

Natural Resources and Environment Management for the Development of Local Wisdom

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Abstract

Natural resources are environmental components that include biological and non-biological resources that work together to produce an ecosystem. Rivers are one of the natural resources that sustain life. Musi River is a 750-kilometer-long river in the Indonesian state of South Sumatra. Rivers are an integral aspect of the environment and natural resources that must be protected in order for humanity to survive. Natural resources have the potential to be a source of local wisdom development. The objective of this research is to gain an understanding of how natural resources and the environment are managed in order to foster the development of indigenous wisdom. The purpose of this study is to define and analyze the opportunities, challenges, strengths, and weaknesses associated with natural resource management and the development of indigenous knowledge in Palembang. Palembang's natural resources, particularly its rivers, have the potential to have a positive impact on the environment and the development of indigenous wisdom if managed optimally. Ecological awareness is critical for the people of Palembang in managing the potential of natural resources for the development of local knowledge, such as maintaining the river's purity and keeping the fauna that is a source of local wisdom.

Keywords

natural resources; environment; local wisdom



I. Introduction

Indonesia is one of the wealthiest countries in the world due to its vast natural resource base, which includes both renewable and non-renewable resources (Sudarlan et al., 2015). Natural resources are materials or energy derived from the physical environment and capable of being used to suit human needs (Dharmawibawa, 2019). Rivers are an integral aspect of the environment and natural resources that must be protected in order for humanity to survive. The human perspective on natural resources has a significant impact

on environmental consciousness and how natural resources are managed (Dharmawibawa, 2019). Environmental awareness is a mental process that develops an awareness of natural resources and the environment in which we live.

Rivers are one of the natural resources that sustain life. Musi River is a 750-kilometer-long river in the Indonesian state of South Sumatra. The lives of many tribes in South Sumatra are inextricably linked to the Musi River, the area's biggest river, which separates Palembang into two sections, north of Seberang Ilir and south of Seberang Ulu (Syawaludin, 2015). As one of the cities located on the river's banks, Palembang City has around 68 active tributaries varying in width from 3 to 20 meters that serve as urban drainage. Near Breech City, the Musi River forms a delta with other rivers. This river is also crossed by the Ampera Bridge, which serves as the city of Palembang's icon. Since the time of the Sriwijaya Kingdom, this river has been renowned as the community's primary mode of transportation (Mulya & Yudana, 2018).

To ensure the sustainability of life values, it is necessary to conserve traditions, culture, and indigenous knowledge, as well as to invest in human capital to increase the welfare of its residents (Setyaningsih & Saksono, 2021). One option is to foster attitudes, behaviors, lifestyles, and traditions that promote environmental stewardship and preservation. These traditions are considered to be an application of indigenous wisdom. Local wisdom is knowledge passed down through generations by village communities for the purpose of managing their environment, specifically knowledge that results in behavior as a result of their adaptation to their environment, which has a positive effect on environmental sustainability (Wibowo, 2012).

Local wisdom is a type of environmental wisdom that exists inside a community's daily life and is an ancestor's inheritance of life values expressed via religion, culture, and rituals (Luciani & Malihah, 2020). Local wisdom is critical for adaptation to the environment; as a result of abstraction in environmental management, the community gains and develops wisdom in the form of information or concepts, customary norms, cultural values, activities, and tools. Often, people's awareness of their immediate area is used to construct a life in their residential environment.

Palembang City's present population increase and economic acceleration have an indirect effect on the existence and status of rivers in the city. Development that disregards the state of the river in the area has the potential to alter the river's function and physical characteristics. Rivers, as natural resources, can contribute to the development of indigenous wisdom. As a result, it is vital to conduct study to identify how natural resources and the environment should be managed in order to foster the growth of indigenous wisdom.

II. Research Methods

The purpose of this study is to define and analyze the opportunities, challenges, strengths, and weaknesses associated with natural resource management and the development of indigenous knowledge in Palembang. Primary data were collected through in-depth interviews with community members, and field observations were processed non-statistically via a systematic description of the dynamics of local wisdom in Palembang.

III. Results and Discussion

The Musi River is also a potential source of local wisdom in Palembang, in the shape of a traditional fish dish. Ecological awareness is critical for the community's management of natural resource potential for the development of indigenous wisdom in Palembang. This can be tempered by a natural process of internalizing an awareness of the ecology (Wibowo, 2012). Local people have knowledge of ecology, agriculture, and forestry that has been passed down through generations in the management of natural resources. This knowledge is derived from everyday contact with the natural world and ecological processes (Lubis, 2018). The following analysis was conducted on the management of natural resources and the environment in order to foster the development of indigenous wisdom:

3.1 Strength

The Musi River has long served as an icon or symbol for Palembang, and it continues to serve as a mode of alternate transportation for the local community. Palembang, Indonesia's oldest city, and the Musi River are the lifeblood of the Palembang people. Until now, rows of dwellings, raft houses, and boats continue to line the Musi River corridor. This designates Palembang as a river city or a city of water. Additionally, the Musi River is used by the population as a river transit route to the interior. Throughout its history, the Musi River has seen numerous modifications in its function, including drainage and flood management. Additionally, the Musi River is a popular tourist destination in Palembang and has significant development potential. The Musi River will become a primary focus for the development of Palembang City's tourism sector in the future. Palembang, as the capital city of South Sumatra Province, has enormous potential as a Musi River tourist destination. The Musi River, which divides Palembang, is critical as the lifeblood of the community's economy and possesses tremendous tourism potential.

