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# The Role of Tanggap Kedung Soka's Local Wisdom in Conserving Water: Case Study in Lampar Village, Tamansari District, Boyolali Regency

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**ABSTRACT.** Cultural environmental services are non-material benefits that can be obtained from ecosystems, such as aesthetic culture and recreational culture. Kedung Soka, which is located in Lampar Village, Tamansari District, Boyolali Regency, is one of the water areas that has been believed for generations as a sacred location because of the myths' existence and beliefs in the community regarding the spiritual power that exists in that location. In addition, Kedung Soka has also been known for a long time as a source of water that has never experienced a drought even in the long dry season. The long historical story also makes this kedung considered sacred, so that people often hold a traditional ceremony to ask for blessings or what is often known as kenduren, known as Tanggap Kedung Soka. As time goes by, currently the water in Kedung Soka is starting to decrease due to several factors of complex environmental changes. The condition of declining water in Kedung Soka is feared to reduce belief in myths that have existed since the time of the ancestors and were taught from generation to generation. This study aims to determine the role of local traditions on environmental services, especially water conservation in a case study of the Kedung Soka Response tradition in Lampar Village, Tamansari District, Boyolali Regency. The research was conducted using a qualitative method to determine the role of local wisdom in Tanggap Kedung Soka tradition, the data in the study was obtained through observation and interviews with the community around Kedung Soka and the community leaders. The results of this study found that Lampar's community hopes that this traditional ceremony can continue to be carried out every year and they have plans to restore Kedung Soka by dredging the mud so that the springs can return to normal. Efforts that can be made in maintaining the sustainability of the cultural environmental services of Tanggap Kedung Soka tradition can be carried out through several activities such as education, promotion, participation, and the traditions' development for cultural tourism.

**Keywords:** case study, cultural environmental services, kadung soka, lampar, spiritual ceremony.

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## 1. Introduction

Environmental services are goods and services available in nature or provided by ecosystems that can be used by humans and become the basis for the valuation of an ecosystem (Setyawan et al., 2018). Environmental services are generally marketed by the presence of hydrological services, landscape beauty, climate regulation, and biodiversity (Ichsan, 2021). Environmental services can be grouped into four functions, namely regulatory services such as climate control, supply services such as food and water production, supporting services such as nutrient cycling, and cultural services such as spiritual and recreational aspects. Environmental services provider is a product obtained from the existence of ecosystems such as water supply, fuel provider, provider of various ecosystems and other materials. Regulatory services that can be utilized from environmental services are obtained by setting ecosystem services such as regulating air quality, and so on. Cultural environmental services are non-material benefits that can be obtained from ecosystems, such as aesthetic culture and recreational culture. Supporting

environmental services are services that are required for the production of all other ecosystem services, such as the establishment of regeneration. Utilization based on ecosystem or environmental services can make or maximize the potential of natural resources in a sustainable manner (Febriarta and Oktama, 2020). Management of environmental services, especially the forestry and environmental sectors, is carried out by considering the balance between social, economic and environmental values. According to Putra (2013), The forestry sector has the potential for environmental services that contribute to the economy for the welfare of the community, besides that environmental services also have other functions.

One type of environmental service function is cultural ecosystem services. Utilization of environmental services is an effort to utilize the potential services from the environment that are already available by treating or not destroying and not reducing the main function of the ecosystem. Aesthetic arts and traditional arts are included in the use of environmental services as a function of cultural services, especially traditional culture. Cultural and spiritual services are one of the benefits that humans can obtain non-materially from ecosystems

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through spiritual enrichment, reflection and cognitive development, as well as aesthetic experience. This includes cultural diversity which is influenced by ecosystem diversity, spiritual and religious values for ecosystem components, knowledge of traditional systems that are influenced by the type of system, knowledge by culture, values of cultural heritage that are of high value due to a diverse society, as well as arts and folklore inspired by the natural beauty or natural conditions of an area.

