

Case study

Strengthening Marine Ecotourism Management's Institutional Performance in Raja Ampat, Indonesia

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ABSTRACT

Institutional performance is a critical element that stakeholders must collectively strengthen to better respond to marine tourism development challenges. The institutional strength of a community has the power to influence the behaviour of local people, which drives them to conduct activities effectively and create a foundation for management. This paper uses qualitative approaches specifically through the case study method. The results of this paper show that: (1) beyond the potential of marine ecotourism development, there are several unsolved problems specifically within the ecological, social and economic areas; (2) ten indicators strengthen the institutional performance in developing Raja Ampat Tourism Villages. These indicators consist of: (1) community cooperation with outside institutions; (2) clarity of management area borderlines; (3) correspondence of regulations towards the local conditions; (4) active engagement of the community in the development and management of regulations; (5) the presence of local institutions; (6) effectiveness of supervision; (7) the imposition of sanctions; (8) conflict resolution mechanisms; (9) governmental recognition through the establishment of regulations; (10) equal access for resource users.

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INTRODUCTION

Raja Ampat, located in the Coral Triangle, provides an advantage in tropical marine biodiversity (Raja Ampat Regency

Government, 2018). According to the Rapid Assessment Program, Raja Ampat has high biodiversity, including 699 mollusc species, 1,320 fish species belonging to 91 families and 553 coral species out of 800 global coral species (McKenna et al., 2002; Raja Ampat Regency Government, 2018). The rich biodiversity contributes to the popularity of Raja Ampat as a tourist destination, especially for those who seek marine tourism.

In ecotourism, visitors travel to natural destinations while maintaining the responsibility to preserve the environment and improve the local people's welfare (The International Ecotourism Society, 2015). Through careful planning and management, ecotourism can protect the environment, improve the local population's living standards, and promote local economic development (D. Hall, 2004; Su et al., 2014). Marine ecotourism is a type of ecotourism activity that is related to enjoying the view of coral reefs, seagrass, various fish species, or other species in the sea, which is carried out either by swimming, diving, or snorkelling (Ahmed et al., 2007; Garrod & Wilson, 2004).

Marine ecotourism activities in Raja Ampat began to develop due to conservation initiatives in maintaining biodiversity (Atmodjo et al., 2020; Mangubhai et al., 2012; McKenna et al., 2002). Since 2006 the Ministry of Marine Affairs and Fisheries has initiated a conservation program, namely the Coral Reef Rehabilitation and Management Program (Coremap) in Raja Ampat. After the Coremap initiation, the

community formed a community-based marine protected area. The integration of local community knowledge and practices in maintaining the sustainability of resources supports the sustainable development of marine ecotourism (Hanafiah et al., 2021; Prasetyo et al., 2020).

Tourism development is seen as a source of new job opportunities for people who can contribute to economic growth (Cobbinah et al., 2013; Hendijani & Yuliana 2016; Joshi et al. 2017; Rout et al., 2016). Raja Ampat Regency's regional income from environmental maintenance service fees charged to each tourist has increased every year, from total revenue of around 1.5 billion in 2007 to 14.4 billion in 2016 (Raja Ampat Culture and Tourism Office, 2017). However, based on the Presidential Regulation of the Republic of Indonesia Number 131 of 2015, Raja Ampat is still one of the underdeveloped areas in Indonesia. Therefore, it is considered that the benefits of developing marine ecotourism in Raja are not optimal.

Institutional holds an essential role in the sustainable management of ecological, social and economic aspects. The institutional has the power to influence local people's behaviours, which can drive them to conduct activities effectively and become a foundation for management. Institutional is defined as regulations, norms and strategies to direct collective actions used to decide who qualifies in decision-making in specific fields and to decide which actions are allowed and which should be limited (Fidelman et al., 2012; Ostrom, 1990; Satria, 2009).

In facing development challenges, an institutional strategy is needed that is designed in a participatory manner with the community and adapted to local conditions to achieve proper management (Barriga, 2014; Hanafiah et al., 2021). Planning a marine ecotourism development strategy begins with identifying potential and problems as a first step to understanding local conditions. Each country has different challenges and impacts on tourism development (Hanafiah et al., 2021). This paper aims to analyse the potential and problems in Raja Ampat Tourism Village and analyse strengthening institutional performance to develop marine ecotourism in Raja Ampat Tourism Village. As a result, this paper contributes to the institutional aspect study as an essential foundation that should be collectively strengthened to develop marine ecotourism.

