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Sasi Laut as a Form of Ecological and Economic Intelligence of Indigenous Community in Kei Islands

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Abstract

Hawear Met/Tahit or *Sasi laut* is one of the traditions in Kei Islands, Southeast Maluku Regency, which is a manifestation of the community's ecological intelligence in preserving the marine ecosystem. Ecological intelligence is a cultural concept that processes require relationships between humans as well as between humans and nature that refer to clear moral and ethical references. Ecological intelligence is closely related to sustainable development as it reflects the sustainability of ecosystems and the socio-economic development of communities. This research aims to investigate how the *Sasi Laut* tradition as a manifestation of the ecological intelligence of the communities supports sustainable development in Kei Kecil Islands, Southeast Maluku Regency. The research used a qualitative method implemented in Ngilngof and Selayar Village, Kei Kecil Islands. The data collection method was an interview. The result showed that *sasi laut* is a manifestation of ecological intelligence that functions as an ethical and moral framework that has been rooted for generations in building relationships between humans and between humans and nature. This is the philosophical foundation of the community's life and an important element in supporting the development of economic, tourism, social, and environmental aspects of Kei Kecil Islands, Indonesia.

Keywords: *Ecological Intelligence, Indigenous Community, Sasi Laut.*

INTRODUCTION

Implementing appropriate marine resource management methods is challenging. Assessing various ecological considerations as well as the social dimensions of human interactions with nature often requires consideration of multiple knowledge systems and perspectives (Berkes, 2007). This complexity provides opportunities for increased understanding but is also an area where misalignment can hinder success. Western scientific approaches are often used as a form of proprietary intelligence to inform analysis and decision-making (Reid et al., 2016). For example, outreach strategies that reflect Western-based scientific knowledge and concepts, such as rarity, extinction risk, small population, or limited spatial range, are the reasons to prioritize certain species for conservation (Miller et al., 2006, Reid et al., 2016). However, local and indigenous ecological intelligence is often excluded, or plays a minor role, in the design and implementation of marine ecosystem management (Ogar et al., 2020). Western marine resource management programs are often built on the assumption that humans (collectively and individually) can have an impact on marine ecosystem management outcomes (Dove et al., 2008). In addition, economic impact is a key parameter of how to drive the conservation of marine ecosystems, but if used without regard to social or cultural impacts, this can negatively impact success (Akers and Yasu´e, 2019). Since ecological intelligence frameworks and motivations for marine resource management are not universally applicable across cultures and can be rooted in fundamentally different worldviews (Timoti et al., 2017), such misalignments can contribute to adverse or unforeseen consequences, including disrupting participatory processes and undermining the long-term sustainability of local community-based marine ecosystem management (Waylen et al., 2010). Despite the potential for negative outcomes, western-based approaches are deeply embedded and rarely questioned in marine resource management conducted by indigenous people (Cornell et al., 2013; Upe et al., 2022).

Management of marine resources will be successful when there is an alignment with cultural aspects (Bennett, 2016). Understanding the nature of local cultures and the forces that surround them is an important aspect of ecological intelligence and should be an important aspect of education and communication for sustainable development (Shumba, 2011). Ecological intelligence is a concept that is culturally bound and its processes require human-to-human and human-to-nature relationships with clear moral and ethical references (Shumba, 2011).

Ecological intelligence can also be understood as an integrated system of information, knowledge, and beliefs, passed down from generation to generation on the relationship between local communities and the environment where the knowledge is cumulative and dynamic, and based on hereditary experience (Berkes dan Folke, 1998). It has the potential to provide valuable insights at large scales (spatial and temporal), drawing on the collective experience based on local customs of those working directly in the fisheries environment.

Researchers have also revealed that the utilization of local customs is an empowering way to engage indigenous and local communities in managing their future (Example: Shumba, 2011; Hillmer-Pegram, 2016; Kato, 2018; Wahyuni, et al., 2023). The utilization of local customs is believed to be an important approach to maintaining harmonious relationships between individuals, communities, and the environment (Rudnev, 2015). However, as stated earlier, local customs are often overlooked as a key source of information relevant to ecosystem management policies because they are often underestimated from the perspective of Western scientific knowledge (Berkes, Colding, & Folke, 2000; Tuhiwai-Smith, 2012). Studying and utilizing indigenous knowledge helps affirm its value and importance as well as facilitate its integration into resource management policies and practices (Kato, 2018; Mugambiwa, 2022).

