



Integration Policy and Community Involvement in Developing Educational Tourism in Marine Conservation Areas of Pulau Kelapa Village, Kepulauan Seribu

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Abstract. This study aimed to analyze policies and joint management of marine conservation areas in developing conservation education tourism in Pulau Kelapa Village, Kepulauan Seribu. In addition, it is to identify community participation in educational tourism activities in marine conservation zones. The research method uses a qualitative approach by conducting observations and interviews with agencies interested in marine conservation areas and the community. The analysis comprises three variables: the governance of relevant government agencies, the role of community organizations and tourism business actors in conservation activities in packages offered to tourists, and the physical potential of marine areas in conservation zoning. This study's findings reveal that using all zones in the conservation area to become a conservation education tourism area needs to undergo a process of mutual agreement from several agencies, both government agencies and community institutions, in utilizing all these areas, with clear and directed regulations in preserving nature and marine life in conservation areas. This research contributes to developing educational tourism in a marine conservation area, Pulau Kelapa urban village, Kepulauan Seribu, in the form of marine zoning area management, types of tour packages based on marine conservation area maintenance (KKL), resources, and improving the quality of tourism business bureaus in Pulau Kelapa with non-formal education supporting conservation activities in the packages offered. The originality of this research is that it attempts to unite several policies from each agency into one common provision and program in educational tour packages in conservation areas that community tourism business groups can manage.

Keywords: Marine Protected Areas · Educational Tourism · Preservation · Community Involvement

1 Introduction

One of the tourism trends in this era is tourists exploring new areas. They compete to be the first to visit a new location with attractive natural or cultural potential that not many had seen, and then it went viral on social media, making other people want to learn about

the place. Generally, conservation areas are targeted because tourists rarely visit them due to strict conservation area policies, especially for the core zone, even though these areas have natural potential as they are well preserved. This situation makes tourists want to visit conservation areas as tourist destinations. This trend prompts the need for more organized visitor management, reviewing existing policies for tourism development in Conservation areas, and identifying community involvement. Marine Conservation Areas are highly in demand, offering several alternative attractions for tourists. Based on the Decree of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia (Permen KP) No. 31 of 2020, Conservation areas comprise parks, wildlife sanctuaries, and Marine Conservation Areas.

1.1 Marine Conservation Area

The directorate general of marine spatial planning public relations stated that in 2022, The Ministry of Marine Affairs and Fisheries targets 2 million hectares of conservation area with a total determination of 15.8 million hectares; 13.8 million hectares are targeted for effective management. National Parks are management units for conserving natural resources and their ecosystems, controlled by the Director-General of Natural Resources and Ecosystem Conservation. Seven Marine National Parks are present in Indonesia; Pulau Seribu, Karimun Jawa, Bunaken, Togean Islands, Taka Bonerate, Wakatobi, and Cenderawasih Bay.

Taman Nasional Kepulauan Seribu (TNKpS) or “Kepulauan Seribu National Park” is the only National Park in the nation’s capital, Jakarta. In 2017, the Kepulauan Seribu National Park was awarded the 29th ASEAN Heritage Park (AHP) in Southeast Asia. TNKpS zone division comprises four zones: Core Zone, Protection Zone, Tourism Utilization Zone, and Settlement Zone. Research on using marine zones is still limited.

The utilization of this marine conservation area has become a topic of discussion for three institutions interested in the Kepulauan Seribu area. They are Kepulauan Seribu Marine National Park *Balai Taman Nasional (BTNKpS)*, Marine and Fisheries Food Security Sub- department (*Sudin Ketahanan Pangan Kelautan dan Perikanan/KPKP*), and Kepulauan Seribu Tourism Sub-department (*Suku Dinas Pariwisata kepulauan Seribu /SudinPar*). When these three institutions implement the functions and targets of the local government institutions interested in Kepulauan Seribu, a different interest exists to utilize the marine zone function, and the solution has not been resolved, especially in the core zone. Based on the regulation on the Implementation of the Marine and Fisheries Sector, Government regulations/PP 2021 poses that the Core Zone is part of the conservation area, protected coastal areas, and small islands for protecting habitats and populations of coastal resources on small islands. The issue is how to take advantage of the core zone area as a source of tourist education about conservation.

