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DEVELOPMENT OF MARINE ECOTOURISM WITH THE APPROACH OF SUITABILITY OF NATURAL RESOURCES AND CARRYING CAPACITY IN CEMARA BEACH, WAKATOBI

PENGEMBANGAN EKOWISATA BAHARI DENGAN PENDEKATAN KESESUAIAN SUMBERDAYA ALAM DAN DAYA DUKUNG DI PANTAI CEMARA WAKATOBI

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ABSTRACT

The Cemara Beach area on Wangi-Wangi Island has relatively high potential for biological resources. Coral reef ecosystems, reef fish, and capture fisheries reflect this potential. In addition to playing a crucial ecological role, these ecosystems also offer significant aesthetic value, making them an ideal asset for marine tourism. However, until now, the utilization of natural resources has not been regulated regarding site plan and visitor limitations, leading to the degradation of coral reef ecosystems. This study aims to determine the suitability classification and carrying capacity of marine ecotourism at Cemara Beach, Wangi-Wangi Island, Wakatobi, particularly for snorkeling and diving activities. Data collection was conducted in the reef flat zone and reef slope zone, selected through purposive sampling, which focused on the representation of the coral reef ecosystem using the manta tow method. The study showed that the location was highly suitable for marine ecotourism, in line with the high live coral cover (ranging from 46 to 76%), diversed types of life forms, abundant coral fishes, and high clarity of the waters. The carrying capacity for snorkeling activities is 240 people per day, within an area of 5.93 hectares, while diving activities have a utilization area of 1.83 hectares and a capacity of 60 people per day. Thus, the total carrying capacity for both activities is 300 people per day. To maintain the sustainability of coral reefs and marine tourism at Cemara Beach, sustainable tourism management is necessary through visitor capacity restrictions, zoning, and strict regulations.

Keywords: carrying capacity, marine ecotourism, natural resources

ABSTRAK

Kawasan Pantai Cemara di Pulau Wangi-Wangi memiliki potensi sumber daya hayati yang masih relatif tinggi. Potensi tersebut tercermin dari keberadaan ekosistem terumbu karang, ikan karang, dan perikanan tangkap. Selain berperan penting secara ekologis, ekosistem ini juga menawarkan nilai estetika yang signifikan, menjadikannya aset yang ideal untuk wisata bahari. Namun sampai saat ini pemanfaatan sumberdaya alam belum memiliki aturan terkait pembatasan pengunjung, sehingga menyebabkan degradasi ekosistem terumbu karang. Penelitian ini bertujuan untuk menentukan kelas kesesuaian dan kapasitas daya dukung ekowisata bahari di Pantai Cemara, Pulau Wangi-Wangi, Wakatobi, khususnya untuk aktivitas *snorkeling* dan *diving* yang dapat dimanfaatkan. Pengumpulan data berdasarkan zona rataan (*reef flat*) dan zona tubir (*reef slope*) dipilih secara *purposive sampling*, yaitu berdasarkan keberadaan dan representasi ekosistem terumbu karang dengan metode *manta tow*. Hasil penelitian menunjukkan bahwa kategori ekowisata bahari di lokasi tersebut sangat sesuai dan sesuai dengan tutupan karang hidup berkisar antara 46–76%, jenis *life form* dan kelimpahan ikan karang menunjang serta kecerahan perairan yang tinggi. Kapasitas daya dukung untuk kegiatan *snorkeling* adalah 240 orang/hari dengan luas area pemanfaatan sebesar 5,93 ha, sementara kegiatan *diving* memiliki luas area pemanfaatan 1,83 ha dan kapasitas yaitu 60 orang/hari. Dengan demikian, total kapasitas daya dukung untuk kedua jenis kegiatan tersebut adalah 300 orang/hari. Guna menjaga keberlanjutan terumbu karang dan wisata bahari di Pantai Cemara, perlu dilakukan pengelolaan wisata yang berkelanjutan melalui pembatasan kapasitas pengunjung, zonasi, dan regulasi ketat.