In Kei Islands, Southeast Maluku Regency, Indonesia, a critical review of local customs as a source of community ecological intelligence is needed. Indigenous customs are substantially an adherence to positive communal relationships, a deep respect for human values, and a deep respect for nature and its resources (Shumba, 1995; Skolimowiski, 1990). Kei Islands communities have customs that have been inherited from generation to generation as local knowledge about marine ecosystem management known as *Sasi Laut* (*Hawear*). *Sasi laut* is a resource management model intended to maintain the sustainability of marine life to improve the welfare of coastal communities by prohibiting fishing and taking lola conch, and sea cucumbers at certain times (Adhuri, 2013). *Sasi Laut* is a form of awareness of the Kei Islands community in maintaining marine ecology to ensure the sustainability of life for their future generations. Today, *Sasi Laut* remains a rational ethical and moral framework as the root of the philosophy and existence of the Kei people. Although in Western thought it may be considered archaic or tribal in nature, *sasi laut* has many important meanings in lives. The Kei community considers *Sasi laut* to maintain a balanced relationship between humans and nature, which in turn will have an impact on maintaining the survival of the local community from the economic perspective. This is important in the management of marine resources, making the value of tradition offset external influences, having strong social identity consequences.

Research has shown that local communities in coastal areas have inherited customary practices regarding the management of their marine environment (Durán et al., 2015; Kikiloi et al., 2017). However, these research results provide only limited reference to contributions to local ecological intelligence in the context of resource management (Heisel et al., 2021). Similarly, several research that specifically examined *Sasi laut* in the Kei Islands community as a tradition in preserving aquatic resources (Hoshino et al., 2017; Ananingsih, 2018; Betaubun et al., 2019, Timisela et al, 2017) did not examine in depth the existence of Sasi laut as a manifestation of ecological intelligence to encourage sustainability in marine ecosystem conservation and its impact on the socio-economic sustainability of the community. Therefore, this research aims to explore the existence of *Sasi laut* as a manifestation of ecological intelligence to support the management of marine resources in Kei Islands which has a positive impact on increasing awareness of preserving marine resources sustainably to improve the economy of the community.

Ecological Intelligence

Ecological intelligence reflects systemic thinking, eco-philosophy, holistic perspective (Bowers, 2010; Capra, 2005; Sterling, 2009), collective lifestyle, and cultural commonalities (Bookchin, 1982; Bowers, 2009; Shumba, 2011). Ecological intelligence is a culturally bound concept and its process requires the relationship between humans and the relationship between humans and nature as a clear moral and ethical reference (Shumba, 2011). These relationships determine how people interact with each other with respect how they act together socially and how they relate to other life forms leading to respect for diversity and interdependence. The main purpose of ecological intelligence is to develop social and environmental

responsibilities (Shumba, 2011; Sterling, 2009) and awareness, critical thinking (Bowers, 2010; Capra, 2005), to conduct cooperative learning (Sterling, 2009), and to bring about long-term behavioral change (Bowers, 2010; Sterling, 2009). Shumba (2011) specifically emphasizes that ecological intelligence cannot be acquired solely through formal education, but also mainly through intergenerational transfer as informal education; thus, local traditions passed down from generation to generation as informal education is prominent in the process of transforming ecological intelligence owned by the community.

Referring to Okur-Berberoglu's research (2020), ecological intelligence is conceptualized into 3 subsets holistic perspective, social intelligence, and economics. First, ecological intelligence must have a holistic perspective because there are visible and invisible networks between biotic and abiotic factors in the world. Every behavior, whether consumption-related or not, may have a direct or indirect impact on the environment. Therefore, people must be responsible for their behaviors towards the environment and their social community (Capra, 2005; Goleman, 2009; McCallum, 2005). Unfortunately, individualism has come to the fore recently due to capitalist perspectives, globalization, and industrialization. However, humans are social beings and should not isolate themselves from the social environment because ecological intelligence is a social and collective process. Any environmental accumulation is transferred through intergenerational communication such as language; therefore, environmentally responsible behavior also needs to involve responsible social and economic behavior (Bowers, 2009; 2010; Capra, 2005; Goleman, 2009; McCallum, 2005; Shumba, 2011). At this point, socially and economically responsible behavior refers to social intelligence.

