Implementation of Conservation Tourism in Supporting The Protection of The Essential Turtle Ecosystem Area at Taman Kili - Kili Beach Wonocoyo, Panggul

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Abstract

Conservation tourism was developed as an alternative to large-scale tourism activities that operate in nature without paying attention to ecological sustainability through natural resources. Conservation management in tourism is a form of concern for the damage to the life of natural resource ecosystems, both caused by human activities and global climate change. Analyzing the relevance of establishing the Taman Kili - Kili Coastal Turtle Ecosystem Reserve as a tourist destination, while prioritizing natural ecosystems and providing benefits for the livelihoods of the local community. The approach in this research is a descriptive qualitative method, describing the results of the study and relating each research data found. The data instrument used involved observation and in-depth interviews with the Kili - Kili beach turtle conservation local community. Conservation tourism activities at Kili – Kili Beach prioritize educating visitors regarding turtle habitats and ecosystems, besides that the purpose of conservation tourism on the Kili – Kili coast is as one of the limited uses of natural resources and natural resources owned without having to exploit turtles. Conservation tourism is carried out in accordance with the provisions in the management of conservation areas and also essential ecosystem areas, while still paying attention to the socio-cultural environment of the surrounding community so that the purpose of the function of utilizing the essential turtle ecosystem area can also be felt by the surrounding community.

Keywords: conservation tourism; turtle essential ecosystem areas.

INTRODUCTION

Background

Conservation tourism in general is a tourism activity by utilizing the concept of conservation, tourism is used as a commercial activity with conservation tools as a form of ecosystem preservation (Buckley, 2010). Conservation tourism was developed as an alternative form of mass tourism activities, with activities in nature without paying attention to the sustainability of natural resource ecosystems. In the development of conservation tourism as the beginning of the development of ecotourism, but with activities that focus on activities that interact with nature, reduce the impact on natural ecosystems and...
activities with the contribution of local communities (Weaver and Lawton, 2007).

In Indonesia, conservation tourism has begun to develop as one of the concepts of sustainable tourism in Law No. 5 of 1990 concerning the conservation of living natural resources and their ecosystems, improve the quality of diversity and its value. Conservation management in tourism is a form of concern for the destruction of natural resource ecosystems, both caused by human activities and global climate change. Conservation areas in Indonesia are divided into several conservation areas, National Parks, Grand Forest Parks and Nature Tourism Parks, including water areas, both coastal areas and underwater ecosystems.

Utilization and determination of conservation areas, especially for limited activities in the form of tourism, is important so that the survival of the ecosystem is maintained, tourism development is controlled with the provisions of activities in conservation areas, it can also provide benefits for the surrounding buffer areas, especially economic movements and the socio-cultural life of the community. The diversity of regional and biological characteristics owned by Indonesia is also the carrying capacity of the limited use of conservation areas as a resource and the uniqueness of conservation tourism in Indonesia. The total area of land and waters of Indonesia is 8,300,000 km². With tens of thousands of islands, Indonesia's coastline is about 108,000 km which is equivalent to two and a half times the circumference of the earth at the equator. This fact explains that Indonesia's waters and coastal areas are very wide, so that the wealth of aquatic ecosystems, especially the sea, is important to be maintained, especially the protection of marine habitats. One of the regions of Indonesia that also has a coastline with a conservation area, namely Panggul District, is located in Trenggalek Regency.

The Panggul administrative area is divided into several villages, Wonocoyo Village is an area with a conservation area that has been stipulated in Wonocoyo Village Regulation Number 3 of 2014 concerning Turtle Conservation Areas. The coastline of Wonocoyo Village is a nesting area for several types of turtles, the hunting of turtles and turtle eggs en masse is the impetus for the village government and local communities to maintain the turtle population. The determination of conservation areas has a direct impact on reducing turtle hunting, besides that the Wonocoyo Village area which is also a Regional Tourism Destination will directly limit the aspects of tourist visits and mass tourism development, so that conservation tourism or conservation tourism attraction becomes an alternative activity in the hope of providing impact on the social life of the community and also contribute to the sustainability of the ecosystem.

This research is important to analyze the suitability of determining the conservation area as a tourist destination on one of the beaches of Wonocoyo Village, which is now a conservation tourism attraction, namely Taman Kili - Kili Beach. The determination of conservation tourism is a combination of two activities that require important attention, tourism as an activity that prioritizes pleasure which is often associated with comfort with the carrying capacity of adequate infrastructure. While conservation is a form of management attention in maintaining the ecosystem as best as possible, without changing or adding infrastructure that will interfere with the function of the area. So that the analysis of the implementation of conservation tourism becomes the main aspect of tourism in Taman Kili - Kili Beach as a turtle conservation area, while prioritizing natural ecosystems and still being able to provide benefits to the lives of local communities.
LITERATURE REVIEW

Tourist Attractions
Everything that has uniqueness, beauty, and value in the form of diversity of natural, cultural, and man-made wealth which is the target or purpose of the visit traveler. Tourist attractions are also divided into three groups, namely:
1. Objects that are available and contained in the universe, with the term natural amenity.
2. The result of human creation, man-made supply.
3. The way of life of the community, the way of life, the traditional way of life of a society (Yoeti, 1996).