Kata kunci: daya dukung, ekowisata bahari, sumberdaya alam

INTRODUCTION

Marine ecotourism management is a form of integration that connects the interests of the tourism industry with the preservation of natural resources. The clarity of the waters and the beauty of the underwater world contribute significantly to increasing tourist appeal. The abundant diversity of marine life, including coral reefs and marine life, the width and ideal slope of the coast, and the rich local culture are allures for both domestic and international tourists. The existence of coral reef ecosystems is a major attraction (Witomo *et al.* 2020), and destination managers must focus on the development and conservation of cultural and natural attractions (Bayih and Singh 2020), providing valuable benefits for humans (Selig *et al.* 2019). The beauty and marine biodiversity of Wakatobi are the main attractions of marine nature tourism (Saputro and Qomarun 2015; Purwanto *et al.* 2015; Muis *et al.* 2016). Significantly improving the local economy (Dilwan *et al.* 2019), ecotourism is a key element in supporting the sustainability of natural resources and gaining ecological, economic, and socio-cultural benefits. Beaumont (2011), Situmorang and Mirzanti (2012), Pegas *et al.* (2013), Shoo and Songorwa (2013), and Dilwan *et al.* (2019) state that ecotourism can provide positive contributions such as increasing income, conservation, environmental preservation, and facilitating the involvement of residents in tourist destinations. The wider the coastal ecosystem area, the greater its contribution to the island's ecological adaptive capacity (Subur *et al.* 2016). Yulianda (2019) states that ecotourism is seen as a form of tourism managed by prioritizing conservation principles.

The existence of Wangi-Wangi Island, as a center of community and government activities, has two main functions: as a coastal protection area and as a center for sustainable tourism development. The role of conservation is directed at preserving the environment and biodiversity, while tourism development utilizes natural potential to increase the community's economic value. The development of marine tourism on Wangi-Wangi Island has limitations, including the island's small size, limited natural resources, and minimal participation of all stakeholders (Huang and Coelho 2017; Apdillah *et al.* 2020). Development of the tourism sector must take into account regional capacity, also known as the environmental tolerance threshold. Iskandar *et al.* (2018) and Tassaka *et al.* (2023) stated that live coral reef cover in Waha Village ranges from 55.83% to 70.5%, with 28 species from 9 families and 14 genera of target fish identified.

The Wakatobi Regency Tourism and Creative Economy Office, through the Wakatobi Central Statistics Agency (BPSW 2023), recorded a total of 9,117 tourists, both international and local, in Wakatobi. The increase in tourists in coastal areas can place significant ecological pressure on the local natural resources.

The utilization of coastal marine tourism at Cemara Beach does not yet have regulations regarding visitor restrictions. Increasing tourist numbers can put significant pressure on coastal ecosystems, such as reducing coral reef cover due to direct contact with visitors, and will diminish visitors' experience during tourism activities. Furthermore, increased pollution from waste and chemicals can stress coral reefs, leading to their death. Therefore, to maintain their sustainability, optimal management of carrying capacity is necessary. Several previous studies have also emphasized the importance of managing tourism carrying capacity as a key to the sustainability of coastal ecosystems (Yulianda 2019; Koroy *et al.* 2017). However, most marine tourism areas in Indonesia, including Cemara Beach, have not yet fully implemented this approach systematically. In fact, globally, approaches based on land suitability and carrying capacity have become important standards for preventing environmental damage due to overtourism (Friess 2016; Cisneros *et al.* 2016).

This study aims to address the challenges of marine ecotourism management at Cemara Beach, Wakatobi. With increasing tourist pressure on coastal ecosystems, a science-based approach is needed to ensure marine ecotourism management that is not only oriented towards economic benefits but also ensures the ecological and social sustainability of the Cemara Beach area. The results of this ecotourism development are intended to present policies for local governments and local communities in ecotourism management so as to create a balance between environmental preservation, economic benefits, and social welfare of the community.

METHODS

Time and location

The field observation was conducted over three months, from June to August 2024, in the coastal area of Cemara Beach, Wangi-Wangi Island, Wakatobi, Southeast Sulawesi Province. The research area was determined based on the level of utilization. Three data collection areas (stations) were located along the coast of Waha Raya Village, Wangi-Wangi Island (Figure 1).