Second, another important part of ecological intelligence is social intelligence, which refers to the social responsibility of society to sustainability. For example, people should be able to think about how goods are produced or whether it involves environmental or social/human exploitation in the production process (Goleman, 2009; McCallum, 2005; Orr, 2002). The economy is an important part of human life, and it is not just about earning or spending money. People should also be able to think about what happens when they earn and spend money, and whether there is exploitation of people or the environment.

The last one is economics. McCallum (2005) and Orr (2002) remind us that the history of Western science has negatively impacted our understanding of the natural environment. Therefore, ecology and economics are considered two different subjects. However, they should be considered as complementary subjects (Goleman, 2009; Orr, 2002) as the economy requires environmental and human resources to thrive (Capra, 2005; Kumar & Budin, 2006). Orr (2002) specifically emphasizes that economics should be based on sustainable development rather than the exploitation of environmental and human resources. People should be able to think that all their needs, such as food, clothing, and shelter, are based on natural resources. Therefore, this critical thinking refers to responsible economic behavior.

Ecological intelligence can be achieved when we recognize, dismantle, interrogate, and modify long-held cultural assumptions and root metaphors of individualism, progress, anthropocentrism, economics, etc. Ecological intelligence expresses appreciation for what is good, values inclusivity, and demands creativity, innovation, and ethics. It raises questions about the consumer-oriented culture of globalization and acknowledging and understanding how individuals are embedded in culture, and how culture in turn is embedded in natural systems. As such, ecological intelligence does not present only on individual, but on collective intelligence. This requires relational thinking to understand systems in all their complexity, as well as the interactions between the natural and human-made worlds. This intelligence does not emerge from one's thought process but requires learning from experience in a cultural and environmental context. Some cultures, as mostly happens in the West, have ecological intelligence that is more mechanistic and consumeristic, while in other regions it will be more humanistic and relational, for example in Kei Islands, Southeast Maluku Regency. Consumerists have a larger ecological footprint and need to transition to a more humanistic, relational, and less consumptive lifestyle. For this reason, there is a need for local community awareness in managing their marine resources. According to Basri, et al (2017), local culture can also be used to manage the sustainability of marine resource conservation for the future.

Sasi Laut in Kei Islands, Southeast Maluku Regency

Sasi is a traditional approach to natural resource management that involves spatial and temporal

enclosure of fields, forests, coral reefs, and fishing grounds (Thorburn, 2000) to allow animals or plants to grow and reproduce (Mansoben, 2003). Due to its restrictive nature, *sasi* is considered a conservation mechanism (Kissya, 1994; Zerner, 1994; Boli et al., 2014; McLeod et al., 2009). If *sasi* is implemented at sea it is called *sasi laut*. *Sasi laut* prohibits the use of destructive and intensive equipment (poisonous plants and chemicals, explosives, small nets) in certain marine areas and establishes seasonal rules for entry and harvesting as well as authorized activities in the area (Harves and Novaczek, 2002). These regulations are guarded and enforced by an institution called *kewang*, which functions as the indigenous police. Their legitimacy, as well as that of the *sasi* institution itself, is based on indigenous or customary law. It is their custom that determines the fundamental structures and ethics of the *Sasi* institution. However, in a modern context, the sea belongs to the Indonesian state, and thus any fisheries and management systems run under national law. Current threats to the implementation of *sasi* are commercialization, modernization, and loss of traditional values in general (Harves and Novaczek, 2002).

In the context of Kei Islands Community Life, *Sasi* is a manifestation of the *larvul ngabal* customary rules in the daily life of the Kei community. *Larvul Ngabal* custom has a central position as a guide to the life of the Kei community, in addition to the religion they adhere to (Lonthoir et al., 2016). In Kei Kecil islands, *Sasi* (locally called *yutut*, while in Kei Besar called *yot*) can be formulated as a prohibition that protects something or a certain result within a certain time limit, enforced in a certain way. It has signs which have the law properties or force applicable to the community and individuals. The most common or widely used *Sasi* sign is a coconut leaf (woven coconut leaf) tied or attached to the object or place that will be used as *Sasi*.