Indonesia has a diversity of cultures and traditions with distinctive characteristics and is the hallmark of every society in each region (Hidayah et al., 2021). Lampar village is one of the villages in Tamansari District, Boyolali Regency which is still thick with traditional culture and cultural celebrations on the island of Java. Abundant natural potential makes Lampar Village has its own interest, this is also the case for the Lampar Village Community that organizes many traditional arts such as folk art performances (Sallata, 2016). One of the cultures that is still practiced today is the kenduren ceremony. The Kenduren ceremony is carried out at night on the night of Suro or Islamic New Year, namely with a series of events starting with the tumpeng ceremony to Kedung Soka accompanied by Javanese gamelan then followed by a shadow puppet show which is held from morning to night. The purpose of holding a kenduren ceremony is to preserve regional culture from generation to generation so as to prevent the existence of traditional culture from fading. The condition of water in Kedung Soka is now starting to decline so that the utilization of available environmental services is now starting to decline.

Lampar Village can be said to be a village that has environmental services, both a provider function and a cultural function. The problem found at the research location is the decreasing quantity of water found in Kedung Soka or an area that is believed to be from generation to generation as a sacred location because the water in it never recedes. But now the water in Kedung Soka is starting to decrease. The condition of declining water in Kedung Soka is feared to reduce beliefs or myths that have been believed for generations. Based on this background, it is necessary to conduct research that aims to determine the cultural environmental services in the case study of Tanggap Kedung Soka, in Lampar Village, Tamansari, Boyolali. The benefits of this research are that it can increase knowledge about culture in Indonesia, especially cultural environmental services and provide an overview of the local knowledge of the Lampar Village community and as a reference for similar research.

## 2. Materials and Methods

### 2.1 Study Case

The research area was conducted in Lampar Village, Tamansari District, Boyolali Regency, Central Java Province. According to 2019 BPS data, the Lampar Village area has a maximum temperature of 33°C and a minimum temperature of 18°C. The average height of the area in Lampar Village is 700 meters above sea level. The boundaries of Lampar Village to the south are Bandungan Village, Tlogowatu Village is bordered by Lampar Village to the north, east to Dragan Village and Tangkil Village Kemalang is directly adjacent to Lampar Village to the west. This research was conducted by means of observation and field data collection at several location points in Lampar Village, namely plantation areas and community farm areas, as well as the main location, namely Kedung Soka in Lampar Village. Observations were made directly to community leaders

who were considered to have an understanding of the traditions in Kedung Soka.

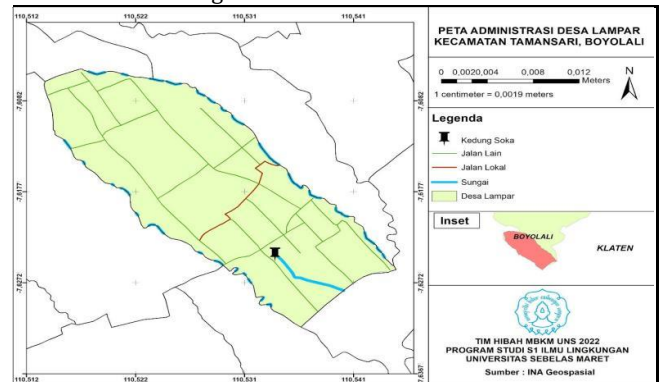


Fig. 1 Location of Lampar Village, Tamansari District, Boyolali

### 2.2 Procedures

The research was conducted for approximately 3 months, starting from May to July 2022. This research was carried out in several stages as shown in the Fig 2. Research flow. This research begins with a literature study phase which aims to obtain information and research themes. Then the stages of identifying problems and making research plans. After finding the themes and problems at the research location, then data collection in the form of primary and secondary data that supports the research is carried out. Primary data were obtained through observation, field surveys, interviews, and documentation. While secondary data is obtained from several references such as journals, articles, and books, and various other literatures. The data that has been collected is then analyzed and discussed on the data from the interviews. The last stage is recommending and drawing conclusions from the problems and data that have been obtained as well as the decreased ability to bind carbon and the loss of flora and fauna species (Kadir and Bahasia, 2019).