1.2 Marine Conservation Tourism

Marine conservation tourism is a developing ecotourism sub-sector in Indonesia. Moreover, it offers vast opportunities for private investment to the need to offer marine tourism experience and open conservation areas as tourist destinations. For this reason, we need

to analyze cross-cutting marine tourism management policies based on conservation education owned by each stakeholder and review procedures in making Kepulauan Seribu's marine area a conservation tourism destination, especially Pulau Kelapa urban village, selected as the case study in this research.

2 Objectives

Conservation areas in the waters were born from two nomenclatures; that is, Law 45/2009 in conjunction with Law 31/2004 and PP 602,007 under the name of Marine Conservation Areas (KKP), and the nomenclature of Law 1/2014 in conjunction with Law 27/2007 with the school of Marine, Coastal and Small Island Conservation Areas (KKP3K), creating several categories of conservation areas. The Minister's Decree or Permen KP 23/2016, Permen KP 17/2008, and Permen KP30/2010 describe each category. Marine Protected Areas (MPAs) Category has several zones: the core zone, the marine nature reserve zone, sustainable fisheries, utilization zone, and other zones.

Tourism activities of marine ecotourism are generally located in marine tourism park areas and utilization zones. However, no permit exists to visit the core zone yet, even though tourists want to conduct conservation education. Tourists intending to study conservation education should enter all zones according to the interests of visitors. The core zone, in this case, is not used as a tourist zone and is utilized only for research purposes. Therefore, the question is, "who is a researcher?" Logically, everyone can become a researcher entering the core zone area as long as they provide proof of entry permit for research purposes, including students.

UU no 5 in 2002, the Kepulauan Seribu National Park was later established with the Decree of the Minister of Forestry Number: SK. 6310/Kpts-II/2002 mandating to designate the Kepulauan Seribu as a National Park. It is to protect 4 (four) essential values: coral reefs, mangroves, Hawksbill turtles (*Eretmochelys imbricata*) and Kima, giant clams (*Tridacna gigas*), and other marine biota used for research, scientific, and educational purposes. Other policies, namely Law Number 1 of 2014 concerning amendments to Law Number 27 of 2007, focus on the Management of Coastal and Small Islands, encouraging the economical use of conservation areas in coastal and small islands. PP No. 108 of 2015 states that National Parks can be used for activities, one of which is research and development of science and the level of conservation awareness and traditional use by local communities. It is to realize that the ideal conservation area managed effectively is a crucial asset in promoting the community's economic stability.

This study aims to analyze existing policies in using marine conservation zones and how to jointly manage marine conservation areas in developing conservation education tourism areas in Pulau Kelapa village and Kepulauan Seribu. In addition, it intends to identify community participation in creating conservation-based tourism activities. The originality of this research lies in the fact that it tries to unite several policies from each agency into one standard provision and program to allow using all the zones, especially the core zone for conservation education tourism packages manageable by community tourism business groups.

3 Theoretical Review

3.1 Tourism Policy

Tourism policy includes regulations, rules, guidelines, directions, and development and strategies providing a framework for individual and collective decision-making directly affecting the outcome of tourism in the long term and, at the same time, daily activities occurring in a destination [1]. Biederman [2] added an essential point in defining tourism policy by suggesting that the principle of tourism policy ensures that countries and regions receive the most significant benefit from tourism's social and economic contributions. Biederman also highlighted the existence of tourism policies in an area to increase the site's progress. Indonesia is an archipelagic country where every region must have a tourism policy. Research conducted by Naomi [3] depicts that the procedures in Harapan Island Kepulauan Seribu have effective program elements so that the program can minimize obstacles making the influence of the community sector reach the program. Thus, this destination can increase the marine tourism development on that island.