Sasi Laut in Kei Islands originated from *Hawear (Sasi) Balwaren* which is contained in the *Larvul Ngabal* law to regulate one's property rights, which reads *"hira I ni ntub fo I ni, it did ntub fo it did",* meaning that what belongs to others is theirs and what belongs to us is ours (Rahail, 1993). *Sasi* is enforced to protect marine resources between the boundaries of one customary right and another, and if persons or individuals take the yields of management of marine resources that are not within the boundaries of their customary rights, they will receive sanctions. The sanctions are in the form of fines, payment of a sum of money, or punishment by the village head or a designated community leader. This teaches us to respect each other's property rights so that there is no act of forcibly seizing something that belongs to them or committing theft. Although it is not explained in detail, it is a mutual agreement between the ancestors to the people today. Community awareness to stand firmly on local cultural values in life is a manifestation of the identity and local culture of the Kei people. Local culture is actually a conceptual idea about social relations between people and nature in the lives of local communities (Jundiani, 2017). In addition, according to Pratama et al (2017), local culture is awareness and knowledge in maintaining and inheriting cultural wealth from certain communities from generation to generation.

METHODS

This research used a qualitative approach to reveal the implications of the research results. The subjects of this research were the people of Ohoi Village, Selayar Village, Ngilngof Village, Langgur Village, and Taar Village in Kei Kecil Islands of Southeast Maluku Regency. Data collection was conducted using an interview technique to capture primary data needed in the field (Creswell, 2017.

In each village, the interviews were conducted with traditional leaders, village heads, government officials from the Tourism office, and indigenous people who work at tourist objects (Table 1). The interview guide for *sasi laut* consisted of a standardized list of questions based on Okur-Berberoglu's (2020) concept of ecological intelligence according to a holistic perspective, social and economic intelligence. The questions were developed to explore how the existence of *sasi laut* manifests these three subsets of ecological intelligence.

Table 1. Overview of Research Informants

Informant	Total	Gender	Age Range	Code
Indigenous people who work at tourist objects	5	3 men, 2 women	20-40 y.o	MA
Head of Village	5	Men	40-60 y.o	KD
Traditional leader	5	Men	50-70 y.o	TA
Tourism Office Staff	2	Men	30-40 y.o	PDP

The interview results were then processed qualitatively and described in a descriptive form. Data validity in this study used source triangulation with a series of qualitative data analyses according to an interactive model consisting of the process of data collection, data reduction, data presentation, and verification or conclusion drawing (Creswell, 2017). At the data collection stage using interviews, it resulted in discussions with informants by including questions about, their customary knowledge and practices, and their opinions on *sasi* from a holistic perspective, social intelligence perspective, and economics perspective. The interviews were conducted until the topic was fully addressed, there was repetition in the data collected, and the information was deemed sufficient to answer the research questions (Fusch & Ness, 2015). The total interview duration was twenty hours for all informants and transcribed using naturalized transcription (Oliver, Serovich, & Mason, 2005), resulting in over 100 pages of transcribed interview material. Interview transcription was first conducted by the lead writer who conducted the interviews in the original spoken language (Indonesian, Kei). The words and expressions in Kei were then translated into Indonesian.

At the data reduction stage, the results of interviews and observations were converted into a manuscript and then simplified into a summary to make it easier for the author to focus on the information. Data presentation is the compilation of research data processed under the observed research focus so that it is possible to conclude. The conclusion-drawing stage was carried out based on findings in the field and verification, by receiving input that could be used to support the achievement of research objectives (Creswell, 2017; Ningi, 2022).

RESULTS AND DISCUSSION

This research focused on how the local tradition of *sasi laut* in the Kei Islands became a manifestation of the ecological intelligence of the Kei Islands community. It aims to explore the complexity of integrating indigenous knowledge and practices as a form of ecological intelligence of local communities. The presentation of findings and discussion was based on relevant main themes about *sasi laut* as a manifestation of ecological intelligence that emerged during data analysis after the interviews. The main themes included *sasi laut* from a holistic perspective, *sasi laut* from a social intelligence perspective, and *sasi laut* from an economic perspective.