The survey method in this study was carried out with data collection techniques by means of field observations and interviews. Respondents from the interviews conducted were community leaders who were considered to be familiar with the Tanggap Kedung Soka tradition in Lampar Village and interviews were conducted with representatives of the Lampar Village community who had followed the tradition. This study uses a semi-structured interview technique in depth and with open-ended questions. According to (Hasanah and Astuti, 2020), using interviews conducted with semi-structured techniques were carried out to obtain the desired data targets and researchers were able to find problems in an open way, where respondents who were interviewed were asked to express their opinions and provide as much information openly as possible. Semi-structured interviews are guided by a list of questions that have been made previously and are related to predetermined problems (Helminaand Hidayah, 2021). Broadly speaking, the interviews conducted were related to history, event processes, conditions, and other matters related to the Tanggap Kedung Soka tradition found in Lampar Village, Tamansari, Boyolali.

### 2.3 Data Analysis

This data research is analysis with a qualitative technique. Research using qualitative techniques is research carried out to understand conditions by leading to in-depth and detailed descriptions related to the actual conditions that occur in the

field (Nugrahani, 2014). Lampar Village community. Then the data obtained will be analyzed. Primary data in this study include data from direct field observations, interviews, and documentation of activities. In addition, this study also uses secondary data, namely literature studies, references from various journals and books, articles, and others as supporters and as a complement to this research.

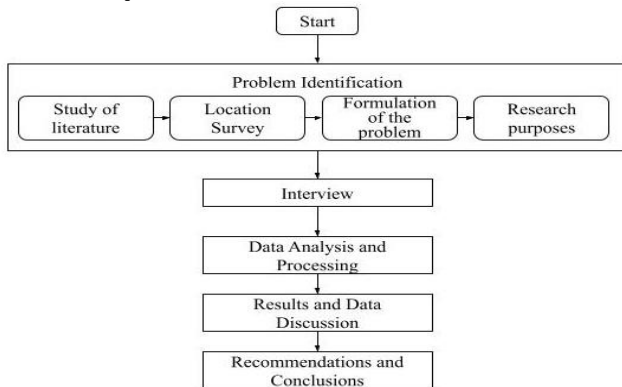


Fig. 2 Research Flow

### 3. Result and Discussion

#### 3.1 Socio-Cultural Conditions in Lampar Village, Tamansari, Boyolali

Lampar Village has many types of abundant natural potential. The environmental services available in it are also scattered, one of which is cultural or cultural environmental services. The people of Lampar Village, who are still thick with their heritage and historical stories, gave birth to this environmental provider. The contribution of the benefits of cultural environmental services is felt by all the people because it is considered a legacy from their ancestors, because the existence of these relics can be utilized properly by them. Culture can shape civilizations or traditions in meeting the needs and welfare of people involved in their environment (Soerjano, 1982 in Putri et al., 2017). Lampar village is still famous for its traditions. These activities are characteristic of the Lampar Village community, including the Tanggap Kedung Soka tradition. People who still apply this tradition tend to have a high cultural value system (Suswita and Arbain, 2017). Villagers still say that the kedung provides ecological benefits as evidenced by its good use, and cultural benefits as evidenced by the sacredness of the area in order to preserve it so that it exists.

#### 3.2 The Tanggap Kedung Soka Tradition

Kedung Soka is a puddle or pond located in one of the hamlets in Lampar Village. This Kedung has existed since the ancestors and there it is a sacred place. Every year, there is an event called Respond to Kedung Soka. The Tanggap Kedung Soka Tradition is an annual tradition containing thanksgiving which is held every 8th sura. These traditions are generally related to the cycle of human life (Putri et al., 2017). Kedung Soka is also divided into several areas. The area where there are rocks is called the pond and the part where the trees are lined up is called donya. Around Kedung there are also Javanese script writings where the writing explains the genealogy of the place. It is also believed that there is a pair of Kedung Soka. Kedung in Lampar Village is in the form of the arch of the left

foot of Werkudara and the arch of the right foot is in the Jatnom Klaten area.