METHODS

Location and Time

Through the Regent's Decree No 104, 2008, Raja Ampat Regency Government designated seven of 24 villages in Raja Ampat as tourism villages. The tourism villages are Arborek, Sauwandarek, Yenwaupnor, Sawinggrai, Yenbuba, Friwen and Saporkren. As a result, three villages were chosen to be the locations of the study, namely Arborek, Yenbuba and Sawinggrai, located in the Dampier Strait, Meos Mansar District, Raja Ampat Regency, West Papua Province (Figure 1). The Arborek, Yenbuba and Sawinggrai villages are close and have the most tourism workers compared to the

other tourism villages. It is calculated from the number of homestays where they work. There are 12 homestay units in Arborek, 20 in Yenbuba (Kri Island) and 8 in Sawinggrai. The study was conducted in November 2018 and October 2019.

The Regional Development Planning Board of Raja Ampat (2010) stated that the Dampier Strait has rich coral potential that would continue to be developed as Raja Ampat marine ecotourism. According to the spatial planning direction, the Dampier Strait area has also been designated a semi-intensive zone designed to receive tourists on smaller scales with limited tourism activities.

Paradigm and Approaches

The authors use a constructivist paradigm, qualitative approach and case study method to answer the research objectives. This method includes assessing the potential and problems of developing marine ecotourism and strengthening institutional performance analysis to develop marine ecotourism in Raja Ampat Tourism Village. The case study is a research design used to develop an in-depth case analysis (Creswell, 2014). Through the paradigm above and approach, researchers can develop the subjective meanings of experiences by asking questions to pursue the complexity of views, rather than narrowing down the meanings into categories or ideas (Creswell, 2014; Merriam, 2009). In addition, Creswell (2014) explained that subjective meanings are often negotiated in social and historical contexts.



Figure 1. Locations of the study (Raja Ampat Regency Government, 2006; Google Earth)

Data Collection

The data collection was done in alignment with the code of research ethics, namely conducting research licensing, conducting interviews with informants free from coercion, protecting the confidentiality of research data and presenting research findings honestly. The data collected

consists of primary and secondary data. The primary data sources are informants who report about the situation and the environment of the sites. In this study, there were 53 informants, including the Cultural and Tourism Agency of Raja Ampat, the Regional Public Service Agency Technical Implementing Unit of West Papua Province (UPT BLUD), The Nature Conservancy

(TNC), Conservation International (CI) Indonesia, village chiefs, Raja Ampat Homestay Association committee, tourism workers, non-tourism workers and private parties. The informants were chosen using the snowballing technique to find a key informant who led other informants until the information and data were saturated (data or information are confirmed homogenous). Snowballing technique is a term of purposeful sampling. The researcher asks the participant to recommend other persons to be sampled. The snowballing technique identifies the case questions of that interested people and collects the precious information from the population sampling (Creswell, 2014).

Primary data were acquired from in-depth interviews, focus group discussions (FGD) and participative observation. The interviews and FGD included a summary of the management of marine ecotourism in tourism villages, identification of potential and problems in an attempt to develop marine ecotourism in tourism villages, and identification of institutional performance in managing marine ecotourism in tourism villages. The interview questions were issued in Indonesian and delivered using the question guide to simplify the information exchange between the researchers and informants. The interview was recorded and transcribed into daily reports in the form of detailed descriptions and direct quotations. Secondary data were acquired from various literature, such as scientific papers, books, Central Bureau of Statistics, regional regulations, tourism villages' profiles, reports from the Cultural and Tourism Agency of Raja Ampat, study

results from The Nature Conservancy (TNC) or Conservation International Indonesia and other supporting literature.

Data Analysis

Referring to Creswell (2014) and Marshall and Rossman (1989), the stages of analysis in this study are as follows:

1. Processing and preparing the data for analysis. This stage involves transcribing the interviews, scanning the materials, typing field data, selecting and compiling the data into categories according to the sources.
2. A data coding process to describe the setting, informants, categories and themes will be analysed. The description involves delivering detailed information regarding the people, location or phenomenon in specific settings. Coding the data begins with compiling a statement of the informant's answer. All the answers to the information are read, understood and analysed. Next, the researchers grouped them into the smallest parts until they reached a saturation point. After obtaining the saturation point, the researcher can create a category for a code.
3. Presenting the data by describing the acquired information and data with words that are easy to read in a report. The data are presented through narrations and tables.
4. Data interpretation. Interpretations explain the comparison between

the study results with information acquired from past literature or theories.

5. The reliability and validity test of the qualitative data is done through triangulation. Triangulation is qualitative cross-validation for assessing the sufficiency of the data according to the convergence of multiple data sources or multiple data collection procedures (Wiersma, 1986). In this study, triangulation was carried out by comparing the results of the observation with the interview results, comparing the results of interviews between informants and comparing them with reports and related literature. Then, further verification is carried out by discussing the results of the processed data with the informants.