Tourist Attractions in this study are intended to be able to analyze the types of tourist attractions at Taman Kili - Kili Beach, thus tourism activities and attractions in the area become opportunities for the rise of natural tourism while still attaching importance to the characteristics of the area.

Conservation Tourism

Tourism
Law Number 10 of 2009 in general provisions conceptualizes tourism as various kinds of tourism activities and is supported by various facilities and services provided by the community, businessmen, the Government, and Local Governments. Tourism according to UNWTO tourism refers to the activities of visitors in tourism destinations. Tourism is a phenomenon whose statistical representation has certain challenges due to its special nature. Most tourism indicators are traditionally physical (non-monetary) and focus on the description and measurement of visitor flows associated with inbound tourism.

Conservation
According to Law No. 5 of 1990 concerning Conservation of Biological Natural Resources and Their Ecosystems, the notion of conservation of living natural resources is the management of living natural resources whose utilization is carried out wisely to ensure the continuity of their supply while maintaining and improving the quality of their diversity and value. Conservation of living natural resources and their ecosystems aims to achieve the preservation of living natural resources and the balance of their ecosystems so that they can better support efforts to improve community welfare and the quality of human life.

Based on the understanding of the concepts of tourism and conservation, it can be interpreted that conservation tourism is a form of activity with the aim not only as an activity with the support of facilities to carry out all activities in tourist destinations to enjoy tourist attractions, but also to participate in the management and preservation of biological natural resources. Tourism activities are also one of the carrying capacities of the utilization of the wealth of biological resources owned to improve the welfare of local communities. The conservation tourism area in this case is intended to analyze the existence of Taman Kili - Kili Beach as a tourism destination for turtle conservation, so that every existing tourist attraction is guided by the concept of conservation tourism.

Essential Ecosystem Areas
Determination of essential ecosystem areas not only as an area outside of conservation, but also as an area with biological diversity, especially the presence of protected or endangered flora and fauna. According to the Regulation of the Director General of Natural Resources and Ecosystem Conservation Number: P.1/Ksdae/Bpe2/Ksa.4/2/2021 concerning...
Technical Instructions for Assessing the Effectiveness of Management of Essential Ecosystem Areas in the general provisions of article 1, it is stated that the Essential Ecosystem Area, hereinafter referred to as KEE is an area outside the Nature Reserve Area, Nature Conservation Area, and Buru Park which is ecologically important for biodiversity. KEE typology consists of:

a. Wetland Ecosystems;
b. Corridor;
c. High Conservation Value Area (ABKT);
d. Heart Park;
e. Landscapes / Landscapes that Have Specialty;
f. Geology and Geomorphology.

KEE is the basis for determining areas outside of conservation but has sensitivity to the impacts of human development and activities. So that the determination of KEE as a protected area but can also be used to support the social life of the community, requires attention in its management. As the determination of Taman Kili – Kili Beach as KEE by the Governor of East Java in the Decree of the Governor of East Java Number 188/121/Kpts/013/2021 concerning Management of the Essential Ecosystem Area of Taman Kili - Kili Beach, Trenggalek Regency, East Java Province. In this study, an analysis related to KEE was carried out to see how the suitability of Taman Kili – Kili Beach as Conservation Tourism was carried out by taking into account the provisions of the characteristics of KEE.

RESULT AND DISCUSSION

Trenggalek Regency is part of East Java Province in the southern region, has a southern coastline of Java Island which is part of the Indian Ocean, with the characteristics of the area making Trenggalek Regency have the potential of a south coast ecosystem which can be an opportunity for the development of natural tourism, not limited to tourist attractions but also the culinary diversity of processed seafood. Tourism development in Trenggalek Regency, especially in Panggul District, is one of the leading regional destinations, the natural wealth of cultural heritage and infrastructure support are aspects of supporting tourism potential. Panggul District tourism has semi-primitive regional characteristics where most activities should pay attention to environmental conditions and conditions, with the concept of nature-based tourism development that pays attention to the sustainability of every aspect of tourism support in the form of infrastructure, the number of visits and attractions developed (Suksmawati, et al. 2021).