The Tanggap Kedung Soka Tradition is maintained by the Lampar Village community with different ritual processes. The process of the Tanggap Kedung Soka tradition is carried out sacredly from morning until morning again. In the morning slack is done. Kenduren is an activity of praying together with the aim of respecting, worshiping, being grateful, and asking for the safety of the ancestors (Putri et al., 2017). Then the community gathered together around the kedung with their respective tumpeng and kenduren equipment. This Kenduren also involves the people of Dukuh Pagoh Klaten. Then after that there was a shadow puppet show one day and night from 1 pm. In the morning, the gamelan has sounded to accompany the people who are going to relax. The impact of the Covid-19 pandemic has also caused this tradition to be delayed. However, it is still carried out as minimally as possible despite many limitations, such as relaxation which is only performed by a few people and a small puppet show which is only performed for 2 hours and is not intended to be watched widely.

Kedung Soka which is said to be sacred also contains many beliefs. Like Kedung water which never runs out or runs out of water even though it is during the dry season. Kedung water is also a source of meeting the daily needs of the people of Lampar Village and the surrounding villages. The belief in this place also has a story that anyone who comes to Kedung with bad intentions, for example, mocking the water, that person will end up with stomach pain or it can also end up fatal. Not a few also local people and from outside the village of Lampar who come to this place for wiritan or just praying.

research is analysis with a qualitative technique. Research using qualitative techniques is research carried out to understand conditions by leading to in-depth and detailed descriptions related to the actual conditions that occur in the field (Nugrahani, 2014). Lampar Village community. Then the data obtained will be analyzed. Primary data in this study include data from direct field observations, interviews, and documentation of activities. In addition, this study also uses secondary data, namely literature studies, references from various journals and books, articles, and others as supporters and as a complement to this research.

#### 3.3 The Utilization of the Kedung Soka

Kedung Soka, which has been holding a large amount of water for a long time, has been used as a spring by the people of Lampar Village and the surrounding villages. According to the results of interviews with local residents, the water stored in Kedung Soka has an abundant quantity of water from the past and the water can be used for the daily needs of the people of Lampar Village and its surroundings. The water contained in Kedung Soka is used by the community for bathing, livestock needs, washing, cooking, and is used for community consumption water. Previously in the water there were also fish that were bred by local residents and the fish were used by the residents of Lampar Village themselves. In addition to the water used by the residents of Lampar Village, Kedung Soka is famous as a sacred place. So that the residents of Lampar Village use Kedung Soka as a place to pray. The place used to pray is in an area where there are rocks. Because of the sacredness of this place, the residents of Lampar Village every year carry out a famous traditional ceremony called the Kenduren traditional ceremony. The Kenduren traditional ceremony which is held every year in the month of Suro on the

8th is used by the residents of Lampar Village as a form of preserving culture which will continue to be preserved to the next generation and become a characteristic of the traditions found in Lampar Village.

However, the condition of Kedung Soka for 3 years has undergone many changes. The water that has never run out even in the dry season has started to run out and can no longer be used by the villagers of Lampar. The springs that used to be used for the daily needs of the residents of Lampar Village are no longer used because the water condition has decreased in quantity and many silt deposits are found in areas that were

previously flooded. The appearance of mud deposits in the Kedung Soka area is thought to be fluvial deposits from sedimentation carrying fine matter and the bodies of living things that have undergone weathering. Although the water has receded, the residents of Lampar Village still maintain traditional ceremonies that have been carried out from generation to generation. The community hopes that this traditional ceremony can continue to be carried out every year and they have plans to restore Kedung Soka by dredging the mud so that the springs can return to normal.



Fig. 3 Kedung Soka: 1) Relics Kedung Soka; 2) Kedung Soka area; 3) Trees in the Kedung Soka area; 4) Javanese alphabet

### 3.4 Efforts to conserve the environmental services through the *Tanggap Kedung Soka* traditions

The *Tanggap Kedung Soka* tradition, which is an ancestral heritage in Lampar Village, is a form of regional tradition that has a role to conserve environmental services. The belief in the existence of a spiritual power that protects the water in Kedung Soka, fosters character in the community to appreciate the existing natural resources. However, as water capacity decreases in Kedung Soka, it is feared that it could trigger a decline in public belief in Kedung Soka as a sacred place. The decreased in public trust in this matter, certainly has an impact on the sustainability of existing cultural environmental services and has become a tradition inherited from the ancestors. Efforts to maintain the existing culture in Lampar Village, and especially in Kedung Soka, are important to do so that the existing cultural environmental services can be sustainable. Structured and optimal management can be the right step to maintain the culture that has long existed in the community, so that as the times develop, the culture will not shift or disappear from the civilization of society.