RESULTS AND DISCUSSION

Potential of Tourism Villages in Developing Marine Ecotourism

Tourism destinations are developed according to the tourist attractions, which are developed synergistically with the tourism and general facilities, accessibility and social empowerment in a complete and sustainable system (The Ministry of Tourism of the Republic of Indonesia, 2016). Nikijuluw et al. (2017) stated that tourism development in Raja Ampat Regency is marked by the increasing number of sea resorts, homestays and liveaboard tourist boats. The Statistic of Raja Ampat Regency (2021) reported that the number of amenities in the Raja Ampat Regency tends to increase from 2016 to 2020. The number of amenities in Raja Ampat Regency is shown in Figure 2.

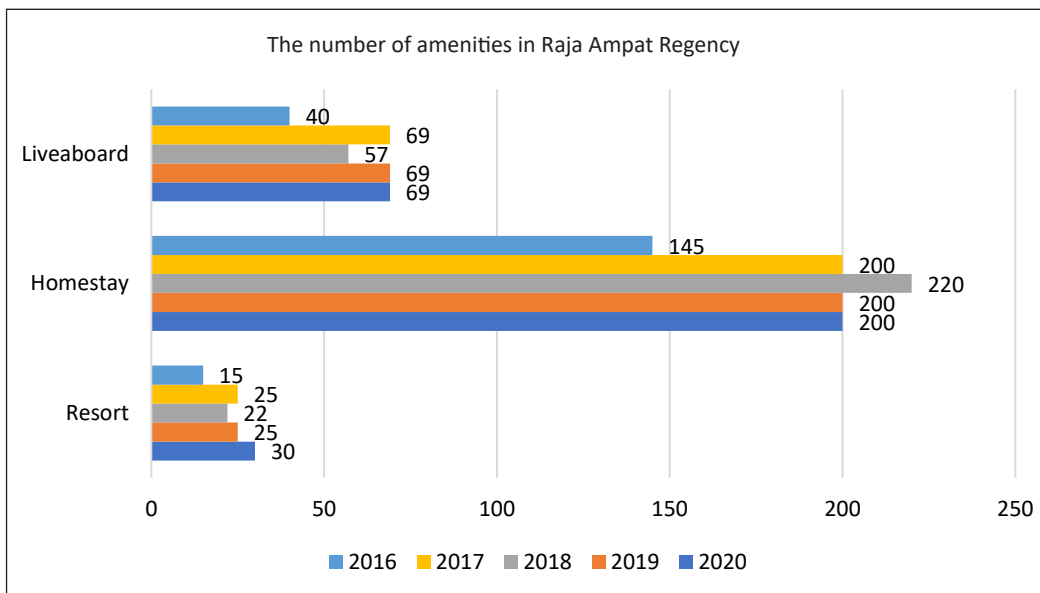


Figure 2. The number of amenities in the Raja Ampat Regency is shown in 2016-2020 (Statistic of Raja Ampat Regency, 2021)

The potential of ecotourism development possessed by Raja Ampat Tourism Villages encompasses ecological, social and economic elements:

Ecological Potential

Natural Potential. The tourism villages have coral reefs in excellent condition with a live coral coverage percentage \geq of 50% (Raja Ampat Regency Government, 2006). Ahmed et al. (2007) stated that coral reefs in an area are the main focus of tourism development because they are a valuable attraction. Based on information from the head of the village of Sawinggrai (P. Sauyai, personal communication, October 21, 2019) who stated that “Raja Ampat has an attraction that can attract tourist visits to the international level. Raja Ampat is most famous for its natural preservation, maritime wealth and karst tourism objects.”

The existence of conservation activities strongly supports the sustainability of natural potential. Conservation is built with the principle to achieve the preservation of natural resources. However, it does not limit people’s access to utilise natural resources. Therefore, the determination of conservation zones (core zones, buffer zones and transition zones) must be clearly and fairly defined.

Carrying Capacity. An increase in visitors can provide economic benefits. However, it will impact environmental damage if you ignore the carrying capacity of the area. The number of tourists in Raja Ampat in 2017 reached a total of 23,141 tourists

(The Regional Public Service Agency Regional Technical Implementing Unit of West Papua Province, 2018). This number does not exceed the carrying capacity. According to the carrying capacity, the number of tourists per year and ten activities in the fifteen Raja Ampat locations is 91,275 (Nikijuluw et al., 2017). West Papua Tourism and Capacity Building Manager, Conservation International (M. Kasmidi, personal communication, November 9, 2018) who stated that:

The Raja Ampat government is committed to developing ecotourism-based tourism by limiting the number of tourist visits as a conservation effort which, of course, will also have a positive impact on the socio-economic community. The behaviour of tourists is also regulated and supervised in tourism activities in Raja Ampat.

Various Selections of Tourism Activities.

Tourists can do various marine tourism activities in the tourism villages such as diving, snorkelling, swimming, fish feeding, sunbathing and beach recreations. Diving is the most popular activity for Raja Ampat visitors (Nikijuluw et al., 2017). The tourism villages also have beautiful scenery and white sand beaches. Tourists commonly enjoy and indulge via swimming, sunbathing and other recreational activities. Many tourist activities are offered to encourage tourists to travel more and stay longer.