With a length of 750 kilometers and an average width of 300 meters, the river certainly guarantees its own characteristics. As a result, developing Musi River tourism activities as an alternative to luring tourists is not a bad idea. River development as a tourist facility is still limited, with one option being to walk along the river in a tourist boat (River Cruise), which has not been taken seriously, despite the fact that the river has great potential in developed countries to be used as a tourist attraction and has a relatively high selling value. The Musi River's tourism potential, among other things, is strategic, and the Musi River's navigability by boats of various sizes enables it to be developed as water tourism, as the Musi River's banks are lined with tourist attractions such as Kuto Besar Fort, Kemaro Island, Kapiten Village, Mosques, and Restaurants. All of which are located near the Musi River.

Additionally, the Musi River offers additional potentials, such as the Belida fish, whose habitat in the Musi River is a fauna that typifies Palembang. Apart from belida fish, there is a diverse array of other species, including cork, shrimp, and mussel shells. Fish has a great nutritional value as a source of high-quality protein. Fish protein is complete in terms of composition and quantity of necessary amino acids. Fish protein is more readily absorbed than beef, chicken, and other proteins. This is because fish meat contains a less amount of protein fiber than beef or chicken. Additionally, fish includes omega-3 fatty acids, which have distinct advantages over other animal meals due to the polyunsaturated nature of essential fatty acids. Consumption of important fatty acids such as linolenic and linoleic acid should be considered for school-aged youngsters. These important fatty acids are required for regular tissue growth and function, including the appropriate development

of brain cells. Additionally, fish is a good source of vitamins and minerals. If we include fish in our daily food, we make a significant nutritious contribution to our body tissues (Prameswari, 2018).

Local wisdom expressed in the form of processed fish meals is referred to as 'pempek and kerupuk kemplang'. Local wisdom is gained and passed down through generations, and its shape can be seen via a cultural lens that encompasses knowledge, culture, skills, resources, and indigenous social systems. Aspects of sustainable water resource management necessitate the existence of interconnected economic, ecological, and social functions. To enhance the ecological function, efforts are being done to preserve the water resource area. The socio-cultural role is intended to increase community participation, particularly in the water resource region. Additionally, as an economic role where resource management serves as a buffer for the production system's sustainability, conservation and usage of the riches contained within, as well as other forms of integrated use, this can be supported by indigenous wisdom. Natural resource conservation, economic empowerment, and community capacity building all correlate positively with enhancing the productivity of the populace's economy and the watershed ecosystem's sustainability. According to him, watershed protection, when combined with economic empowerment, contributes positively to economic, social, and environmental sustainability (Surya, 2020).

3.2 Weakness

The management of natural resource potential, particularly from rivers, has not been ideal. The more people there are, the more human activities exploit the environment. Humans rely on their environment to fulfill their requirements (Surtikanti, 2017). The natural environment's quality is deteriorating at the moment. The continued degradation of the natural environment as a result of lengthy and continual harm has a detrimental effect on the survival of living things, including humans. Human exploitation of the natural environment creates a schism in the interaction between humans and their environment (Niman, 2019). Numerous communities engage in unlawful activities such as fishing with dynamite, potassium, and uncontrolled catching of germs in the area, all without regard for sustainability (Widarmanto, 2018). Belida fish are becoming increasingly scarce; the population is declining and is on the verge of extinction. Apart from being difficult to produce, belida fish cannot be bred in the same way as other fish. Belida must be reintroduced into the wild where they can lay eggs and breed normally. Local wisdom products such as original or original pempek and kemplang crackers were originally created with belida fish, but the raw materials are now made using cork fish and mackerel, which has an effect on the taste. However, this is a prudent move that can help conserve the belida fish species and local species from extinction. Additionally, this cuisine has seen little innovation. Local wisdom is a sociocultural order in the form of knowledge, norms, regulations, and skills passed down from generation to generation by a community in order to meet the needs (living) together (Hidayati, 2016). It serves as a means of conservation and preservation of natural resources, human resource development, as well as the development of culture and science (Dharmawibawa, 2019).

3.3 Opportunity

In terms of the environment, there is a government policy aimed at limiting plastic consumption in the interest of sustainability. Plastic garbage accumulation continues to be a challenging problem to manage, much more so when plastic waste is poured into rivers. The administration is particularly concerned about this issue. While the abundance of water hyacinth along the Musi River can be a concern if not cleaned properly, this plant

can also be used to help reduce plastic consumption by converting it into environmentally beneficial plastic substitute items. Areas next to rivers with water treatment plants have the potential to be turned into viable products and also serve as a solution for river cleanliness (Hidayat & Erlyn, 2021b). Maintaining the river's sustainability, of course, also means preserving its fauna, which provides food. Due to the rising range of community demands for food and clothes as a result of population growth, the demand for natural resources is so tremendous. Culinary 'pempek and kerupuk kemplang' are sought after as souvenirs by tourists, resulting in an ever-increasing demand for this cuisine and its raw material, mainly river fish.