Tourism policy cannot be implemented without considering other supporting policies from other institutions with interests in the same area and whether these policies align with the same or contradictory goals. In a conservation area, evidently, the main goal is preserving and protecting nature.

3.2 Preservation

Preservation is an activity conducted continuously and purposefully and integrated to realize a specific goal reflecting the existence of something fixed and lasting, dynamic, flexible, and selective [4]. In executing preservation in the tourism sector, it is necessary to know what must be done first to preserve the surrounding environment. Of course, preserving the tourism industry is done through preserving nature, culture, and history.

The development of conservation tourism areas needs to involve the community because the community's contribution to preserving areas can also increase the surrounding community's local economy [5]. Education on the village's conservation resources and the coastal environment should be conducted through counseling, discussion, monitoring, and evaluation. Based on previous research, one can see that the importance of implementing sustainability in a destination is realizing an achievement desired by the local community to maintain survival. Because the process of preserving will lead to cultural behavior if done continuously and within a particular time.

3.3 Marine Tourism

Marine tourism is a form of tourism using the potential of the coastal and marine environment as the main attraction. The concept of marine tourism is seen from nature's uniqueness, characteristics, ecosystem, peculiarities of art and culture, and societal characteristics, all of which are its fundamental strengths [6]. Marine tourism (including beach tourism) is a tourist activity, including swimming, fishing, diving, snorkeling, sailing, surfing, skiing, beach recreation, canoeing, and many more. Activities exist to enjoy the

beauty and biodiversity of the sea potential in two ways: (1) activity in shallow waters by using a boat with a translucent floor or the bottom wall of the boat made of glass; and (2) activity by utilizing diving equipment, especially for deep water making it impossible to see with a translucent glass boat [7]. The arrangement of marine tourism areas heeding conservation principles aims to maintain the balance of nature. Moreover, the zoning system targets protecting natural resources and facilitating management implementation.

3.4 Marine Conservation Area and Tourism

A marine conservation area is a marine area or sub-tidal exposure, including the waters covering it, flora, fauna, and historical and cultural sides related to it and have been protected by other laws and regulations to safeguard part of or all environment [8]. One of the efforts to protect coastal and marine ecosystems is to designate an area on the coast and sea as a conservation area which, among others, aims to protect critical habitats, biodiversity, and ecological processes to maintain and improve the quality of resources [9]. Marine Conservation Area is tidal water, including coastal areas and small islands, comprising plants and animals. It includes evidence of historical and socio-cultural relics protected by law or other effective means, either by preserving the whole or part of the area. According to Bengen [9], a conservation area site planning yields a site management plan in the conservation area. In the initial site planning stages, a preliminary schedule of location selection must contain the policies needed to implement, program objectives, and a basic strategy framework to achieve the main goals.

The primary goal of establishing conservation areas in the coastal and marine areas involves conserving ecosystems and natural resources so that ecological processes in an ecosystem can continue and maintain the production of foodstuff and environmental services to benefit humans sustainably [9]. The determination of conservation areas on the coast and sea must be aimed to achieve this and comprises the following issues:

1. Protect critical habitats and maintain biodiversity,
2. Protect the coastline and locations with historical and cultural value
3. Provide recreational locations and natural tourism
4. Promote sustainable marine development.

Tourism generally does not conflict with conservation except in the most sensitive and valuable areas. Thus, zoning to accommodate tourism can contribute to conservation by enabling control of destructive fisheries (using explosives), fishing, and breaking coral to collect pearls and other shells and others. [10]

3.5 Community Involvement

Conservation management is considered successful ecologically but often encounters failure in the social part. One impact was the problem of local people's livelihoods. [11] The issue emerged mainly from implementing conservation areas and their zoning systems or the existence of a no-take-zone that impacts restrictions on using resources for the community. [12]

4 Methods

This study used a qualitative method, with primary data collected by interviewing several informants from various agencies involved in conservation and tourism areas. We collected secondary data by reviewing several sources of policies and programs from the three related institutions. The analysis comprises three variables: the governance of relevant government agencies, the role of community organizations and tourism business actors in conservation activities in packages offered to tourists, and the physical potential of marine areas in conservation zoning. This research can contribute to developing conservation-based educational tourism in Kepulauan Seribu, especially Pulau Kelapa urban village, Kepulauan Seribu, as a prospective site for developing conservation areas of edu-tourism destinations.