1. *Sasi Laut* from Holistic Perspective

Human survival depends on how they interact and relate to nature and the environment where they live. The intelligence of the community to explore various resources of natural and local cultural values or local wisdom is very important. Local wisdom is all forms of knowledge, beliefs, understanding or insight, customs, and ethics that guide humans in behaving with ecological communities throughout their lives.

Local wisdom is holistic because it is related to human knowledge, understanding, and insight into nature and the environment. The holistic perspective in Ecological Intelligence states that people must take responsibility for their behavior towards the environment and their social community (Capra, 2005; Goleman, 2009; McCallum, 2005). Humans as social beings should not isolate themselves from the social environment because ecological intelligence is a social and collective process (Okur-Berberoglu, 2020). Kongprasertamorn (2007) stated that to live in harmony with the environment, local communities use the accumulated local culture passed down from their ancestors to manage natural resources. The utilization of local culture provides many diverse opportunities in marine resource management (Brook and McLachlan, 2008).

In the context of the Kei Islands community, traditional and community leaders revealed that the local wisdom of *sasi laut* has become a moral and ethical framework that closely connects people with each other as well as with other forms of life in their natural environment. It represents the context of

Ecological Intelligence from a Holistic perspective as proposed by Okur-Berberoglu (2020) which describes the respect and honor between humans and between humans and nature. As revealed by one of the traditional leaders (TA1) in an interview:

> "*Sasi laut* is a law based on the underlying philosophy of *larvul ngabal* customary law, which is *"Itdok fo ohoi itmian fo nuhu* (inhabiting or occupying a village where we live and consume foods from nature or the land)". This is the norm in maintaining the balance between humans and nature. The *sasi laut* tradition also teaches our community about the ethics of life to be able to respect each other and protect the boundaries of one customary right with other customary rights. If anyone violates and takes the yields of marine resource management that are not under their rights, they will receive sanctions (*sasi bahwaren*)".

The interview results showed that *sasi laut* is a form of local wisdom that has been passed down from generation to generation to maintain the sustainability of the marine ecosystem and as a form of guidance in the utilization of marine products. Collective solidarity is the core of the *Sasi Laut* tradition and it provides the essence of ecological intelligence. Ecological intelligence requires individuals to share knowledge with others and collaborate consistently with prevailing Community Traditions. This is consistent with Goleman (2009) that ecological intelligence allows us to understand systems in all their complexity, as well as the interconnections between the natural and human-made worlds. Yet, such understanding demands a broad range of knowledge that no human brain could possibly store it all. People need help from others to navigate the complexities of ecological intelligence.

Sasi laut reflects how local communities have a unique perspective and understanding of nature and interact with it. *Sasi laut* tradition is very important for the life of the community in Menyeu Subdistrict because it becomes a management system for marine resources, ensuring a more equitable sharing of resources, preventing conflicts between resource users, and contributing to the sustainability of resources. *Sasi laut* is a natural process that takes place based on the awareness of the community to protect and maintain various marine life for their future. This awareness is referred to as local wisdom. As expressed by one of the village heads (KD1) in the Menyeu sub-district, he stated that:

> "*Sasi laut* tradition has been carried out for generations to preserve the sea and to regulate the capture of marine products because the tradition of *sasi laut* can prevent the exploitation of marine products that are excessive and destructive. With *sasi,* we also keep our traditional fishermen from being harmed by fishing vessels owned by fishing companies".

Sasi laut will be a strong foundation for marine resource management in small island areas. It is a culturally-rooted system, a social mechanism, and a set of rules and regulations that can be accepted by the communities in this area. Familiarity with the concept of management, recognition of the need to protect natural resources, perceived benefits, and general appreciation of *sasi,* make it a symbol of the ecological intelligence of the community. With the existence of formally recognized customary structures that have networks to the government, the enforcement of local cultural rules has clear legitimacy and can be accounted for. With the assistance of non-governmental organizations, scientists, and the government, a joint management structure can be established that includes the principles and components of *sasi*. This is in line with the holistic perspective of ecological intelligence, which requires people to take responsibility for their behavior towards the environment and their social community (Capra, 2005; Goleman, 2009; McCallum, 2005).