Tourism development in Pelang District is still continuing to improve, as stated by the Head of the Trenggalek Regency Tourism Office, "Tourism development in coastal areas must be sustainable because it involves aspects of coastal ecosystems, and life under the sea. In addition, tourism development related to the need for infrastructure facilities in tourist attractions also needs to be addressed". In line with the Head of the Tourism Office, the Wonocoyo Village Head stated that "The village area which is currently a
tourist destination in village management, namely Taman Kili - Kili Beach, it is hoped that the potential and wealth of the beach can be maintained amidst the development of mass tourism, and can have an impact on the community. local”. In Wonocoyo Village Regulation Number 3 of 2014 concerning Turtle Conservation Areas in Chapter II Article 2 states that the core zone of the Wonocoyo Village Turtle Conservation Area includes coastal and marine areas with the following boundaries, Boundary point I (north side) on the equivalent Wonocoyo beach along 100 meters measured from the highest tide point. Taman Kili - Kili Beach is one of the attractions for conservation tourism which is also included in the turtle KEE, optimizing the management of the Taman Kili - Kili Beach KEE, Trenggalek Regency, as a form of contributing to the preservation of natural resources, sustainable development, education and research as well as community welfare so that in its development, it requires conformity with the concept of conservation tourism as shown in the regional Figure 1 of the Turtle Essential Ecosystem Area.

![Figure 1. Turtle Essential Ecosystem Area](Source: trenggalekkab.go.id)

Determination of KEE outside protected areas and/or conservation areas has important ecological values that can support the sustainability of life through efforts to conserve biodiversity for the benefit of the community and the quality of life of local residents where the environment around the place of residence is designated as a protected area. Some of the KEE criteria are Wetland Ecosystems, Animal Corridors, High Conservation Value Areas (ABKT) and Conservation Parks.

1. Wetlands have a very important economic value for the people who live around them through the production of biological natural resources such as fish, rice, medicinal plants, forest wood and as a means of transportation (Herman, 2021). The criteria for wetlands are areas with unique or distinctive
ecosystems with various vegetation, habitats for waterbirds and migratory birds, habitats for endangered, endemic and protected flora and fauna species, as a place to reserve clean water for the surrounding area, areas with wet criteria also have economic value, scientific, spiritual or cultural and other ecosystem services. Wetland criteria are also one of the areas that can be used as utilization areas, for example the existence of mangrove forests and brackish water rivers to be one of the potential tourist destinations that also apply the concept of conservation tourism. KEE with wetland criteria in Panggul District, especially in Wonocoyo Village, namely Pelang Beach, a tourist destination by utilizing the uniqueness and biodiversity of forest hills and waterfalls in the Pelang Beach area, Pelang Beach tourist attraction is one of the leading tourism destinations area, utilization as a tourism destination requires that in its development it adopts KEE area criteria. Pelang Beach tourism destinations located in unspoiled areas require planning and development with the concept of nature-based tourism by paying attention to sustainable resources. Sustainable development is designed to meet the needs of the present without losing its existence in the future (Suksmaawati, et al 2021). The determination of KEE, especially in wetland areas, provides an opportunity for local communities to be able to take part in improving welfare, both in its implementation in the tourism industry, as well as limited use in the area such as as a means of agricultural land, plantations and ponds. Pelang Beach is also an area directly adjacent to Taman Kili - Kili Beach which is also one of the tourist attractions that enter KEE with different types of characteristics.

2. Criteria Corridor is a natural vegetation or vegetation node that can connect two ecosystems, either ecologically or physically. Habitat paths for wild animals, endemic, protected rare, vulnerable and endangered, have social functions related to meeting the basic needs of local communities, cultural functions for ulayat rights communities and related to local wisdom in the use of resources and the environment, potential conflicts between humans and wildlife high, as an area with high carbon stock. The criteria for the corridor are more to provide a connecting space between one habitat and another so that the designated area is mostly an area between conservation areas so that the needs of animals between disconnected habitats do not become a conflict both in community social activities and the movement and fulfillment of animal feed in the area (Purwanto et.al Tropenbos Indonesia, 2018). The determination of the corridor in the KEE can provide an understanding of the area that becomes the habitat path, the Taman Kili – Kili Beach KEE is one of the habitat lines that provides movement space for turtles for population sustainability, the turtle fauna biodiversity corridor is a line of native vegetation with a horizontal corridor that connects between water and land. The Taman Kili – Kili coastal ecosystem corridor is part of the turtle conservation area, the function of the corridor provides opportunities for local communities to carry out restoration activities in the utilization area without destroying the habitat, the use of KEE with corridor characteristics can also provide education for tourists to come visit to know the turtle ecosystem, as stated by the manager of Taman Kili - Kili Beach who is included in the Wonocoyo Village community group "The footprints of turtles when they are about to lay eggs on the beach and how to dig sand determine the number of eggs in one ride to the land". The function of the corridor is also a response to environmental changes, seen when in direct observation the manager of Taman Kili - Kili Beach explained
related to the tides of sea water, typical plants and the weather climate in the coastal area to determine the turtle corridor when laying eggs, "The characteristics of the beach with pandanus trees and hot weather will provide a marker that the area is a corridor area and a place for turtles to lay eggs," said Sigit as the manager. Corridor effectiveness is important in conservation areas and protection of endangered fauna in order to maintain land use in accordance with its designation and avoid conflict activities between local communities and the needs of fauna habitat in changing habitats.