The types of data required in this study include primary and secondary data. Primary data were obtained directly from the field through observation and interviews. Primary data collection was conducted using a purposive sampling method, which is a sampling technique based on specific considerations and reasons, such as determining a research location deemed relevant to the development of marine ecotourism for snorkeling and diving activities at Cemara Beach. Thus, the research area was deemed capable of providing the most representative data and information to support the achievement of the research objectives, namely assessing the level of suitability and carrying capacity of the marine ecotourism area in the region. This approach was implemented to ensure that the information collected was sourced from parties with significant knowledge and experience related to the topic being studied (Sugiyono 2011).

Secondary data was obtained through a review of various documents and previous publications. This secondary data also included information on the area's history. Reference sources used in this study came from official agencies authorized in the fields of planning, maritime affairs, tourism, and population data, including the Regional Development Planning Agency (Bappeda), the Maritime Affairs Office, the Tourism Office, the Central Statistics Agency, and the Village Office. All these sources were selected because they provided relevant and necessary information to support the analysis of marine ecotourism development in the study area.

Biophysical data collection

Data were collected using the method proposed by English *et al.* (1997), with a transect distance of 50 m parallel to the coast. Data collection locations were selected based on the results of a towing technique using a rod body, where the location of each transect point was determined using the Line Intercept Transect (LIT) method. Current velocity and water clarity are physical parameters of water quality. Meanwhile, water quality measurements, including current velocity, were measured using a current kite, and water clarity was measured using a secchi disk. The tourism suitability analysis in this study focused on assessing the area for snorkeling and diving activities. Land suitability was used as an approach to assess the extent to which parts of the area can be optimally utilized, in accordance with the area's natural resource potential. While assessing an area to be developed as a tourist destination can be done visually, from an ecological perspective, a scientific parameter-based evaluation is required to ensure that the area truly meets the requirements for development as a suitable tourist location.

Data analysis

Analysis of marine ecotourism suitability

This study focuses on assessing the suitability of marine ecotourism activities, such as snorkeling and diving. Weighting is done by considering the role of each parameter, while scores are assigned based on the actual conditions of each parameter. The weighting value of each parameter is calculated to determine the level of suitability of the type of marine tourism to the potential of the resource (Yulianda 2019). The formula for calculating the marine tourism suitability index is:

$$TSI = \sum_{i=1}^{n} (W_i \times S_i)$$

Description:
TSI = Tourism suitability index
n = Number of conformity parameters
Wi = Weight of the i-th parameter
Si = Score of the i-th parameter

Tourism suitability levels (TSL) are classified as follows: highly suitable (≥ 2.5); suitable (2.0 ≤ TSL < 2.5); unsuitable (1.0 ≤ TSL < 2.0); and very unsuitable (<1.0). These categories help assess the suitability of an area for sustainable ecotourism-based tourism activities.

The suitability of diving tourism considers six parameters (coral community cover, water clarity, coral reef depth, life form types, reef fish diversity, and current speed). Meanwhile, snorkeling activities refer to seven parameters, including coral community cover, life form types, reef fish species, water clarity, ocean currents, water depth, and coral reef width. These are also classified into four assessment categories: very suitable, suitable, unsuitable, and very unsuitable.

Coral biota analysis is the process of identifying, quantifying, and evaluating biodiversity within a coral reef ecosystem. This process is crucial for understanding the health and sustainability of coral ecosystems. Some common data collection techniques used in coral biota analysis in this study include

1) Field observation involving visual surveys in the field to identify coral species, fish, and other organisms, as well as recording the surrounding environmental conditions; and 2) using underwater cameras to document and identify various types of coastal ecosystems.

Analysis of coral biota

Analysis of coral biota is crucial for determining the suitability of snorkeling and diving activities. Odum (1971) states that distribution analysis for coral biota types is carried out by applying the following equation:

$$D = \frac{\sum N_i}{nA}$$

Description:
D = Abundance of fish
$\sum N_i$ = Number of fish at the observation station
A = Observed coral reef area (m^2)

Analysis of regional carrying capacity

Regional carrying capacity (RCC) is the maximum number of tourists that can be physically accommodated in a designated area at a given time without disrupting nature and humans (Yulianda 2019). The formula for calculating RCC is as follows:

$$RCC = K \times \frac{Lp}{Lt} \times \frac{Wt}{Wp}$$

Description :
RCC = Regional carrying capacity (people/day)
K = Ecological potential of visitors per unit area
Lp = The area or length of the area that can be utilized
Lt = Area units for specific categories
Wt = Time provided by the area for tourist activities in one day
Wp = Time spent by visitors on each specific category

The ecological potential of visitors is calculated based on the location of the activity and the natural capacity to accommodate visitors. Ecological capacity is also determined based on the number of people per activity. The maximum value (K) per unit area (Lt) for each marine tourism category and the time required for each tourism activity (Table 1), as well as the predicted time required for each activity (Table 2), are calculated.