5 Findings and Discussion

5.1 Ocean Area Preservation Policy

The preservation policy analysis in the research focuses on the governance of marine areas, aligning with the Ministry of Marine Affairs and Fisheries (KKP) program on implementing marine spatial governance in 2022. Policy-making or decision-making needs to be reviewed because planning and decision-making should not conflict with the interests of local communities. This research will also analyze using seawater for marine tourism, tourism business conservation areas, and valuables from sinking ship cargo (BMKT) concerning community management and local government agencies in preparing new policies. The DKI Jakarta Government has determined that sea zoning has 3 (three) categories, namely (1) Core Zone, (2) Utilization zone, and (3) Buffer Zone. The main conservation area of DKI Jakarta Province has three areas of the National Park Management Section (SPTN): SPTN Region I Island on Kelapa Dua Island. A KPKP-assisted fishing group, namely a fishing group of fish cultivators (POKDAKAN), exists too. Government Regulation 27 of 2021 concerning implementing marine and fisheries fields explains the criteria and requirements for establishing, placing, or demolishing buildings at sea. For fisheries activities, floating buildings can use static fishing aids, such as a floating net, known as *Kerambah*, and artificial reefs for coral reef transplantation. Kepulauan Seribu has a marine land use program to increase food production for fish farming. The Grouper fish farming program is one of the priority activities in the Kepulauan Seribu. One species is the hybrid grouper (the result of crossing *cantang* and beautiful grouper) with a floating net cage farming system.

The type of fish seeds to be stocked must comply with the policy of the marine area: (a) the type of fish, (b) the type of fish is not native to Indonesia. Meanwhile, Cultivation-Based Fishing is based on (a) Cultivation-Based Fishing is conducted by considering the age of fish consumption, (b) method of capture, and local wisdom. Moreover, the method of fishing must meet the criteria of not damaging the environment, not causing pollution, and not breaking the fish reproduction cycle. People on the island usually spend the night catching fish called *Ngebabang*.

According to Mr. Jupli, a Pulau Kelapa fisherman, he said,

“Island people usually spend the night catching fish called Ngebabang, and it has become a tradition for generations. Fishermen use simple fishing nets, using coconut leaves, while some catch fish in shallow seas, namely on coral reefs where fish gather, using submerged nets, some cultivate fish with floating net cages in the middle of the sea.”

Mr. Isai Yusidarta, the chairman of SPTN Pulau Kelapa, Kepulauan Seribu Marine National Park (*Balai Taman Nasional Kepulauan Seribu*), expressed that the concern about catching fish from fishermen in the conservation area is still under control. What is feared is the type of fish caught, as some people still catch fish species inhabiting shallow tropical waters on coral reefs and coral beaches,

“For example, this type of Ikan Kakak tua feeds on algae attached to coral reefs. Every day they use 90% of their time to chew/eat gulma. Ikan Kakaktua will excrete dirt in the form of a lot of fine white sand.”

The species of *Ikan kakak tua* (parrotfish), whose population is getting smaller, is a type of fish preserving marine ecosystems, especially coral reefs. Mr. Wira Saut Simanjuntak, an extension worker of SPTN, also stated that the coral reef ecosystem is threatened because of the island’s land reclamation. Local people intentionally or unintentionally hoard coral reefs to build living land. It is due to their married children needing to build a new home. Furthermore, Mr. Wira Saut has concerns about fish seedlings in conservation areas; he said,

“Another problem that needs to be considered is that the use of fish seedlings in marine conservation areas must come from native species of the area because if they come from other regional sources, it is feared that there will be mixing and development of non-native populations.”