3. The ABKT criteria have criteria as areas with high biodiversity such as protected forest areas and conservation areas with natural vegetation, landscape elements that are important for the dynamics of natural ecological processes, distinctive ecosystems, ABKT (High Conservation Value Areas) during This has taken into account the condition of the surrounding landscape, but the determination is carried out exclusively at the management unit (MU) level which is not coordinated with each other. The implication is that ABKT areas which are expected to be connected to each other to form ecological corridors both within and between MUs often do not occur. The lack of ABKT connectivity at the MU level makes the function of ABKT as natural infrastructure to be minimal. The HCV or High Conservation Value (HCV) approach is aimed at maintaining or enhancing important local, regional and global ecological or environmental and social values in the production landscape, namely identifying biodiversity values (HCV 1), landscape level ecosystems (HCV 2 ), rare and threatened ecosystems or habitats (HCV 3), protection of environmental service providers (HCV 4), basic needs of local communities (HCV 5) and protection of cultural sites (HCV 6) (Widayati et.al Tropenbos Indonesia, 2018). Determination of the level of HCV based on indicators owned by the area, Taman Kili – Kili Beach as a turtle nesting area which is one of the protected and endangered fauna makes the KEE of Taman Kili – Kili Beach as an HCV area 1. An area that provides a biodiversity support function for the area protection and/or conservation, areas with high biodiversity adjacent to protected and/or conservation areas. Areas with endangered species, with the existence of habitats for species that are listed on the IUCN Red-List as Critically Endangered. There is a habitat for a population of species with limited or protected distribution that is able to survive (Viable Population) and is an area with habitat that has a carrying capacity for wildlife, such as a coastal area that is directly opposite the ocean which is a turtle migration route. In addition, Taman Kili – Kili Beach is also a habitat for species or a group of species that temporarily exist for breeding, nesting, migration routes, animal corridors, shelters, as well as beach characteristics in the form of sand with very low noise and light levels, making Taman Kili - Kili Beach a turtle nesting habitat.

4. Furthermore, the Biodiversity Park hereinafter referred to as the Kehati Park in the Regulation of the Director General of Natural Resources and Ecosystem Conservation Number: P.1/Ksdae/Bpe2/Ksa.4/2/2021 concerning Technical Guidelines for Assessing the Effectiveness of Management of Essential Ecosystem Areas, the determination of KEE with the criteria that the Kehati Park is a reserve area for local biological natural resources outside the forest area that has in-situ and ex-situ conservation functions, especially for plants, whose pollination and seed dispersal must be assisted by animals with the structure and composition of the vegetation to support the preservation of animals, pollinators and seed dispersers. The Kehati Park area is
outside (not) a forest area, legal ownership or control status (Clear) and is not in dispute over ownership, control or management rights (Clean), stated by the owner in writing and has legal force that the land is confirmed its designation for a wildlife park through a letter of determination, is at an altitude of 400-600 meters above sea level and close to water sources. KEE Taman Kili – Kili Beach based on observations and involved observations are not included in the criteria for the Biodiversity Park, Taman Kili – Kili Beach Mostly consists of coconut plantations and plantations produced by local communities, the highest tidal water border area of 100 meters is dominated by attracting plants Sea turtles lay eggs, namely pandanus plants and sandy soil, and some are in the form of coconut production plantations. Basically, the main function of the Kehati Park is not for tourism activities. The main function of this park is to preserve nature, especially flora, in certain areas. This means that the Kehati Park is designed to protect plants whose distribution is highly dependent on animals, such as birds or bats. Because it functions as a protection, the Kehati Park was built based on the identification of local plants that exist in the area. Its manufacture refers to the Regulation of the State Minister of the Environment Number 29 of 2009 concerning Guidelines for Conservation of Biodiversity in the Regions and the Regulation of the State Minister of the Environment Number 03 of 2012 concerning Biodiversity Parks (KLHK, 2020). In a mini area, Kehati Park has the characteristics of an arboretum but with a larger area.

