

Optimization of Local Potential Towards Nature And Culture-Based Tourism Village

(Study on Charcoal Kitchens and Mangrove Forests in Kuala Sempang Village, Bintan Regency)

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Abstract

Charcoal kitchens in Kuala Sempang Village, Seri Kuala Lobam District, Bintan Regency serve as media for charcoal production. Historically, charcoal was used to fuel cooking, ironing, and other household tasks. Mangrove trees are used as a raw material in the manufacture of charcoal. Mangrove trees are the primary source of charcoal because of their high density, which makes them more durable than other trees. Economically, charcoal production can boost the economy and human welfare. On the other hand, the production of charcoal affects environmental degradation. Several locations where charcoal is produced are called “charcoal kitchens.” Charcoal kitchens in several locations are no longer manufactured, rendering them obsolete. The charcoal kitchen is unique in its shape and even represents a technological advance for its time. Therefore, it is regrettable if the structure that bears witness to past technological advancement is abandoned and fails to benefit current and future generations. This study employs a descriptive-qualitative method with a rationalistic

approach. This method is based on a holistic approach, which examines a general concept through the lens of a specific object and then incorporates the findings into the general concept. According to this study, a concept for utilizing the remaining charcoal kitchen structures and protecting mangrove forests through culture and nature-based tourism villages is required. The government's development of facilities, as well as intensive promotion, are required. Additionally, community empowerment is essential to sustainably manage the remaining charcoal kitchen structures and mangrove forests.

Keywords: culture, nature, synergy, society, government

Introduction

Charcoal kitchen is a term for the Malay people of the Riau Islands to denote a building used to make charcoal. There are several locations where charcoal kitchens are set up. One of the locations for the charcoal kitchen is in Kuala Sempang Village, Seri Kuala Lobam District, Bintan Regency, Riau Islands Province. The main raw material for making charcoal is mangroves. Mangroves were chosen because of their high wood density, making them vulnerable to exploitation (Ritabulan et al., 2019). The exploitation of mangrove trees for charcoal raw materials occurs not only in the Riau Islands, especially Kuala Sempang Village and its surroundings, but also in other areas, including Aceh (Nugroho et al., 2017).

Making charcoal begins with the cutting and burning of mangrove wood. Following that, the mangrove becomes charcoal with a market value. As we know, charcoal is a necessary component of fuel that can be used in place of gas and oil. Additionally, according to Santoso (2013), charcoal production aims to meet the needs of domestic and international markets (Ritabulan et al., 2019). Due to the commercial nature of charcoal, it is manufactured on a larger scale. This means that mangrove trees are felled in large numbers while disregarding the mangrove ecosystem's sustainability. In Kuala Sempang Village, mangroves are found along the coastline and rivers. Local residents work as charcoal makers.

In 1999, the Government and People's Representative Council formulated forestry regulations. The regulation is contained in Law No. 41/1999 on Forestry. One of the substances of Law No. 41 year 1999 is the prohibition to destroy forests. The prohibition on destroying the forest has an impact on the charcoal-making business. As a result, the business of making charcoal through the charcoal kitchen was abandoned by the owner and, at the same time, impacted the cessation of workers in making charcoal.

Since the charcoal kitchens' production ceased, the buildings have been neglected, with no maintenance or use. The charcoal kitchen structure is unlike any other structure. The structure is shaped like a semi-circle or dome, similar to the structure in the fictional film "Teletubbies." The following images depict the charcoal kitchen structure and the Teletubbies house structure. Both images show a building in the shape of a dome or semi-circle with a hole on one side. The hole in the charcoal kitchen is used to insert mangrove wood, which is used to make charcoal, while the other small hole acts as a combustion medium.



A



B

Figure 1. Pictures of Charcoal Kitchen Building (A) and Teletubbies House (B)

Nowadays, people desire “Instagramable” locations. The term “Instagramable” is derived from the words “Instagram” and “Able.” Instagram is a popular social media platform for sharing photos and videos. Meanwhile, the term “able” refers to the ability to. Thus, “Instagramable” refers to an object that is both capable and deserving of being shared on social media platforms such as Instagram, Facebook, and others, both in the form of photos and videos.

The buildings used to make mangrove charcoal are proven to have Instagramable value. This can be seen from the enthusiasm of the people who visit and take documentation, both photos and videos, by paying retribution. Until this research was conducted (2021), the retribution levied for maintaining the cleanliness of the charcoal kitchen environment was IDR 5,000 per person. The surrounding community then uses this retribution as operational costs to maintain the cleanliness of the charcoal kitchens.