Tourism Villages Have a Marine Protection Zone. Tourism villages, such as Arborek, Yenbuba and Sawinggrai, have a marine protection zone extending to 500 meters from the beach. The activities prohibited in this zone include (1) bombing and anaesthetising; (2) coral and sand mining; (3) littering or waste-dumping; (4) building permanent tourism facilities; (5) beach reclamation and anchoring; (6) fishing, netting, trawling and others; (7) catching fish or other marine organisms; (9) use of lamp boats; (10) aquaculture; and (11) walking on coral reefs. In addition, community awareness and compliance are initiated through institutions built at the operational, collective and constitutional levels.

Environmental Awareness and Active Environmental Preservation. The development of ecotourism requires environmental awareness (D. Hall, 2004). Environmental obedience and awareness are based on the knowledge possessed by the community in tourism villages. An example of this local wisdom is that fishing in fish breeding areas will limit the productivity potential of the fish. Another example is that littering the sea waters will negatively impact the fish population. The community in the tourism village become aware that the abundance of fish is one of the attractions for tourists, thus becoming their incentive for preservation.

Social Potential

Cultural Potential Uniqueness. Bhuiyan et al. (2016) described ecotourism as a balance between nature views, biodiversity and culture in the tourism area. There is artistic potential in the forms of traditional dances and handicrafts. Through cultural potential, the locals can obtain additional benefits and opportunities to introduce the local culture. The value of upholding culture in tourism villages is still substantial, such as the enforcement of a modest dress code, prohibition of heavy drinking (except in traditional events), prohibition of non-religious activities on Sunday and upholding values of hospitality and unity. According to Balasingam and Bojei (2019), the development of the homestay product should focus promotional efforts on the sociocultural aspects of friendliness, welcoming and local community participation.

Raja Ampat Homestay Association. Most of the homestay owners and employees are members of the Raja Ampat Homestay Association. Raja Ampat Homestay Association acts as the platform of information exchange and tourism development. The association's agenda is to conduct gatherings for the members to exchange information, meetings and workshops. Raja Ampat Homestay Association enforces rules in homestay management while taking environmental preservation and social-economical aspects into account. The committee also helps the members to market the homestay through

the website www.stayrajaampat.com. Thus, the existence of the Raja Ampat Homestay Association strengthens social capital for the development of marine ecotourism.

Society’s Strong Homogeneity. The cooperation and participation of local people are essential for all industries, especially the tourism industry (Rishi & Upadhyay, 2013). The tourism village inhabitants build a cooperative relationship in managing marine ecotourism. That could happen because of the substantial homogeneity influenced by their homogenous social identities, including familial, ethnic and religious connections, as well as mutual interests, beliefs and culture. The people also highly depend on coastal and marine resources, which drives them to cooperate to preserve the resources.

Cooperation between Stakeholders. During the planning process, the stakeholders agreed to conduct and build conservation strategies. Local people are also involved in determining zones because it is related to the local people’s customary rights. It is different from Luting’s rural tourism development; their discourses were heavily influenced by the upper-level government’s ideas and rules (Wang, 2020). The Raja Ampat government enforces the rule prohibiting private-owned resorts in tourism villages’ areas. The government also does not collect any business permit fees from the local people. The non-government organisation assists people in developing the tourism sector through socialization and scientific data.

Economic Potential

Increasing Tourists. M. Hall (2010) stated that small islands often become popular tourist destinations that attract more tourists than permanent residents. According to the Statistic of Raja Ampat Regency data in 2019, the number of domestic and international tourists in the Raja Ampat Regency kept increasing from 2009 to 2019. The number of tourists in the Raja Ampat Regency is shown in Table 1.

Table 1
The number of tourists in the Raja Ampat Regency

Year	Domestic tourists	International tourists
2009	405	3 446
2010	790	4 628
2011	1 849	6 178
2012	2 060	7 244
2013	4 006	10 157
2014	7 691	10 759
2015	10 251	12 011
2016	12 472	13 616
2017	17 250	18 841
2018	20 811	23 099
2019	22 285	24 090

Source: Statistic of Raja Ampat Regency (2019)

Accessibility. Easy access to tourism villages is supported by easy road access and transportation. For example, tourists outside West Papua would fly to Domine Eduard Osok Airport, Sorong, West Papua, Indonesia. From the airport, land transportation to the Sorong crossing port is easy to find. Tourists can board a boat from Sorong port to Waisai port, then continue by speedboat or longboat to the small islands, where Arborek, Yenbuba and Sawinggrai

villages are located. Speedboat and longboat can be accessed through renting from the local people. It corresponds to Hoang et al. (2018), which stated that local people increase accessibility.