5. Criteria for Landscapes or Landscapes that Have Geological and Geomorphological Specificities have intact forest cover and or natural vegetation, have a scientific function as an object of research and investigation for the development of science, function as a groundwater recharge area capable of being a medium for infiltrating surface water into the soil. soil and functions as a permanent (permanent) groundwater storage medium in the form of an aquifer whose existence is sufficient for its hydrological function. Classification of landforms according to Cristian and Stewart in Austin and Margules, 1984 which was developed at CSIRO (Australia) using a land system approach. This classification system is based on geomorphological, climatic and land cover aspects. Therefore, the formation of the earth's surface with the same formation and evolution process, but in different climatic conditions and land cover, will constitute a different land system. In this system, place names are used as the name of the land system. Taman Kili - Kili Beach with regional characteristics as spawning grounds can be interpreted as a Landscape with Geological and Geomorphological Specificity, an area with supratidal characteristics of fine or coarse sand that is broad and sloping and has plant species with coastal vegetation formations which are turtle nesting areas, some The types of turtles found in the Taman Kili – Kili Beach area are green turtles, krill and blimbing, but it is possible that there will be other species if the KEE of Taman Kili – Kili Beach continues to improve in protecting land use functions as turtle nesting habitats. The concept of landscape ecology or geoeology can be applied in various fields (Wiyono & Sunarto, 2016) but indeed not all areas can be used as tourism activities, especially related to educational tourism, but tourism activities can be used as a means of conservation if tourism is made not based on tourist requests but following turtle nesting season. This concept can integrate environmental components and spatial aspects so as to provide comprehensive analysis results (Ardian and Eko, 2018) in tourism management requiring
contributions from every stakeholder to meet conservation tourism goals. Advances in science in the field of remote sensing and GIS (Geographic Information System) provide useful tools to identify patterns and structures of landscape ecology (Wu et al., 2015). Landscape ecology can be used to assess habitat quality at specific spatial scales. It is used to increase the animal population (Narce et al., 2012). Heterogeneous landscapes affect ecological processes such as animal movement, population size, and interactions between species (Turner, 2005).

KEE criteria at Taman Kili – Kili Beach are dominated by corridor areas, ABKT and Landscapes that have Geological and Geomorphological Specificity of turtle habitat, turtles (Lepidochelys olivacea) are animals in the reptile class whose lifespan is almost entirely in the ocean and includes oviparous and fertilization animals eggs take place in the body of the parent (Panjaitan et al., 2012; Yustina et al., 2004). Turtles are reptiles that live in the sea and are able to migrate long distances to the Indian Ocean, Pacific Ocean, and Southeast Asia (Apriandini, 2017). Taman Kili – Kili Beach as a place for turtles to lay eggs with characteristics that are easily accessible from the sea, its position is high enough to prevent the eggs from being submerged by the tide and the sand is relatively soft (loose) and of medium size to prevent the nest hole from collapsing during its formation (Miller, 1997). The heterogeneous and relatively wide environment for nesting their eggs is a characteristic that turtles prefer to lay their eggs (Bouchard & Bjorndal, 2000; Sheaviyian et al., 2014), the policy of establishing Taman Kili – Kili Beach as KEE provides protection for the habitat and population of flora and fauna in Indonesia. the area is mainly for the sustainability of the turtle ecosystem. The complexity of the issue of sea turtles has an undeniable impact on the management and conservation of the area (Rosalina and Muji 2022). Every rule in the implementation of activities should be the basis of the gap between every activity that utilizes the turtle ecosystem, both as KEE and conservation tourism, so that the protection of the area from destruction can be minimized but also has an impact on the social welfare of the local community.

The determination of Taman Kili – Kili Beach to become a tourism destination with the concept of conservation activities, making tourist attractions that exist side by side and are in KEE. The suitability of tourism activities and area criteria is important to maintain the sustainability of tourism and turtle ecosystems. Every year the turtle population continues to decline, due to natural factors and human activities that endanger the population directly or indirectly, because of this, turtles are categorized as endangered and protected species (Nurhayati et al. 2020). Red Data Book International Union for Conservation of Nature and Natural Resources (IUCN) which is included in Appendix I of CITES (Convention on International Trade in Endangered Species) which means that international trade in turtles for commercial purposes is prohibited (Seminoff, 2002). Efforts to maintain balance, use and preserve diversity provide opportunities for tourism activities which are currently being used not only as fun activities but also as a means of education and conservation to maintain the survival of biological ecosystems.

Conservation tourism trends according to several observations from the 2021 UNWTO scenario show that international tourist arrivals could grow by 30% to 78% in 2022 compared to 2021. However, this will still be 50% to 63% below pre-pandemic levels. According to experts, domestic tourism and travel close to home, as well as outdoor activities, nature-based products, and rural tourism are among the key travel trends that will continue to shape tourism in 2022. This suggests that natural tourist attractions are forecast to become a global trend in tourism recovery.
attractions that have uniqueness, beauty, and value in the form of diversity of natural wealth will become the target or destination of tourist visits. The determination of the tourist attraction of Taman Kili – Kili Beach as a conservation tourism area is an opportunity for tourism progress in tourism destinations in the Trenggalek area, especially the strategic tourism area of the Pelang area.

