analysis tools because there are links between these three aspects and the sustainability of an area. Simatupang [6] revealed that the concept of sustainability has also been proposed in the development of settlements in various scales (small cities, cities, metropolitan). The objectives of the three aspects of the sustainability dimension are also a requirement in achieving sustainable urban settlements (See figure 4) [6].

The three main interrelated pillars are economic growth, social sustainability, and environmental sustainability. The success of sustainable development does not only depend on the economic sector but also the need for government intervention in implementing to achieve equitable welfare [7].

3.3. Identification, description, and interpretation of economic aspects

The description of economic aspects at the beginning of Kudus Old City can be illustrated by the original livelihood of Kudus community that is farming and trading. In their livelihoods, Kudus community relies heavily on the trade sector, especially trade in industrial products. Kudus natural conditions are very supportive of this kind of economic activity [9]. Towards the end of the 19th century, Kudus City experienced an increase in prosperity due to the abundance of agricultural produce in the surrounding area. In the first half of the 20th century, Kudus became famous for its kretek cigarette factory. The industry that was originally a household craft developed into a large industry [10]. Kudus City is considered as one of the industrial cities as well as a trading city, considering that it is located close to the north coast of Java [11].

The current economic activity in the Menara area that can be observed is trade. In the old days, at the beginning of the Kudus City, the flourishing trade was palawija. Palawija crops are the most important crops in Java after rice. At present, the trade has shifted to follow the development needs. Physically, it shows in houses in the Menara Kudus area that have a sisir building as a symbol and a place for trading. This sisir building used to be a warehouse for palawija and tobacco, and also as a
cigarette factory during the kretak home industry. At present, the sisir building still exists and functions as a place of business. This proves that the Kudus Old City and the Menara Area in particular still maintain trade as their main livelihood.

Economic development has also increased rapidly along with the rapid number of tourists and pilgrims visiting the Menara Kudus Area. The government also responded positively by playing an active role and cooperating with the management of Menara Kudus Foundation to identify problems and make corrective efforts. There are some historic buildings which have not optimally contributed to the Kudus Old City, namely traditional Kudus houses due to the fact that the houses are in private ownership and are not yet open for tourism. Tourists can actually see and enter the Kudus traditional house at the Kretak Museum or at the Gusjigang Museum that is located quite far from the Menara area. The Kudus Regency Government is making efforts to revitalize the Menara Kudus area while maintaining building elements that are used as markers in the Menara Kudus area. For example, the revitalization of the old square preserved the banyan tree that existed in the Menara Kudus [12].

In previous studies about the identification of economic activities around the Menara Kudus, it was found that there were a variety of economic activities that took place in the Kudus traditional house, ranging from the trade in palawija, tobacco, cigarette industry, and the convection industry to economic activities related to pilgrimage activities. But now the trade in palawija and tobacco cannot be found anymore. The convection industry still exists and is developing. Economic activities related to pilgrimage also developed such as the home industry of jenang (traditional snack in Java), a place for pilgrims to stay, motorbike daycare, and a place to sell souvenirs typical of Kudus and boarding schools for memorizing Al-Qur'an (pesantren) [13].

3.4. Identification, description, and interpretation of social aspects
Kudus City is divided by a river called Kaligelis into Kudus Kulon (West) and Kudus Wetan (east). Kudus Kulon is the area that is to the west of the Kaligelis, more precisely around the Menara Kudus. The Kudus Kulon community located around the Menara Kudus is socially thick through jigang. Jigang are the two main activities attached to the Kudus kulon community, namely the activity of reciting the Qur'an and trading. Mu'tasim and Mulkhan [14] revealed that the mention of Kudus Kulon originated not only from this geographical boundary but also to a community of 'inside' people living around the Menara Mosque. The term Orang Kudus Kulon for people who live around the Menara Mosque is a proud designation. While for people who live in the outer areas and have no connection with the people of the Menara Kudus, the title is actually less pleasant. They have different views about the designation [14].