Palembang features tourist lodging facilities such as cruise ships for the Travel Bureau and Travel Agents, as well as 1- to 5-star hotels, restaurants, traditional markets, and modern marketplaces that contribute to the city's tourism development. Palembang. The Visit Musi initiative was created in 2008 with support from the Palembang City Government. The administration is attempting to reestablish Palembang City's status as a river city in order to attract tourists. Tourism is a critical component of Palembang City's economy, accounting for over 30% of regional original income in 2019. If a country's economic growth conditions have improved, this is predicted to have a positive effect on reducing unemployment (Hidayat & Erlyn, 2021a). The economic condition of the population is a condition that describes human life that has economic score (Shah et al, 2020). Tourism development has the potential to significantly improve people's welfare, eradicate poverty, reduce unemployment, conserve nature, the environment, and natural resources, and promote culture (Fatimah et al., 2019). Culinary is a component of tourism, and there are two sorts of culinary: traditional food and adapted culinary. Traditional culinary is a food product that is frequently consumed by a group of people or served at specific occasions and times, that has been passed down from generation to generation, that is made according to generation-to-generation recipes, that is made without or with little engineering, and that possesses certain characteristics that set it apart from other people. Cuisines from other hemispheres. While culinary adaptations include foods that have been improved in terms of quality, cooking method, ingredients added or subtracted, spices blended, and shape, color, and flavor altered to suit the tastes of the indigenous people. This is typically done because some foreign foods may not taste as well as native dishes, and in order for them to be accepted by the community, adjustments are made. Palembang's traditions and indigenous wisdom are significantly more appealing to foreign visitors than the city's modernism. There are still numerous potential Palembang traditions and customs that are not widely known in the community and must be preserved (Alimin, 2018), and the existence of a local culture of wisdom can help local communities overcome their problems by exploring opportunities for increased prosperity and poverty reduction (Sugiartana, 2021).

3.4 Threat

Local knowledge, however, cannot be divorced from a variety of threats such as population growth, contemporary technology, and the influence of other cultures, foreign investment, and poverty and inequality (Widarmanto, 2018). Local wisdom has begun to wane as a result of the immigrant population's growth of politics, culture, and technology (Utami & Salim, 2019). Local wisdom is a form of social capital generated by a society to maintain order and balance in its sociocultural life and the preservation of its natural resources. Certain Indonesians who live in places with distinct customs, culture, and customary law exhibit true indigenous wisdom by emphasizing the preservation of nature and the environment. The presence of this indigenous system not only satisfies the

community's diversity of traditions and cultural history, but also teaches and reinforces the Indonesian social structure. Each indigenous society exhibits its culture and capacity for survival through distinct modes of interaction with their environment (Pesurnay, 2018).

The actions of individuals, such as littering and open defecation in the river, contribute to river pollution. Human behavior toward the environment is determined by three aspects: fundamental factors such as the community's worldview, norms, beliefs, and habits. Education, employment, culture, and social class are all enabling factors. The influence of mass media, both electronic and print, counseling, religious and community leaders are all driving elements. The success of leadership is partly determined by the ability of leaders to develop their organizational culture (Arif, 2019). The degree to which a person absorbs information is determined by his psychological state and perception of his environment, which are mirrored in the organization of his behavior. Additionally, the sequence of a person's behavior can be defined using a cycle chart, which is a collection of items representing interpersonal relationships, value systems, mindsets, attitudes, actions, and norms.

IV. Conclusion

Palembang City's present population increase and economic acceleration have an indirect effect on the existence and status of rivers in the city. Development that disregards the state of the river in the area has the potential to alter the river's function and physical characteristics. Rivers, as natural resources, can contribute to the development of indigenous wisdom. This condition will persist in the future unless all stakeholders in South Sumatra act immediately to improve the situation by raising awareness that all our activities in nature, in order to maximize the potential of natural resources, must be conducted responsibly and with a focus on sustainability.

If we disregard these natural preservation principles, the day will come when nature will respond with disaster, resulting in an increasing number of human losses, both as a result of the disaster itself and as a result of harm to natural resources that directly contribute to the disaster. Reduced land productivity as a result of nutrient loss from the soil and depletion of available ground water. And if these diverse impacts are more severe, humans will reap the benefits of their labor in the form of a decreased degree of welfare as a result of the loss of sources of livelihood that are often graced by natural resource blessings. Palembang's natural resources, particularly its rivers, have the potential to have a positive impact on the environment and the development of indigenous wisdom if managed optimally. When it comes to managing the potential of natural resources for the development of indigenous knowledge, ecological awareness is critical for the local community. This includes keeping the river's purity and also protecting the fauna that is a source of indigenous wisdom.

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