Protection and security of the area and control of the damage’s impact on biological natural resources are part of the technical implementation functions of the National Park as stated in the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number p.7/menlhk/setjen/ otl.0/1/2016. In this case, the institute prioritizes sustainability over the community’s needs. Aside from that, another task of TNKpS is empowering the community in and around the area. The empowerment focuses on nature conservation, meeting the community’s interests in the long term.

Meanwhile, the task of the sub-department of Food Security and Maritime Affairs (/KPKP), namely the Units and Work Units in the DKI Jakarta Provincial Government, is as an agency handling marine affairs, agriculture, fisheries, animal husbandry and animal health, forestry, and food security. This institution views the ideal conservation area, effectively managed, as an essential asset in realizing sustainable fisheries to foster the community’s economic stability. It also aligns with the mandate of Law No. 1 of 2014 concerning Amendments to Law No. 27 of 2007 concerning the Management of Coastal and Small Islands, encouraging the economical use of conservation areas in coastal and small islands. The Head of KPKP Kepulauan Seribu, Devi Lidya, said that marine fish cultivation is part of the concern for marine conservation. For example, one activity is conducted through the Marine Cultivation and Conservation Center at the DKI

Jakarta Province. Recently, the KPKP service released 4,000 fish seeds in the waters of the Kepulauan Seribu from January to May 2022 in marine conservation. Mrs. Devi said,

“This is an effort to maintain the preservation and balance of the existing nature by helping provide fish for fishermen in the waters of Kepulauan Seribu with local native seeds and to maintain its availability in the future,”

This program can help provide fish seeds for fishermen in the waters of the Kepulauan Seribu. People needing seeds can apply for captive fish seeds monitored and maintained by PBKL managers so that community marine fish farming does not cause unexpected conservation problems. Pramuka Island was chosen as the location for the release of seedlings. The authenticity of fish seeds sourced from PBKL is guaranteed from conservation areas. However, it is still challenging to have more local seeds. In addition, no policy exists for the community to buy or take seeds from PBKL because the amount does not meet. The cultivation of marine fish by the community, not necessarily local seeds, is a concern for the National Park Authority in maintaining the authenticity of biota in conservation areas.

One can conclude that the policies and objectives of these two institutions have gone in the same direction. However, disseminating this knowledge was not optimal for the community, particularly regarding the importance of maintaining the authenticity and preservation of marine biota conservation. Although some information has been conducted, the community does not understand the applicability of conservation rules for sustaining marine life as their source of income, both as fishermen and in tourism services. The natural beauty of conservation areas also becomes a potential tourist attraction. It needs to be socialized concerning deeper preservation knowledge.

5.2 Preservation

In preserving the tourism sector, what must be done first is to preserve the surrounding environment [13]. Environmental preservation is all human efforts to positively control the natural environment's carrying capacity to provide its residents with a safe and prosperous life and preserve nature, culture, and history. The Community of Tourism and Culture justifies it, and Elevation Activists in Pulau Kelapa named *Komparasi* suggest that:

“The people of Pulau Kelapa need to increase the capacity of the community to gain understanding related to the preservation of marine tourism on Pulau Kelapa. So that the people of Pulau Kelapa can become local tour guides, the goal is to provide education to tourists. In preservation, there are 3 (three) important aspects, namely: protection, development, and utilization in this case of marine tourism products such as hawksbill turtle breeding tour packages and mangrove forests that will be managed by important communities' elements of preservation. (interview on December 20, 2021).”