Taman Kili - Kili Beach with potential tourist attractions in the form of landscapes and as KEE is designated as a natural tourist attraction, the characteristics of the area which is a turtle habitat for laying eggs make the uniqueness of Kili - Kili Beach, activities that intersect with nature become the main attraction. Taman Kili - Kili Beach is designated as one of the tourist attractions that is included in the regional tourism strategic area according to Trenggalek regulation no. 26 of 2016 concerning the Master Plan for Regional Tourism Development for 2017-2031, so that both development and management must be based on the provisions of regional tourism development with the aim of creating sustainable tourism. In addition, the use of the Taman Kili - Kili Beach KEE as a tourist attraction with the concept of conservation tourism is also stated in the Wonocoyo Village Regulation No. 3 of 2014, where the Taman Kili - Kili Beach KEE is a zone for the limited use and rescue of turtles through tourism activities. Tourism is considered an industry that is not only expected to have an impact on improving the welfare of local communities, but also becomes a tourist attraction with conservation activities, education related to turtle habitat and turtle nesting patterns.

Application of the concept of conservation tourism at Taman Kili – Kili Beach in the Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number 31/Permen-Kp/2020 concerning Management of Conservation Areas. Coastal parks are coastal areas whose functions must support the sustainability of ecological processes naturally and can be managed naturally, sustainably to maintain and improve the quality of biodiversity, such as the presence of turtles in the Taman Kili – Kili beach area which rises ashore to lay eggs every year during the dry or dry season, so the characteristics of the sand area and the small amount of human activity along the coast must be maintained. Coastal parks have criteria in the form of aquatic biodiversity, unique natural phenomena and natural local wisdom, and high attractiveness, and have great opportunities to support the development of sustainable marine natural tourism. The concept of sustainable tourism development should be built with due regard to conservation aspects, especially those included in conservation areas. So that it does not need to conflict with the spirit of conservation, but also needs to be a concern that as a conservation area every supporting aspect in it, both related to beauty, beauty, and cleanliness of tourist areas is an important priority (Hidayati and Audrey, 2021).

Taman Kili - Kili Beach as a conservation tourist attraction and also as a green turtle habitat area or green turtle (Chelonia mydas), Hawksbill turtle (Eretmochelys imbricata) and Leatherback turtle (Dermochelys olivacea) which are protected and attract international attention, are expected to be a place for conservation activities through tourism, so that educational understanding related to turtles can become a trigger the reduced hunting of turtles and turtle eggs. At the beginning, before the development of tourism, turtle egg retrieval was often carried out by the community due to lack of knowledge and understanding so that it had an impact on uncontrolled exploitation in nature, community participation and public awareness of the balance and existence of turtle habitats gave rise to community groups who care about turtle habitats, so that empowerment interventions community and education make the turtle-laying sandy area no longer a consumption material but an opportunity to improve welfare through tourism activities.
which are also expected to have an impact on improving the welfare of local communities. Based on the data obtained regarding the number of turtles that lay eggs and the number of eggs in the sands of Taman Kili – Kili Beach, it is proven that since turtle hunting began to decrease with education and regulations related to turtle hunting, the number of mother turtles laying eggs and the number of eggs increased even the species of turtles that were found began to decrease up to lay eggs is currently increasing, as shown in Table 1.1 Data for Turtles at Taman Kili – Kili Beach.

Table 1. Data for Turtles at Taman Kili – Kili Beach

| Year | Number of Turtles | Number of Eggs Hatching | Eggs Not-Hatching Eggs |
|------|-------------------|-------------------------|------------------------|
| 2012 | 37                | 3132                    | 2524                   | 599                     |
| 2013 | 52                | 4074                    | 3302                   | 772                     |
| 2014 | 35                | 3496                    | 1529                   | 1969                    |
| 2015 | 27                | 2209                    | 1519                   | 690                     |
| 2016 | 54                | 4810                    | 3135                   | 1675                    |
| 2017 | 46                | 3301                    | 2029                   | 1209                    |
| 2018 | 65                | 4668                    | 4093                   | 575                     |
| 2019 | 79                | 5569                    | 5252                   | 317                     |
| 2020 | 85                | 6115                    | 5512                   | 603                     |

Source: Primary Data processed in 2022.

According to Sigit Manager “There are several factors that make turtles rise to lay eggs or not, ranging from the tide level to the beach atmosphere, as well as related to eggs hatching and not hatching, rainfall and climate change are natural factors that cause turtle eggs do not hatch, because hatching turtle eggs depends on the heat level of the sand or sand where the turtles lay their eggs”.