Kudus Kulon community in their daily life is very strong with the Islamic atmosphere, that's why the Kudus Kulon area is also called the santri area. Santri is a person who studies in pesantren. Kudus Kulon as santri area supported by the number of Islamic boarding schools and the many Qur'anic memorizers who studied around the area of the Menara Kudus. Triyanto [15] revealed that the Kudus community is a society where the majority of its citizens are puritan moslem. For them, the values of the teachings of Islam are not just to be practiced in the best possible way but also functioned as a guide of life. Kudus Kulon has been nicknamed the area of santri with the Kauman Village as its center [15]. Aside from being a santri, the Kudus Kulon community is also known as a persistent merchant. This is evident from the beginning of Kudus City until now. In Kudus Kulon, there is still a place for traders even though the goods as trading commodities have changed a lot.

3.5. Identification, description and interpretation of environmental aspects
Menara Kudus area is an area with a unique and characteristic residential environment. The neighborhood around the Menara Kudus is dominated by houses in a high fence or commonly called a Kilungan house. Inside the Kilungan house, there is a traditional Kudus house complete with an inner courtyard and a sisir building. So even though it seems like the house surrounded by narrow aisles and massive walls, but inside the house, there is still a fairly wide green area. This is unique to the residential environment around the Menara Kudus. Apart from the Kilungan house, there are also traditional houses
that line and are not surrounded by a fence. This traditional house also always has a yard in front of it. The environmental aspect of the existence of this yard is very important as a rainwater catchment area and for air circulation. That's why the original houses in this area all felt cool because of the yard in front of his house. The yard that is still maintained in each house is what makes the water source in the Menara Kudus area still sufficient and suitable for consumption.

In a previous publication, it was mentioned that in the area around the Mosque and the Menara Kudus, settlements are dominated by Kilungan houses so that they form labyrinthine-shaped streets. The farther away from the Mosque and the Menara Kudus, the form of settlements turned into open houses without a wall of light. But the shape is still the traditional Kudus house, only its shape is lined and open without a refinery [16].

In addition to the existence of the yard, the houses also still use wood that is environmentally friendly and maintain various vegetation around the house. Apart from that, the traditional Kudus house that was raised from the floor by 2-3 steps, gave the distance to the land and did not damage the soil. This wooden house is a knocked-down house that can actually be dismantled and not much damage to the soil underneath.

4. Conclusion
This section presents an interpretation of the impact of historic buildings on the sustainability of the Menara Kudus area. Based on three aspects of sustainability, namely economic, social, and environmental, it can be seen that the existence of historic buildings in the Menara Kudus Area is still a binder and attract the activities around it.

Almost every house around the Menara area is opened for economic ventures, ranging from selling souvenirs, pilgrims’ lodging, boarding schools, convection businesses, and several other businesses. Socially, the Menara Kudus area is still a center of knowledge with many santri studying from several cities around Kudus. This area is still socially thick as a santri area and is believed to be a place to gain knowledge. The social aspect that has changed is the view that separates the people who live in Kudus Kulon and Kudus Wetan. This difference in perspective does not feel sharp. The environment and the community still maintain the yard as an area of absorption and circulation of fresh air in the midst of a dense environment. Meaning the yard is a binder of activity in these houses.

The environmental aspect is also related to the social aspect as expressed in the old city of Kudus. The Kudus community has two main activities, namely jigang which consists of reciting the Qur’an and trading. Both of these are done in the traditional Kudus house in a separate section by the yard. Qur’an activities are mostly done in the main building, and trading activities are carried out in the sisir building [17].

Also supporting the sustainability of the Menara Kudus area is the collaboration of various parties including the local government, the Foundation that manages the Mosque, the Tomb, and Menara Kudus as well as the Kudus Cultural Heritage Team and the people who inhabit the surrounding Menara Kudus area.

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