Based on the interview results above, one can conclude that the efficient use of natural resources can keep tourist destinations always natural, eventually impacting tourist activities. The marine tourism preservation resources in Pulau Kelapa include

Table 1. Marine tourism preservation resources in Pulau Kelapa

Coast	Sea Level	Bottom
1. The cultural life of coastal communities, such as art studio coastal communities, among others, marawis, hadroh, and pencak silat 2. Traditional cuisines 3. Hawksbill turtle breeding 4. Mangrove forest	1. Snorkeling 2. Island hopping or around the island by driving a traditional boat owned by locals 3. Catching Fish using coconut leaves or called Janur	1. Diving 2. Coral reef transplant 3. Pre-Identification of DNA environment for marine life

Source: Data processed by researchers, 2022

1) Potential attractions and conservation activities and 2) Marine tourism preservation activities, with details as expressed in the Table 1.

5.3 Educational Tourism in Marine Conservation Area

One of the essential principles in marine tourism is the importance of providing education to visitors/tourists and local communities (host population) about the prominence of nature conservation, particularly on how humans or visitors should act to have positive impacts on the sustainability of natural life and living things in nature [14]. Preservation is a dynamic element, where each element plays a role in providing a function to other elements and is defined as a unified system that cannot be separated from the relationship between elements of protection, development, and utilization of tourism destinations. In the Decree of the Minister of Tourism and Creative Economy/Head of Tourism and Creative Economy Agency Republic of Indonesia number 9 of 2021, concerning social and economic sustainability, it is stated that local communities can still access natural, cultural, historical, archaeological, religious, and spiritual sites in tourism destinations. It is where possible sites, facilities, and services, including those of natural and cultural importance, are open to all. The guidelines for sustainable tourism destinations explaining the criteria for sustainable tourism destinations, on a small scale, can be applied to destinations in national parks, groups, tourism villages, and local communities. Types of conservation programs or activities integrated into packages or tourist attractions are coral reef transplant, planting sea pine and mangroves, and releasing hatchlings.

However, in conservation marine zones, it is necessary to prepare biodiversity and natural heritage conservation program according to the scale and capacity of the destination. It was discovered by the manager and tourists of *Komparasi* suggesting that:

“We must inform every travel activity related to preservation education such as maintaining marine and land ecosystems such as kicking corals, holding corals/another biota, stepping on corals, taking corals/biota, etc. We will act decisively if there are tourists who do not comply with the rules when traveling.”

Table 2. Marine Tourism Activity Program Based on Preservation Education

Issues	Purpose	Activity
Preservation	Education, recreation, and invite people to love the environment	<ol style="list-style-type: none"> 1. Seeing the collection of marine biotas 2. Touching marine biota: <i>kima</i>, sea cucumber, etc 3. Watching Hawksbill turtle breeding 4. Tracing mangrove forest areas 5. Doing divestment/ release into the sea
Food Security	Sustainable Development (Sustainability)	<ol style="list-style-type: none"> 1. Learn about the process of grouper fish farming 2. See the process of hatchery of grouper fish and participate in feeding 3. See directly adult grouper fish off the coast 4. Look at the process of making special cages for grouper

Source: Data processed by researchers, 2022

Based on the above answer, preserving and sustaining marine resources is essential. Thus, supporting nature conservation efforts as a step to protect marine ecosystems from damage and extinction is critical. The researchers compile the following programs based on interviews and field findings for preservation activities in tourism through tour packages as follows (Table 2).

Referring to the rules in Law No. 11 of 2010, the direction of BMKT management is for the benefit of conservation, considering that BMKT has a high historical and scientific value. However, unfortunately, it is not strengthened by Law No. 32 of 2014 on Marine Affairs regulating that the BMKT appointment activity is the utilization of marine resources that will be developed as one form of maritime service industry type. According to informants, the activity of searching for goods on the shipwreck occurred around the 1990s. From shipwrecks exploration from 1998 to 2003, it was stated that the information was found alone when seeking help, then accidentally found the VOC shipwreck, then the search for other shipwrecks began conducted by a group of six crew members.