Tourism as an Alternative to Earning a Livelihood. The development of tourism is seen as a new working opportunity, potentially being the most significant contributor to national income (Hendijani & Yuliana, 2016; Joshi et al., 2017; Rout et al., 2016). Before the designation of tourism villages, the majority of the inhabitants work as small-scale fishermen. The driving factors in their transition to tourism workers are their previously small income, low capital and unstable income as a fisherman. The income as a fisherman is uncertain, which is an average of around Rp. 500,000-Rp. 2,000,000/month, then when you become a tourism actor, the average is Rp. 1,500,000-Rp. 7,000,000/month. According

to the informant (E. Mambrasar, personal communication, October 11, 2018), many feel that their income increases when they switch from fishers to tourism actors. It is because Raja Ampat is getting more and more tourists.

Availability of Facilities for Tourists. Each homestay consists of a private facility and a public room. Furthermore, homestay facilities also provide transportation facilities such as speedboats and longboats to facilitate tourist trips. Each homestay determines the price of a travel package that includes the boat, gasoline and driver’s price. Facilities and infrastructure in the tourism villages are also considered sufficient; the following can be shown in Table 2.

Modes of Transportation Owners. Tourism actors, especially the homestay owners and managers, use a speedboat or longboat to facilitate tourist trips. By

Table 2
The total list of facilities and infrastructure facilities at the tourism villages

Facilities and infrastructure facilities	Arborek	Yenbuba	Sawinggrai
Homestay	11	20	8
Semi-permanent dock	1	2	1
Public toilet	3	-	-
Snorkelling equipment rental	2	5	1
Diving equipment rental	1	5	-
Gazebo	7	-	1
Stall	3	2	2
Small garden	2	-	-
Telephone network tower	1	1	-
Midwife’s place	1	1	1
Community health centre	1	1	1
PLN electricity and Genset	1	1	1

using a speedboat or longboat, it creates easy mobility, and the mileage is relatively faster. Most tour operators use speedboats or longboats with two engines, each with 20 Paarden Krachts (P.K.). Homestays that do not have a speedboat or longboat to facilitate the guests will have to borrow a speedboat or longboat from their neighbours or relatives.

Marketing through the Website. The homestay owner or manager cooperates with the Raja Ampat Homestay Association board in marketing the homestay and establishing travel packages to be advertised through the website www.stayrajaampat.com. It is managed by the board of Raja Ampat Homestay Association. The website has clear information about homestay's location, facilities and services, various Raja Ampat destinations, travel packages, booking and trip planning guides. Marketing through the website can reach a broader market. The majority of homestay guests are obtained from bookings through the website.

Challenges in Developing Marine Ecotourism

Kinseng et al. (2018) and Cobbinah et al. (2013) stated that tourism does not only bring benefits but can also bring potential problems and conflicts to the community. According to the study results, the challenges in developing marine ecotourism in Raja Ampat Tourism Villages are as follows:

Ecological Challenge. Fish Feeding.

Feeding the fish is one of the tourist activities. However, several rules have been set in the

form of restrictions on feeding and the type of food given. The impacts remain present. The time set for feeding is in the afternoon; whereas, the fish can naturally obtain their food earlier in the day. Furthermore, the types of food that can be fed are only limited to natural or non-packaged foods such as noodles and biscuits. However, tourists still often violate these rules since there is no strict supervision. The violation remains due to lack of socialization to tourists, lack of information boards for fish feeding rules, lack of supervision and no sanctions for such violations. If this case is ignored, the potential of food chain damage and ecological damage will increase and further exist.

Waste Management Problems. As the development of tourism villages continues to develop, the impacts also continue to develop. The activities from village tourism generate an increase in waste produced by tourists. Before many tourists visit the village, most of the community piled up organic waste in the soil. However, with the increasing number of tourists and their waste, the community is burning and polluting the village's air.

Careless Anchor Removal. Raja Ampat conservation areas have implemented the rules on removing anchors at a minimum depth of 50 meters. However, according to residents' reports, many homestays still do not comply with the rules. Some of them are found docking marine protected area zones. Disobedience occurs when homestay

operators lack compliance, unavailability of mooring for anchors' removal and severe penalties and further actions are also absent from punishing those who do not comply with the rules.

Social Issues. *The Ambiguity of Tenurial Owners.* Su et al. (2014) mentioned that structural problems, especially in protected areas, occur due to the structure of tenurial management and land ownership ambiguity. In Raja Ampat Regency, a certificate does not prove land ownership. Land ownership is determined based on customary cultivated land and often results in the ambiguity of land ownership. The ambiguity of land ownership usually occurs between families within a clan.

Conflict of Interest. One private sector in Arborek and Yenbuba villages builds their business with local ownership alibi in each village. The types of business include homestay packages and diving package. First, the tourist stays at a homestay owned by local persons. Later the private sector will pay homestay rent to locals. This situation can potentially shut down local community business owners. It happened in Yenbuba village, where diving packages owned by foreign nations are preferable for the tourists rather than packages owned by locals.