2. *Sasi Laut* is a Form of Social Intelligence of Indigenous People

Another important part of ecological intelligence is social intelligence, which refers to the social responsibility of society to sustainability (Okur-Berberoglu, 2020). Okur-Berberoglu (2020) stated that the economy is an important part of human life. It is not only about earning or spending money, but people should also be able to think about what happens when they earn and spend money and whether there is exploitation of people or the environment. In this context, social intelligence becomes an ethical and moral framework as the basis for the principles of justice in society to ensure that there is no exploitation of nature and people for the economic interests of certain individuals or groups.

Ecological intelligence must be shared or distributed to be part of the whole culture. According to Goleman (2009), ecological intelligence synergizes with social intelligence which allows us to coordinate

and harmonize our efforts. Through collaboration and information exchange, ecological insights fundamentally result in decisions and actions that allow for ecological sustainability. This principle of ecological intelligence is consistent with the principle of *sasi laut* in the Kei Kecil Islands, as expressed by one of the village heads (KD3) that:

> "*Sasi laut* has existed since the time of our ancestors to regulate marine *petuanan* areas or village coastal waters. The location of *sasi* is regulated by the village based on existing customary rules. If the village wants to conduct *sasi*, we announce the boundaries of the sea and what marine products are included in *sasi*. *Sasi laut* is sacred to us because it invokes ancestral spirits, so if someone violates it, there will be consequences for the offenders. When the *sasi* time is over, the "buka sasi" custom is carried out. We also tell people about the rules, such as what tools can be used, what and how much fish and other marine products can be caught"

This philosophical foundation emphasizes the unity between human life and nature. Nature is an integral part of humans as indigenous people. Indigenous people in Kei Kecil Islands believe that the destruction of nature means the destruction of indigenous people's lives. For this reason, managing nature for the sustainability of human life and the balance of nature is fundamental to overcoming greed and selfishness. This becomes the ethical and moral framework in the life order of indigenous people in the Kei Islands.

The social intelligence manifested through the *sasi laut* tradition can be used as a social institution in managing justice from an economic aspect in the Kei Islands community so that it still provides opportunities for local communities to be able to keep their economy stable. This is an important instrument as intended by Okur-Berberoglu (2020) to avoid urbanization due to economic inequality due to uncontrolled exploitation of the environment and people. For indigenous people, strengthening their identity as a medium to preserve their cultural identity and develop their socio-economic potential is a way to survive in the modern industrialized world. Environmental sustainability is inevitably linked to the configuration of economic, social, and cultural structures.

Environmental sustainability and the sustainability of human life are inseparable, with each dimension contributing to the other. Environmental sustainability certainly contributes to the sustainability of human life through economic growth. Environmental sustainability is also inseparable from how local communities are inhabited by certain values, rules and norms. Sasi Laut has great potential in maintaining and preserving the environment utilized by the community to fulfill their needs. The social intelligence formed through *Sasi Laut* can be an important aspect in safeguarding human and environmental exploitation so that it can encourage the establishment of economic and social justice in the Kei Kecil islands of Southeast Maluku Regency.

3. *Sasi Laut* is a Form of Economic Intelligence

In the perspective of Economic Intelligence as one of the foundations of Ecological Intelligence, *Sasi Laut* in the environment of the Kei Islands Community acts as a bridge to maintain a balance between the ecological and economic aspects of the society. With full awareness, protecting the sea with all its contents means protecting the future economic life of their future and also the future of the next generation because the sea is the main life for Kei indigenous people. In addition, as a local tradition that has been rooted from generation to generation, *sasi laut* has become a solid foundation for supporting sustainable development in tourism for the economic improvement of the village and the Kei Islands community. Another potential of *sasi laut* for the development of marine tourism, as expressed by a tourism business in the Kei region that:

> "Currently, *sasi laut* is not only focused on marine conservation, but also on tourism. In Kei, the traditional opening ceremony of *sasi laut* is carried out during the Meti Kei Festival, a typical fishing event of the Kei people which we call "*wer warat*" or "pull the rope". I think this is an extraordinary attraction that is unique to the Kei Islands. People visit Kei Islands not only to enjoy the beauty of the beach, but they also want to experience the customs of the Kei community"

On the day of the *sasi laut* opening ceremony, the locals gather at a predetermined place. After the ceremony, led by a traditional leader, the participants depart for the *sasi laut* area to harvest using a traditional method called "*Wer warat*", or "pull the rope", which is a tradition of catching fish using rattan wrapped around yellow young coconut leaves from the fronds of coconut trees. This method is a special tourist

attraction in the Kei Islands. The traditional opening ceremony of *sasi laut* is presented as an interesting tourist attraction. Moreover, good management can generate income for the community as a tourism product.