The arrangement and management of the charcoal kitchen buildings should be carried out by considering various aspects, including cultural heritage preservation. This is in line with the spirit contained in Law Number 11 of 2010 concerning Cultural Conservation, where the state is responsible for regulating the protection, development, and utilization of cultural heritage. The Cultural Conservation Preservation has several objectives as regulated in Article 3, where the Cultural Conservation Preservation aims to:

- a. Preserving the nation’s cultural heritage and human heritage;
- b. Improving the dignity of the nation through Cultural Conservation;
- c. Strengthening the nation’s personality;
- d. Improving people’s welfare; and
- e. Promoting the nation’s cultural heritage to the international community.

In order to keep the Cultural Conservation objects from changing their shape, several efforts are needed, including restoration. This restoration aims to restore the physical condition of cultural heritage by repairing, strengthening, and/or preserving it through reconstruction, consolidation, rehabilitation, and restoration works. Regarding the restoration of cultural

heritage buildings, several things that must be considered are stated in Article 77 paragraph (2), that the Cultural Conservation-Restoration as referred to in paragraph (1) must pay attention to: a. originality of materials, shapes, layouts, styles, and/or workmanship technology; b. the original condition with the slightest possible degree of change; c. the use of non-destructive techniques, methods and materials; and D. implementing competence in the field of restoration.

The charcoal kitchen is not only found in Kuala Sempang Village but there are several other locations, one of which is in Panglong Village. In carrying out conservation, the Bintan Regency Government carries out conservation by building protective buildings as shown below:



Figure 2. The Bintan Regency Government carries out conservation by building protective buildings

The construction of additional buildings that aims to protect and preserve the charcoal kitchen building as shown in the picture above is considered inappropriate since it does not go through the stages as stipulated in Article 77 paragraph (2) of Law number 11 of 2010 concerning Cultural Conservation. For this reason, a specific government policy is needed, both the Village Government and the Regency Government in managing and utilizing charcoal kitchens along with mangroves which are the raw materials for making charcoal.

Research Method

In general, there are three types of research: quantitative, qualitative, and a combination of the two. This type of research is classified according to the type of data and analysis used (Kurniawan & Puspitaningtyas, 2016). The research problems are classified as descriptive problems based on the issues raised in this study. According to Kurniawan, a descriptive problem is concerned with the existence of independent variables, either on one or more variables and does not intend to make comparisons between the variables (Kurniawan & Puspitaningtyas, 2016).

As a result, the descriptive-qualitative method with a rationalistic approach was chosen for

this study. This method is based on a holistic approach, which examines a general concept through the lens of a specific object and then incorporates the findings into the general concept. Among other things, the qualitative research paradigm is inspired by the rationalism philosophy, which requires a holistic, systematic discussion and elucidates the meaning of empirical facts. The epistemological rationalistic approach to research requires that the object under study is not isolated from its context or focused on a single object, but does not eliminate the context.

The data collection method was observational, and the literature was sourced directly from the results of observational research on objects, as well as a variety of other sources, including books that can be used to support the writer's content and online sources that can be used to supplement the scientific vehicle used to support the discussion.

Results and Discussion

A. Optimization of Charcoal Kitchen and Mangrove Forest

A charcoal kitchen is a structure constructed by the community to produce charcoal. Generally, mangrove trees are used to make charcoal. Mangrove trees are coastal shrubs that thrive in muddy or swampy conditions. Mangroves serve three (three) primary functions, namely physical, biological, and economical. Physically, mangroves help to stabilize beaches, protect them from seawater abrasion and riverbank erosion, treat waste from human activities on land, and serve as "parking lots" for rainwater. When a tsunami strikes, areas covered in mangrove forests will withstand the waves; the more densely packed the mangrove trees, the greater their ability to withstand waves. Biologically, the mangrove forest serves as a nursery for shrimp, shellfish, and fish larvae, as well as a nesting site for a variety of birds and other biotas. Meanwhile, mangrove forests economically benefit the community through wood utilization, mangrove fruit utilization, and fishery development. (Irawan, 2013; Ritabulan et al., 2019; Swastha, Basu, 2014).