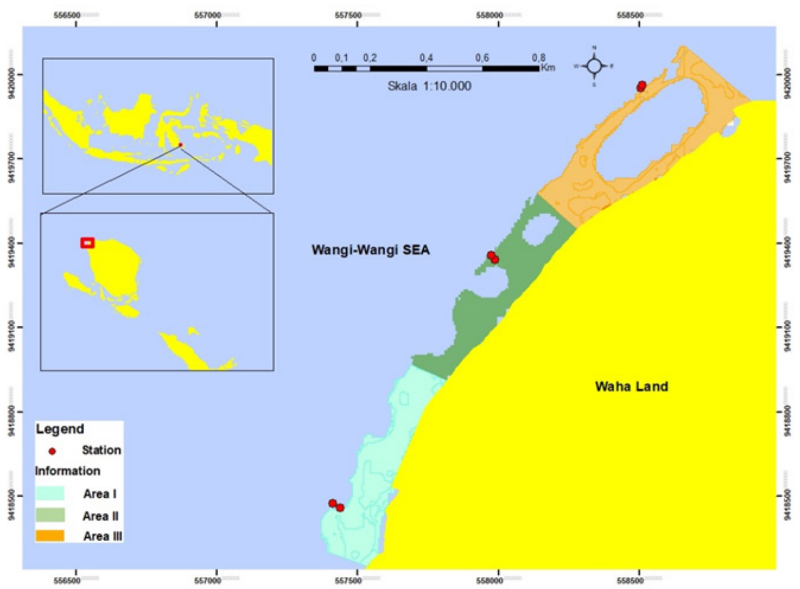

Figure 1. Map of the research location at Cemara Beach, Wangi-Wangi Island, Wakatobi.

Table 1. Ecological potential of visitors (K) and activity area (Lt) at Cemara Beach, Wangi-Wangi Island.

Activity	Σ Visitors (people)(K)	Area Unit (Lt)	Notes
Diving	2	2,000 m²	Every 2 people in 200 × 10 m
Snorkeling	1	500 m²	Every 1 person in 100 × 5 m

Source: Yulianda (2019)

Table 2. Predicted time required for each tourist activity at Cemara Beach, Wangi-Wangi Island.

Activity	Time required Wp-(hours)	Total time 1 day Wt-(hours)
Diving	2	8
Snorkeling	3	6

Source: Yulianda (2019)

RESULTS AND DISCUSSION

Physical conditions of waters

The physical quality of the environment is determined based on the condition of the waters around Wangi-Wangi Island. Measurements of water quality, such as temperature, current, and transparency, are used to determine whether the area is suitable for ecotourism, both snorkeling and diving. The results of measurements of Wangi-Wangi Island's physical environmental parameters indicate that conditions are still relatively good (Table 3).

Temperature measurements during data collection yielded values of 27–29 °C. The temperature in Wakatobi Regency throughout the year, from January to December, ranges from 22.4 to 34.5 °C (BPSW 2023). In general, coral reefs grow optimally at temperatures between 25–29 °C and a maximum of 36–40 °C (Yulianda 2019). Currents at the time of data collection were measured at 12 to 15 cm/second. Water currents are moving masses of water caused by wind and tides. Current speed affects activity in the area (Eraku *et al.* 2021). Water transparency at the observation location was 100% at a depth of 4–10 m. Water transparency measurements were conducted during the day, with cool weather, sunny weather conditions, and with gentle waves to assess the ability of light to penetrate the water column. Light plays an important role for marine animals and is a source of energy in the photosynthesis process of plants, which is the basis of the food chain with an effective depth of around 10 m (Yulianda 2019). Water depth is one of the parameters that must be known. Measurements of water depth varied 4–10 m. Meanwhile, the water depth used for marine tourism activities ranges from 1.5–15 m (Eraku *et al.* 2021).