“The point of finding shipwrecks first in Karang Batang Kecil, Satu Island, there are also those that did not work out because there were no adequate tools, some of the findings were bowls, urns. Once, in July 1989, white gold could be found on a small coral reef.”

In conclusion, public knowledge about shipwrecks has not been understood. In addition to that, no socialization has been done, and the dives conducted by tourists still need to be considered for safety issues unless the tourists already have a special license for divers.

5.4 Community Involvement

Most people of Pulau Kelapa Tourism Village are hereditary traditional fishermen, depending their lives on sea catches but aligning with the growing ecotourism, especially in marine conservation tourism, as people are now turning to the marine conservation sector. The participation of the Pulau Kelapa's village people and the development of ecotourism cannot be separated from the intervention of various stakeholders from government and private elements, such as Kepulauan Seribu Marine National Park (*Balai Taman Nasional*), KPKP, and Sub-department of Tourism (*Suku Dinas Pariwisata*) Kepulauan Seribu.

Based on the results of interviews that researchers conducted with Mr. Safaat, The Head of Pokdarwis, who said that:

“Tourism activities that involve tourists to participate in conservation are being carried out on Pulau Kelapa, in the form of planting mangrove shoots, transplanting coral reefs, cleaning garbage on the beach.” (interview on December 20, 2021)”

Moreover, the people of Pulau Kelapa Tourism Village manage homestays, meaning that this village's people participate in intangible businesses. As for the activities conducted on the tour package, it is done as a visit to the museum to picture the sea in the form of temperature, depth, and information on marine life, after tourists are invited to dive to see marine life (Table 3).

In connection with that, it is necessary to strengthen the pattern of a partnership between the local community and the manager of the diving tourism business and its cargo, starting from attractions to the facilities provided conclusion.

Table 3. Tourism Package in Pulau Kelapa, Kepulauan Seribu

Material	Component
Attractions	<ul style="list-style-type: none"> a. Relics of marine life and sunken ships as a collection from the museum b. Interpretation of the value of marine life c. Conservation program of surrounding flora and fauna
Activity	<ul style="list-style-type: none"> a. Visiting flora and fauna conservation museum b. Diving in the waters of coconut island and its surroundings c. Snorkeling
Facilities	<ul style="list-style-type: none"> a. Souvenir replicas of marine life and sunken ships b. Maritime museums exhibiting replicas of art objects, as well as history related to marine life c. Traditional transportation facilities used as diving transportation in the marine biota site area on Pulau Kelapa and surrounding areas d. Traditional or modern means of transportation providing sub-glass bottom facilities e. Dive center providing diving instructors, equipment to coaching programs/diving clinics at marine biota sites in Pulau Kelapa and surrounding areas

Source: Data processed by researchers, 2022

This study's results indicate that the development of educational tourism in conservation areas requires a model connecting relevant agencies and the role of the community by involving appropriate technology to utilize the marine zone, especially the core zone, by increasing the community's knowledge of marine conservation-based tourism activities. In general, the community has recognized and implemented conservation activities outside their routine fishing activities, especially the tourism-driving community offering tour packages in marine conservation areas. This awareness is appropriate in maintaining environmental conditions for tourist activities and reminding each other, their families, and government officials to protect the marine environment. However, their conservation knowledge is minimal, so they still need knowledge and guidance from the government and university researchers.

6 Competing Interest Statement

This research has not been completed yet. It requires more data from the relevant government institutions. Still, the problem lies in obtaining the data needed, making it challenging. Thus, a focus group discussion is necessary to invite all relevant institutions to reach a common perception. In particular, all stakeholders must agree upon the discussion on permits to enter the core zone of marine conservation for educational tourism activity.

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Authors' Contributions. In our team, we divide the tasks according to the competence of each member. For example, Sarojini Imran explores and analyzes marine conservation zones, conservation tourism and policy issues. Fetty Nurmala collects theoretical data related to discussions and studies on conservation issues. On the other hand, Yosi Erlinda is in charge of developing research methods and compiling the results of interviews with resource persons.

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