Conservation tourism is an educational contribution not only for tourists who visit related to concern for sustainability of turtle life but also provides awareness to local communities that, with tourism in The multiple impact will also save the turtle’s life due to the cost of retribution and conservation, in addition to providing accommodation, transportation and local restaurants around the KEE Taman Kili – Kili Beach will have a direct impact on the local community. Conservation of resources side by side with the development of the area into a tourism destination, will socially open new jobs for the community so that economically it can be used as a source of income for the surrounding community (Hilyana et al, 2021). Sigit as the manager and community group for turtle conservation also explained "Our main goal is to build and incorporate turtle conservation not only as a turtle rescue at this time, but also to invite anyone who comes to Taman Kili - Kili Beach to learn together and care about the existence of the turtle ecosystem and habitat. , because with conservation activities, humans will learn turtle egg laying patterns, and patience in watching the process of laying turtle eggs until the eggs hatch, visitors who come do not automatically see turtle eggs, turtle hatching because what we expect them to come only at certain times, namely when turtles lay eggs and indeed the purpose of visiting is to learn about turtles”. Conservation Tourism supports the purpose of the KEE not
only in the form of tourism activities but also as a means of conserving protected and endangered turtles, turtles in conservation areas as an educational tool so as to make visitors aware that the beauty and uniqueness of turtles can be enjoyed when the turtles live and breed. Another hope for the local community is to change the mindset of the community in utilizing biological natural resources from the existence of turtles, the importance of protecting turtles for the benefit of the future, the use of turtles as an educational tourism attraction is an alternative solution as a protection effort that can simultaneously provide economic benefits to the community (Setiawan et al, 2021).

CONCLUSION

Tourism and conservation are two activities that have become a trend in the last few decades, merging activities between tourism and conservation is an opportunity to increase education related to the preservation of living natural resources. Conservation Tourism is essentially a tourism activity with the main attraction in the form of tourist participation in the management and conservation of nature, in this study Conservation Tourism located at Taman Kili – Kili Beach became one of the tourist attractions with the concept of conservation tourism. Conservation tourism activities at Taman Kili – Kili Beach prioritize educating visitors regarding turtle habitats and ecosystems, besides that the purpose of conservation tourism on the Kili – Kili coast is as one of the limited uses of natural resources and natural resources owned without having to exploit turtles. Conservation tourism is carried out in accordance with the provisions in the management of conservation areas and KEE, while still paying attention to the socio-cultural environment of the surrounding community so that the purpose of the use of the turtle KEE function can also be felt by the surrounding community, without causing conflicts over natural resources. The effectiveness of the use of KEE at Taman Kili – Kili Beach is proven to be able to reduce the level of exploitation of turtles and hunting for turtle eggs, hopes for the sustainability of conservation tourism and implications for the welfare of local communities to be one of the main functions of the existence of conservation tourism at Taman Kili – Kili Beach.

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REFERENCES

Apriandini, N. (2017). Analisis Siklus Reproduksi Penyu Hijau (Chelonia mydas) di Pantai Sidangkerta Kecamatan Sindangkerta Kabupaten Tasikmalaya. Journal Unpas.

Ardian dan Eko Haryono. (2018). Karakteristik Struktur Ekologi Bentanglahan untuk Kesesuaian Habitat Kukang Jawa (Nycticebus javanicus) di Kabupaten Temanggung. Yogyakarta: Universitas Gadjah Mada S1 Geografi dan Ilmu Lingkungan.

Austin and C.R. Margules. (1984). The Concept Of Representativeness In Conservation Evaluation With Particular Relevance To Australia. Canberra: CSIRO Institute Of Biological Resources, Division Of Water And Land Resources.
Bouchard, S.S. & Bjorndal, K.A. (2000). Sea Turtles as Biological Transporters Of Nutrients And Energy From Marine To Terrestrial Ecosystems. Ecology. 81(8), 2305–2313.

Buckley, Ralf. (2010). Conservation Tourism. London: CAB International.

Herman. (2021). Kawasan Ekosistem Esensial (Kee) Sebagai Benteng Mewujudkan Suistainable Tourism Development Berbasis Pesisir Pulau-Pulau Kecil Di Kabupaten Bangka Selatan. Bangka Selatan: Badan Perencanaan Pembangunan, Penelitian dan Pengembangan Daerah.

Hidayati, Khairul & Audrey Tangkudung. (2021). Harmonisasi Pariwisata Dengan Konservasi: Suatu Upaya Membangun Pariwisata Yang Berkelanjutan Di Kabupaten Kayong Utara. Jurnal Syntax Transformation Vol. 2 No. 1.

Hilyana, Sitti. Andre Rachmat Scabra & Rini Saptaningtyas. (2021). Desain Sea Scape Kawasan Wisata “Green Turtle” Pantai Sedayu Kabupaten Lombok Utara. Jurnal Abdi Insani LPPM Unram Volume 6, Nomor 2.

Miller, J. D., (1997). Reproduction in Sea Turtle. In: Lutz, P.L and Musick, J.A. (Eds). The Biology of Sea Turtles. Boca Raton. FL: CRC Press. Pp. 51- 81.

Narce, M., Meloni, R., Beroud, T., Pléney, A., & Ricci, J. C. (2012). Landscape ecology and wild rabbit (Oryctolagus cuniculus) habitat modeling in the Mediterranean region. Animal Biodiversity and Conservation, 2, 277–284.

Nurhayati, Atikah. (2020). Responsibility of a West Java South Coast Local Community in Turtles Conservation. Jurnal Perikanan Universitas Gadjah Mada. Vol. 22 (2), 77-84.