Insufficient Training. The training to enhance skill and knowledge on the conservation efforts has not been implemented regularly and evenly within the tourism villages. The community

especially needs regular training to develop ecotourism in the tourism villages. Several pieces of training needed by the community are homestay standardization training, hospitality training, language training, food and beverage services training, financial management of homestay training and skill training for making various souvenir products.

Economic Issues. Limited Capital. There is limited distribution assistance in several tourism villages in the form of boat assistance, grant funds, loan funds and homestay facilities assistance from the local government. However, the assistance has not been distributed evenly to all communities in tourism villages. According to Raja Ampat Regent Regulation No. 18/2014, there is a fee for maintaining environmental services borne by the tourist. There is an allocation of funds for the community's welfare from that fee, set in the regulations. The allocation of funds must be transparent and evenly distributed.

Limited Events or Tourism Activities. In this tourism village, the development of tourism events has not yet been implemented. Furthermore, tourism activities are limited to snorkelling, diving, swimming, fish feedings and the recreation of bird-beaches (especially in Sawinggrai village), where other events can be developed, such as a glass-bottom boat, parasailing and other environmentally friendly tourism activities. Destination's management must protect the resources and maintain socioeconomic prosperity (Shariffuddin et al., 2020).

The growing exclusion local people in liveaboard business. The liveaboard and travel agent can potentially shut down the local business since they provide complete facilities and services for the tourists without involving the local business actors. The head of the village of Arborek (D. Mambrasar, personal communication, October 12, 2018) stated that:

What is the benefit of having many guests come if the guest is a guest of a travel agent or liveaboard company? We, the people, only watch, the lodging, touring and transport of guests are all from travel agents and liveaboard.

The Marketing System in The Association is Still Not Optimal. There is a fee to market the local business on the website, which is considered unclear and unfair since homestay types (small, medium and large) determine the price. Furthermore, even if there is no tourist in the homestay, the homestay owner must continue to pay the fee to keep the advertisement on the website. Therefore, most homestay owners feel burdened with this policy.

Lack of Proper Cleaning Maintenance and Homestay Comfort. The Raja Ampat Homestay Association has already set the homestay standardization, including full and comfortable facilities and homestay management. However, most homestay owners pay less attention to the homestay cleanliness, especially in the bathroom facilities. Therefore, most homestays

provide a shared bathroom with low maintenance and cleanliness.

Strengthening the Marine Ecotourism Institutions Performance

Identifying the potentials and problems is one way to conduct social mapping as the central core in management planning. After identifying the potentials and problems, proceed with systematical planning to achieve the goals. The expected output from this is institutional or regulations that include targeted, strategic, and needed resources. According to Ostrom (1990) and Satria (2009), nine indicators help strengthen the institutional: (1) clarity of boundaries; (2) compliance of the rules towards local conditions; (3) active involvement of resource users in the composing and management of regulations; (4) the existence of a local institution; (5) community respect towards supervisors; (6) the imposition of sanctions; (7) conflict resolution mechanisms; (8) strong recognition from the government; and (9) the existence of ties or networks with external institutions. However, this study found additional indicators that help strengthen the institutional performance in Raja Ampat Tourism Village. These indicators include:

Identification of Potentials and Problems

Identifying the potentials and problems is one way to conduct social mapping as the central core in management planning. The involvement of community actors who

clearly understand the current condition and issue is needed and can be obtained by conducting a focus group discussion (FGD). After identifying the potentials and problems, proceed with systematical planning to achieve the goals. The expected output from this is regulations that include targeted, strategic, and resources that are needed.

Cooperation within the Local Community and Outside Institutions. The local communities have developed Cooperation with the government, NGOs, academicians and private sectors. At the planning stage, the community conducted a declaration to establish cooperation with the government, NGOs and academicians to determine the borderline of management areas and marine ecotourism strategic regulations. At the implementing stage, the community, the government and NGOs ensured that the management is conducted accordingly to the regulations. To further develop marine tourism management, support from the government in policy, capital and market support, training and development of human resources quality and building partnerships are needed. The community collaborated with the Maya Tribe Adat Council, UPT BLUD, Raja Ampat Culture and Tourism Office and the police at the monitoring stage.

Clarity of Management Areas Borderlines. The marine of the tourism villages are designated as community-based marine protection zone (Daerah Perlindungan Laut Berbasis Masyarakat [DPL-BM]).

The boundaries of the DPL-BM area have been clearly defined, namely 500 meters from the beach. The DPL-BM is an area chosen and determined in a participatory manner by the community to be managed and maintained together as a “fish bank” to supply fish stocks to all communities in the village (Raja Ampat Culture and Tourism Office, 2014). The DPL-BM was used as the fish bank that can provide benefits for food security and tourist attraction. The abundance of fish and coral reefs in the area attracts tourists to snorkelling, diving, fish feeding and other activities.