Furthermore, Irawan said that the use of mangrove wood for the charcoal industry or charcoal kitchen has long been developed and cultivated by the community. Using mangrove wood for the charcoal industry continues to increase from time to time (Irawan, 2013). To regulate the use of this forest, in 1999, the government issued Law Number 41 year 1999 concerning Forestry. Article 50 paragraph 3 stipulates that everyone is prohibited (c.) from cutting down trees within a forest area with a radius or distance of up to point 6; 130 (one hundred and thirty) times the difference in tides consisting of the lowest tide from the shore (Law of the Republic of Indonesia Number 41 year 1999 concerning Forestry).

Kuala Sempang is one of the villages in Sri Kuala Lobam District, Bintan Regency. The charcoal kitchen was constructed in four locations and is still standing today. This structure is constructed entirely of bricks. Along with Indonesia, Vietnam has a dome-shaped charcoal kitchen structure with vertical walls. Each kitchen is 6–7 meters in diameter and 2.8–3.0 meters in height and is constructed entirely of bricks, sand, and clay (Ritabulan et al., 2019). Only two of the four charcoal kitchen buildings remain operational. Both structures are constructed of clay-coated bricks. Meanwhile, the other two units are densely forested with

hundreds-year-old trees. Currently, the condition is deteriorating due to the overgrowth of trees and lack of maintenance. The charcoal kitchen building's architecture features a vent for inserting wood and faces the sea. Between the charcoal kitchen and the sea is a short distance. The building stands approximately 5 meters tall, and the interior space is estimated to accommodate approximately 20 people.

Here is a view of a charcoal kitchen that is still intact and well-maintained, as well as a view of a building that is hundreds of years old and poorly maintained.



(A) Old Charcoal Kitchen Building



(B) New Charcoal Kitchen Building

Figure 3. Pictures of old charcoal kitchen building (A) and new charcoal kitchen building (B)

As the main raw material for making charcoal, mangrove trees have better quality than other trees in general. Therefore, the mangrove wood around Kuala Sempang Village is degraded. According to Soerianegara (1990), mangrove forests are forests that grow in coastal areas and are usually found in bay areas and river mouths with the following characteristics: (1) not affected by climate, (2) influenced by tides, (3) waterlogged sea soil, (4) coastal lowlands, (5) forests do not have a canopy structure, and (5) the types of trees usually consist of: (a) *kayu api* (*Avicennia* sp), (b) *pedada* (*Sonneratia* sp), (c) mangrove (*Rhizophora* sp), (d) *lacang* (*Bruguiera* sp), (e) *nyirih* (*Xylocarpus* sp), and (f) *nipah* (*Nypa* sp) (Soerianegara, 1990).

The economic benefit is one of the mangroves' benefits and functions. Mangroves can protect coastal and coastal communities from abrasion threats and provide wood for structures and firewood. Additionally, mangrove forests produce fish, shrimp, and crabs (Irawan, 2013). Additionally, mangrove forests produce drugs such as *Bruguiera sexangula* leaves that act as tumor inhibitors. Kuala Sempang Village owns 150 hectares of mangrove forest, which grows along the river in Kuala Sempang. As a result of mangrove trees as a raw material for charcoal production, the condition of mangrove trees in Kuala Sempang Village has deteriorated, resulting in environmental damage. As a result, ecosystems and marine biota that were once abundant can be lost or become scarce, affecting fishermen who rely on catches of marine biota. This is because these biotas no longer exist as they did before the

mangrove area was damaged.

Meanwhile, Kuala Sempang Village's mangrove forest possesses enormous potential (Irawan, 2013). If appropriately managed, the mangrove forest area owned by Kuala Sempang Village has a chance to become as famous as the mangrove forest in Sebong Village, which has won numerous awards. The government provided seed assistance to be grown in Kuala Sempang Village's mangrove forest, though not all of the seeds were successful.

Based on the data above, to utilize the remaining charcoal kitchen buildings and maintain the mangrove forest ecosystem in Kuala Sempang Village, a concept of using charcoal kitchens and protecting mangrove forests is needed as nature and culture-based tourism village.

B. Nature and Culture-Based Tourism Village

According to RI Law No. 10 of 2009 About Tourism Tourism is various kinds of tourism activities and supported various facilities and services provided by the community, businessmen, the government, and Local government. Globally and on a national scale, tourism is a important economic sector. Therefore environmental damage such as pollution domestic waste, slum areas, disturbance to tourists, residents who less or unfriendly, chaotic traffic, crime, etc., will can reduce the number of tourists who visit a tourist destination. So from that tourism development must be maintain environmental quality. The environment is the basis development of almost the entire industry and tourism is one of the industries that does not escape the guidance of industrial development with an insight into nature conservation sustainable.