Panjaitan, R. A., Iskandar, S. & Alisyahbana H. (2012). Hubungan perubahan garis pantai terhadap habitat bertelur penyu hijau (Chelonia mydas) di pantai pangumbahan ujung genteng, kabupaten sukabumi. Jurnal Perikanan dan Kelautan.3 (3),311-320.

Pemerintah Indonesia. UU Nomor 5 Tahun 1990 Tentang Konservasi Sumber Daya Alam Hayati dan Ekosistem.

Pemerintah Indonesia. UU Nomor 10 Tahun 2009 Tentang Kepariwisataan.

Pemerintah Indonesia. Peraturan Menteri Kelautan Dan Perikanan Republik Indonesia Nomor 31/Permen-Kp/2020 Tentang Pengelolaan Kawasan Konservasi.

Pemerintah Indonesia. Peraturan Menteri Lingkungan Hidup Nomor 29 Tahun 2009 Tentang Pedoman Konservasi Keanekaragaman Hayati di Daerah.

Pemerintah Indonesia. Peraturan Menteri Lingkungan Hidup Nomor 03 Tahun 2012 Tentang Taman Keanekaragaman Hayati.

Pemerintah Indonesia. Peraturan Direktur Jenderal Konservasi Sumber Daya Alam Dan Ekosistem Nomor: P.1/Ksdae/Bpe2/Ksa.4/2/2021 Tentang Petunjuk Teknis Penilaian Efektivitas Pengelolaan Kawasan Ekosistem Esensial.

Pemerintah Indonesia. Keputusan Gubernur Jawa Timur Nomor 188/121/Kpts/013/2021 Tentang Pengelola Kawasan Ekosistem Esensial Pantai Taman Kili Kili Kabupaten Trenggalek Provinsi Jawa Timur.

Pemerintah Indonesia. Peraturan Daerah Kabupaten Trenggalek No. 26 Tahun 2016 tentang Rencana Induk Pembangunan Kepariwisataan Daerah Tahun 2017-2031.
Pemerintah Indonesia. Peraturan Desa Wonocoyo Nomor 3 Tahun 2014 Tentang Kawasan Konservasi Penyu.

Purwanto E., Widayati A., Wijaya K. dan Zagt R., (2018). Identifikasi Areal Bernilai Konservasi Tinggi Tingkat Lanskap/ Wilayah Administrasi. Makalah Kebijakan No. 2/2018. Bogor: Tropenbos Indonesia.

Pusat Pemetaan Tata Ruang dan Atlas. (2020). Atlas Geospasial Indonesia Fisik dan Lingkungan Alam. Bogor: Badan Informasi Geospasial.

Rosalina, Dwi & Muji Prihajatno. (2022). Turtle Conservation Effort In Cemara Beach Mangrove And Conservation Area, Banyuwangi, East Java. Jurnal kebijakan perikanan Indonesia Volume 14 Nomor 1, 1-10.

Seminoff, J.A. (2002). Marine Turtle Specialist Global Green Turtle (Chelonia mydas) assessment for the IUCN Red List Programme. Report for the Species Survival Commission, Gland, Switzerland.

Setiawan, Eka Budi. Paulus Boli & Ricardo F. Tapilatu. (2021). Study on Turtle Potential and Community Perception in Ecotourism Development Efforts. Musamus Fisheries and Marine Journal Vol.4 (No.1): hal 15-25.

Suksmawati, Herlina et al. (2021). Recreation Opportunity Spectrum Analysis of Strategic Area Tourism Destination Pelang Region. E-Journal of Tourism, Vol.8. No.2: 172-183.

Turner, M. G. (2005). What Is the State of the Science? Annual Review of Ecology, Evolution, and Systematics. 36, 319–344.

UNWTO. (2021). World Tourism Barometer.

Weaver, D.B. and Lawton, L.J. (2007) Twenty years on: the state of contemporary ecotourism research. Tourism Management. Volume 28, Issue 5, Pages 1168-1179.

Widayati A, Purwanto E, Kasumawijaya, Zagt R. (2018). Nilai Konservasi Tinggi (NKT) Tingkat Lanskap dan Wilayah Administrasi. Policy Brief 01/2018. Bogor: Tropenbos Indonesia.

Wiyono, J., & Sunarto. (2016). Regional Resource Management Based on Landscape Ecology in Northern Muria Peninsula, Central Java. Indonesian Journal of Geography, 48(1), 54–61.

Wu, K. L., Zhang, D. Y., Zou, Z. C., & Shan, L. (2015). Employing RS and Landscape Ecology Indicators in Measuring the Changes of Landscape Patterns in Low Carbon Eco-City Planning. Advanced Materials Research. 1092–1093, 1640–1644.

Yoeti, Oka A. 1996. Pengantar Ilmu Pariwisata. PT. Ikasa Bandung.