Regulation Establishment through Local Conditions. Long before the establishment of the DPL-BM, the Raja Ampat community had implemented a marine-*sasi* management institution. *Sasi* is conducted inherently with the *sasi pante* (beach) system, which prohibits catching fish, shellfish, lobsters, sea cucumbers and other sea creatures within the agreed area. *Sasi* is conducted in fish spawning areas and has been implemented since the time of their ancestors. Therefore, the establishment of Raja Ampat as a conservation area by DPL-BM zoning systems is appropriate for local conditions.

To develop marine ecotourism in Raja Ampat Tourism Village, Raja Ampat Homestay Associations apply the rules to manage homestays by local conditions and values. The rules preserve cultural heritage sites, sacred and ancient sites, protecting coral reefs, wild animals, and habitats. Homestay buildings are not permanent. They are built in harmony with nature and

maintain traditional concepts. Guests behave by the cultural context, and women have a voice and power in managing homestays.

Regulations are Developed and Actively Managed by The Community. The community is actively involved in the preparation and management of rules. The rules are as follows: (1) prohibition of fishing; (2) prohibition on the use of explosives, trawlers, potassium, large charters, taking rocks and small-eyed nets with a stretch more than 50 meters from the sea; (3) prohibition of littering; (4) prohibition of stepping on coral; (5) prohibition on damaging seagrass beds; (6) prohibition of jumping from the jetty; (7) prohibition of coral and sand mining; (8) prohibition of building permanent tourism facilities; (9) prohibition of beach reclamation and anchor disposal; (10) prohibition of activities that can damage other environments. During Sunday worship, religious and traditional leaders give sermons to keep the sea in mind and often promote awareness through statements such as *“God will be angered if we destroy nature”*. The words of religious and traditional leaders are considered sacred and must be obeyed.

The Presence of a Local Institution. The existence of local institutions established by the Raja Ampat Homestay Association aims to regulate management mechanisms with sustainability, organize homestay activities and guides, build an information exchange between members and develop sustainable tourism. The Raja Ampat Homestay

Association also plays a role in helping its members market homestays through the website. Homestay owners are charged a monthly fee for website operations, but the charging rules are considered unfair. Thus, applying the collection rules taken from percentages based on income from incoming tourists is necessary. The percentage of fees that goes to the association can be determined according to mutual agreement.

Surveillance Effectivity. Surveillance is carried out through a sea security patrol by representatives of the Maya Tribe Adat Council in each of the customary territories in Raja Ampat. Indigenous people and all parties are entitled and obliged to report violations in their respective customary jurisdictions. Each violation will be tried in a traditional session attended by village community leaders, including the village government. Common violations reported are illegal fishing, fishing gear that is not allowed and the collision of coral reefs by ships.

Applied Sanctions. Sanctions applied in tourist villages in violations, including social sanctions, administrative sanctions and economic sanctions. Economic sanctions are in the form of fines or confiscation of goods and social sanctions in community service to clean the village for one day ranging to more severe social sanctions in the form of eviction. For example, one tourist actor (Marcel, personal communication, October 14, 2019) said, “the people who catch fish here (Arborek) will be admonished three

times. More than that, there are customary sanctions or paying fines. The fine can be used for additional village community service needs.”

In customary regulations, perpetrators of crimes in coastal or marine areas are tried by representatives of customary councils in each village. If indicated criminal, the offender was handed over to the police. Suppose the UPT BLUD knows a violation. In that case, the UPT BLUD will coordinate and report to Raja Ampat Culture and Tourism Office. The office will impose economic sanctions in the form of fines or administrative sanctions to revoke valid business licenses to owners of travel agents, liveaboard and homestays.

Conflict Resolution Mechanism. Land conflicts in tourist villages are caused by clan-based land ownership, which is considered unclear ownership. Therefore, communal ownership conflicts are resolved by customary conflict resolution mechanisms by bringing in customary leaders who have knowledge regarding the land boundaries and possess power based on the communal ownership system. Members of the customary community have institutionalized the mechanism, marked by the knowledge, understanding and compliance of the communal ownership management system.

Recognition from the Government through Policy Establishment. The indigenous communities are given the authority to manage and protect natural

resources in coastal and marine areas. They make a local custom to protect their traditional areas as long there is no contradiction with the existing legislation. Regent Regulation wrote the statement of Raja Ampat Regency No. 8/2017 about the Protection of Fish, Marine Biota and other Potential Natural Resources in Coastal Areas in the Guidance of Maya Raja Ampat Tribe. In local custom, the community agreed to protect and manage natural resources that applied to coastal and marine areas of Raja Ampat, applying a monitoring and sanction system.

Equity Access for All Resource Users.