Efforts that can be implemented in maintaining the sustainability of the *Tanggap Kedung Soka's* cultural environmental services can be carried out through several options such as education, promotion, participation, and the tradition's development for cultural tourism. Education can be done to introduce the *Tanggap Kedung Soka* culture to the younger generation in Lampar Village. This young generation will later maintain the continuity of ancestral traditions, so it is important to introduce and teach them about history, philosophical meaning, spiritual values, and teachings in the *Tanggap Kedung Soka's* tradition. In addition, education can also be provided through increasing understanding related to environmental services. According to Soenarno (2014), environmental services education is considered important to be taught to the community from an early age, with the hope that when they reach adulthood, they can optimally utilize the existing environmental services, so it can have an impact on their life. Promotion can be done as an effort to introduce the existing culture to the wider community, especially to people outside Lampar Village. Through promotion, more people will know about this culture and preserve the culture. Increasing

the active participation of the Lampar Village community will also play a role in maintaining the sustainability of existing cultural environmental services. With the participation in the implementation of the *Tanggap* Kedung Soka, it will instill a sense of love and pride in the people in Lampar Village for their culture. So that the existing culture will not shift or be replaced as civilization develops.

The next effort that can be a solution related to the problem of cultural environmental services' sustainability that can be carried out by the Lampar Village government is to make the *Tanggap* Kedung Soka tradition as an annual cultural tourism, which can be visited by all the general public. Cultural tourism is a form of tourism activity that focuses on traditions or traditional ceremonies, arts, mosaics of places, and so on that project the cultural diversity and identity of the people concerned (Bilqis, 2019). To realize the development of cultural environmental services into tourism, of course, a more in-depth study is needed. The development of the *Tanggap* Kedung Soka tradition into a form of cultural tourism not only has advantages, but may also have other impacts on life around Kedung Soka. The condition of infrastructure and institutions also needs to be considered as well. Without adequate infrastructure and strong institutions, it will be difficult to manage the cultural tourism.

Apart from developing cultural environmental services, it is also necessary to take steps to restore Kedung Soka's condition to the way it used to be, so that the ecosystem and its components can run optimally. Cultural environmental services in Kedung Soka are closely related to the condition of water availability in Kedung Soka. The low rainfall in the Lampar Village area is thought to be one of the causes of drought in Kedung Soka. So far, Kedung Soka still uses rain as its main water source, so that rainfall has a major impact on the existing water supply. Conservation of land and water is also needed to support cultural environmental services in Kedung Soka. One of the possible steps to take is to increase the presence of vegetation to help absorb more rainwater. The presence of vegetation plays a major role in capturing rainwater and minimizing the amount of runoff water that is not absorbed into the land surfaces. Through increasing plant vegetation around the Kedung Soka area, it is hoped that it will be able to optimize the low rainfall, so that the water supply in Kedung Soka can return to its normal condition. The return of water supply conditions in Kedung Soka will certainly have a major impact on the sustainability of the cultural environmental services in it and restore the function of these environmental services as before.

#### 4. Conclusion

The existence of the culture of *Tanggap* Kedung Soka is a manifestation of the people's belief in Lampar Village, in the spiritual power that guards Kedung Soka, as well as a form of gratitude for the existence of Kedung Soka in supporting people's lives. Even though in the last three years the water sources in Kedung Soka have started to dry up and only contain mud, people still carry out the existing culture. The existing cultural environmental services have not diminished even though the water in Kedung Soka has started to dry up. Kedung Soka's response is suspected to have a connection with water

conservation efforts in Kedung Soka. Myths and beliefs that have long been growing in society have caused respect to be expressed in the form of sacrificing Kedung Soka, so that it wouldn't be used for abuse activities that harm the resources. It is hoped that through restoration activities, Kedung Soka can return to its normal condition as a water resource for the people in Lampar Village. Innovative efforts related to the development of Kedung Soka need to be implemented so that the environmental services in it can still be sustainable and provide benefits to the community around Kedung Soka.

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