In addition to being a tourism center during the opening of *sasi*, the implementation of *sasi* which brings impacts on the maintenance of marine ecosystems, is a special attraction for marine tourism for divers because it can provide amazing underwater charm. One of the indigenous people who works at the tourist site (MA4) said:

> "*Sasi laut* has many benefits, one of which is for tourist attractions. Here, when people or tourists visit, they want to swim and dive to see coral reefs and fish in the sea. With the implementation of *sasi laut*, we can protect coral reefs and small fish so that they can grow since we are not allowed to catch fish before the *sasi* is opened and we cannot use bombs to catch fish so that coral reefs are preserved. This also has a positive impact on the economy of the community around the tourism site because they can sell stuff at tourist attractions or provide boat rental services for marine tourists. The government also obtained revenue from taxes and levies from people who visit the area"

Thus, *sasi laut* is an indispensable aspect of the process of maintaining the sustainability of the natural environment, which eventually has an impact on economic growth in the Kei islands. The balance of economic and ecological aspects will support the development of marine tourism in the Kei Islands. Basically, the concept of sustainable development that focuses on the community is implemented to create balance, stability, and sustainability.

The results of this study prove that *sasi laut* as a local culture is a manifestation of ecological intelligence because it can become a moral framework for maintaining a balance between economic and ecological aspects. This result is in line with the views of researchers who stated that an important component of ecological intelligence is the balance between ecology and economy because the economy requires environmental and human resources to develop (Kumar & Budin, 2006; Goleman, 2009; Orr, 2002).

CONCLUSION

Among the Kei people, *Hawear Met/Yahit (Sasi Laut)* is a tradition passed down from generation to generation to preserve marine resources. *Sasi Laut* reflects how people have a unique way of perceiving and understanding nature and interacting with it, protecting marine life in various ways. This is a form of ecological intelligence owned by the community in maintaining and preserving the sustainability of marine ecosystems that are utilized by the community to meet their needs. The main purpose of Ecological Intelligence is to develop social and ecological responsibility and awareness that leads to behavioral changes for the sake of the next generation. In addition, the *Sasi laut* tradition as a manifestation of ecological intelligence acts as an important ethical and moral framework for the community to maintain a balanced relationship between humans and between humans and nature to maintain the stability of the socio-economic conditions of the people in the Kei Islands.

Based on the results of this research, several conclusions can be drawn. First, *Sasi Laut* reflects the holistic perspective of Ecological Intelligence where it becomes a foundation directing the community to be responsible for every behavior towards the environment and their social communities in the Kei Islands. Second, the organization of *sasi laut* became a manifestation of ecological intelligence reflected through the social intelligence of the Kei Islands Community. This is shown by *sasi laut* becoming an ethical and moral framework in the life of indigenous peoples by prohibiting them from taking what is not their right. It has a positive impact on the environment and sustainable management to maintain the stability of the economic and social environment. Third, *sasi laut* becomes a manifestation of ecological intelligence viewed from an economic perspective because its existence in the Kei Islands can maintain the stability between ecological and economic aspects. *Sasi Laut* has succeeded in becoming a special attraction in the development of local tourism which contributes to the development of the local economy while maintaining the preservation of marine ecology without eliminating the cultural values of *sasi laut* itself. The results of this research generally show that *sasi laut* is a manifestation of the local ecological intelligence of the Kei Kecil Islands community.

However, a careful approach needs to be taken. Although tourism has positive impacts on improving local economies, one of the things that need to be prevented is the adverse commodification of the culture (Carr et al., 2016; Erb, 2015). Therefore, it needs a

synergy from all elements (indigenous people, government, and other institutions) to keep local culture such as *sasi laut* to be preserved by the applicable customary values. One possible approach to recognizing *sasi laut* in the context of environmental and economic development can be achieved by using *sasi laut* not as a tourist product, but rather as part of an authentic visitor education experience where traditional leaders in the Kei Islands can interpret *sasi laut* as a holistic resource, while providing employment opportunities for local communities (Carr et al., 2016; Okur-Berberoglu, 2020).

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