By definition, equity access covers three things, namely: (1) procedural justice, the involvement of all parties (society) in the truest sense; (2) substantial justice, rights to relish the benefits according to expectation; (3) distribution justice, equal distribution from the gained benefits (Taylor, 2000). Procedural justice and substantial are already achieved by most of the community in tourism villages because they were involved in the planning, implementing and monitoring of marine ecotourism management and gained the benefits according to the existence of management of marine ecotourism. However, distributive justice has not been achieved. Since benefits have not been evenly distributed to all communities, such as the access to technology, capital, market, knowledge and partnership, there should be a transparent and fair mechanism for the community to get the existing benefits.

The development of marine ecotourism can be achieved by maximising existing potential and minimising problems with the right problem-solving solutions. Stakeholders can manage these efforts through institutional. The performance of marine ecotourism management institutional in Raja Ampat has fulfilled several aspects. However, there are several strategies needed to improve institutional performance. The following strategies for strengthening the performance of marine ecotourism management institutions can be shown in Table 3.

Table 3
Strengthening the performance of marine ecotourism management institutions

The performance of Institutional	Fulfilled aspect	Unfulfilled aspect	Strategies needed
Cooperation within the local community and outside institutions	There are cooperation between the government, community, NGOs, academia and the private sector in planning, implementation and monitoring	Lack of cooperation in local community business partnerships.	Necessary stimulus program for local community business development and support to expand business partners between the community and travel agents
Clarity of management areas borderlines	The boundaries of the community-based marine protection zone have been clearly defined	Physical water zoning markings (eg. buoys) are not installed/missing. There is a lack of clarity on communal-based land ownership.	Putting a buoy as a physical zoning barrier. There is formal or informal evidence of communal land ownership.
Regulation establishment through local conditions	The establishment of Raja Ampat as a conservation area by DPL-BM zoning systems is appropriate according to local conditions.	Lack of local economic protection regulations	Involving the community as local guides or workers on liveaboard, strengthening the competitiveness of local businesses.
Regulations are developed and actively managed by the community	Rules are compiled and managed with the community in a regulatory, normative and cultural cognitive manner.	Low enforcement of regulations in waste management, illegal fishing by migrant fishers, anchor removal, and fish feeding	Increase the number of patrol officers, tighten supervision, build moorings and warning boards.
The presence of a local institution	The local institutions established by the Raja Ampat Homestay Association aims to regulate ecotourism management	The effectiveness of capacity building activities for members of the Raja Ampat homestay association has not been optimal	Forming a special team for the Homestay Association management that focuses on administering and developing tourism businesses at the district level.
Surveillance effectivity	Community respect towards supervisors	Lack of guard posts	Establish a monitoring system by building guard posts placed in all tourist spots and tourist villages.

Table 3 (*continue*)

The performance of Institutional	Fulfilled aspect	Unfulfilled aspect	Strategies needed
Applied sanctions	Sanctions applied in tourist villages including social administrative and economic.	There are some violations that escape sanctions.	There is a supervisory person in charge who has the authority to follow up on violations at the village level.
Recognition from the government through policy establishment	Based on the regent's regulations, indigenous peoples can make policies for the protection of their customary territories	There is no enforcement of regulations from the government to protect the local economy	There is support from the government by establishing regional regulations to regulate the entry of private investment in tourist villages.
Equity access for all resource's users	Procedural justice and substantial are already achieved by most of the community in tourism villages.	Distributive justice has not been achieved since the benefits have not been evenly distributed to all communities	There should be a transparent and fair mechanism for the community to get the existing benefits

CONCLUSION

The stakeholders' assessment of the potential and problems of marine ecotourism development affects how the institutional strategy is built. The development of marine ecotourism can be achieved by maximising existing potential and minimising problems with the right problem-solving solutions. Stakeholders can manage these efforts through institutional performance. Behind the potential, there are still problems faced in developing marine ecotourism in Raja Ampat Tourism Village. The institutional aspect is a necessary foundation to be strengthened to answer the challenges of developing marine ecotourism.

This paper has examined ten indicators of strengthening marine ecotourism management's institutional performance in Raja Ampat Tourism Village and the regulatory strategies that need to be improved. These indicators include: (1) community cooperation with outside

institutions; (2) clarity of management area borderlines; (3) rules being developed according to local conditions; (4) rules being developed and actively managed by the community; (5) the presence of local institutions; (6) effectiveness of supervision; (7) the imposition of sanctions; (8) conflict resolution mechanisms; (9) recognition from the government through the establishment of regulations; (10) fair access for resource users.

This study provides several recommendations for the development of marine ecotourism. First, development planning needs to be developed in a participatory manner with the community and adapted to local conditions to achieve proper management. Second, the need to build co-management among stakeholders to increase conservation effectiveness. Third, community capacity building, such as training and mentoring tourism actors. Fourth, the local government guarantees a fair distribution of access to the community.

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