Additionally, the cultural heritage and mangrove forests in Kuala Sempang Village can be developed into a Tourism village. A tourism village has been developed by repurposing the elements or potentials found in the village and its community as tourism products or attributes, transforming tourism into an integrated and themed activity (Sutrisno et al., 2018). With the concept of culture and nature-based tourism village, the remaining charcoal kitchen buildings and mangrove forests can be developed into tourism opportunities.

The concept of culture and nature-based tourism village must continue to creatively develop a new identity or characteristic for Kuala Sempang Village to synergize the potential of the remaining charcoal kitchen buildings and mangrove forests. These are the strategic steps to develop the village's potential into a Tourism village (downloaded from www.berdesa.com):

1. Identification of village potential through discussion with all village components from all walks of life is needed. In this case, the superior potential in Kuala Sempang Village is the remaining charcoal kitchen building and mangrove forest.
2. It is necessary to identify problems that can become obstacles to the development of village tourism potential, ranging from physical, non-physical or social, internal and external. Or it could be that if the problem is processed in a certain way, it can become a potential problem. Based on the results of Karuniyati's research in 2020, the social life of the community in Kuala Sempang Village is still well maintained (Karuniyati et al., 2021).

3. A strong commitment is needed from all village components to equalize opinions, perceptions, and raise the remaining charcoal kitchen buildings and mangrove forests to become Tourism villages. This commitment is the strongest support for the realization and sustainability of Tourism villages.
4. It is required to identify the positive and negative impacts of cultural and nature-based tourism activities.
5. It takes a strong commitment from all village components to cooperate with the local government and, if necessary, cooperate with the private sector. The government should identify the impact of working with the private sector. This includes budgeting for developing Tourism villages by using all existing economic resources.
6. It is necessary to prepare all sets of norms/regulations that are more aimed at overseeing the development of Tourism villages and monitoring potential deviations. Regulations are prepared so that tourism activities and their impacts remain within the regulatory corridor as the legal umbrella.
7. It is deemed necessary to conduct training for all components of the village, including the village government on tourism management, how to manage tourist attractions, management of guests/visitors, along with innovations that need to be developed considering that, like other sectors, the tourism sector also experiences fluctuations.
8. It is essential to use all media to introduce and publicize tourism potential in Kuala Sempang Village, both conventional and non-conventional media, such as internet media. The Internet is now a very effective means of publication that can reach all parts of the world. Tourist attractions that are remotely located can also be known by people in other parts of the world thanks to internet technology.
9. Residents need to learn from the success of other Tourism villages or comparative studies. They can learn a lot from the success of other tourism villages, especially similar ones, since the typical problems and future challenges that will be faced are more or less the same. With professional and innovative management, Tourism villages will be competitive and pass internal, external, and regional international exams.

The cultural potential through the remains of the charcoal kitchen building in Kuala Sempang Village provides a lesson that the area has had traditional technology from the past that comes entirely from its people, both the manufacturing process and the ingredients obtained from the surrounding environment. Along with changes in society and the preservation of mangrove forests as raw materials, this traditional technology must be abandoned (Parthiana, 1984). To fulfill economic needs, it can be done by managing mangrove tourism and opening community specialties from and by the people of Kuala Sempang Village (Kustiawan & Sofi, 2017). Meanwhile, the rest of the charcoal kitchen building can be packaged better to add to its tourist attraction. The participation of the local government to support the quality of the

Tourism village is very much needed. The form of packaging for the rest of the charcoal kitchen building can be packaged as shown in the following pictures:



Figure 2. Development Plan for Remaining Charcoal Kitchen Building (Above View)

Source: Author's Documentation (processed design), 2021



Figure 3. Development Plan for Remaining Charcoal Kitchen Building (Front View)

Source: Author's Documentation (processed design), 2021

Conclusion

The government must construct facilities and conduct intensive promotion in order to introduce the tourism potential of Kuala Sempang Village. To manage the remaining charcoal kitchen structures and mangrove forests in Kuala Sempang Village, community empowerment is required. The transformation of the village into a tourism destination must be done sustainably. Finally, the government's participation cannot be maximized without involving the area's residents.

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