Ecological conditions of coral reefs

Cemara Wakatobi Beach still has good ecological conditions, marked by the presence of coral reefs that are quite diverse and support the potential for marine ecotourism. The coral reefs at Cemara Beach, Wakatobi, are composed of various types of coral, generally fringing reefs that extend from the shoreline to deeper waters. Their growth is influenced by light intensity, depth, and ocean currents. In shallow waters, branching corals such as *Acropora* and *Pocillopora* are found, which grow rapidly and form reef flats that serve as primary habitats for various species of small fish and invertebrates.

Percentage of coral reef cover

The extent of live coral reefs at Cemara Beach ranges from 46 to 76%. The percentage of live coral at the location was in moderate to good condition. Coral cover reflects the variation in ecosystem conditions at the research site. Five types of coral cover were encountered during data collection on Wangi-Wangi Island, including live coral, dead coral, abiotic coral, soft coral, and other types, which serve as the basis for assessing whether the area is suitable for snorkeling or diving (Figure 2). English *et al.* (1997) proposed six indicators of coral development, including *Acropora*, non-*Acropora*, soft coral, dead coral, Abiotic coral, and other coral. Based on observations of coral presence, there are different terrains, namely, reef slopes and reef flats.

Marine ecotourism utilization focuses on the availability and beauty of coral reef ecosystems as the primary attraction for snorkeling and diving. Visitors not only enjoy the beauty of hard corals but also utilize soft corals as a highlight of their underwater tourism experience (Koroy *et al.* 2017). The types of coral lifeforms used to determine marine ecotourism activities are described in English *et al.* (1997).

Based on observations at Station 1 (at a depth of 10 m) the highest percentage of live coral cover was 76%, with a contribution of 6% soft coral and 7% abiotic. This condition reflects that the coral reef ecosystem in the area is in a healthy state, thus very supportive of tourism activities. Station 2 (at a depth of 4 m) had 64% live coral, 16% soft coral, and 18% other categories, indicating the presence of non-coral organisms. Station 5 (at a depth of 9 m) and Station 6 (at a depth of 4 m), each had a live coral cover of 65% and 59%, with a significant soft coral cover of 21% (at Station 5) and 6% (at

Station 6).

Meanwhile, Station 3 (at a depth of 8 m) and Station 4 (at a depth of 5 m) showed low live coral cover, at 48% and 46%, respectively. At Station 3, soft corals dominated, reaching 49%, while Station 4 was dominated by abiotic corals, reaching 39%. At Station 6, abiotic corals were recorded at 12%, accompanied by 6% soft corals.

The percentage of dead coral was relatively low and was only found in three locations: Stations 5 (2%), 6 (1%), and 2 (2%), with Station 3 being the lowest at 0.5%. Coral reef cover at Cemara Beach, across the three areas, based on depths of 4–10 m, ranged from 46 to 76%, with a total number of life forms ranging from 9 to 12 species. Coral reef cover of > 50–75% is considered suitable, and > 75% is considered very suitable for snorkeling and diving (Yulianda 2019). Basically, the aim of visitors to snorkel and dive is the strong attraction of coral reefs and coral biota as the most interesting objects to enjoy.

Reef fish abundance

The diversity of reef fish species varies at each observation station. Station 1 (at a depth of 10 m), found 115 species of reef fish with a total of 575 individuals/m², consisting of 27 families. Meanwhile, at Station 2 (at a depth of 4 m), there were 87 species, with 431 individuals/m² from 31 families. Station 3 (at a depth of 8 m) recorded 72 species, 335 individuals/m², and 19 families. Station 4 (at a depth of 5 m), found 63 species, 247 individuals/m², and 22 families. Station 5 (at a depth of 9 m), found 66 species, with a total of 308 individuals/m² from 20 families. Meanwhile, at Station 6 (at a depth of 4 m), there were 65 species, 204 individuals/m², and 23 families. The presence of reef fish in coral reef areas is directly related, as coral reefs serve as important habitats, providing food sources and safe havens for fish to shelter from predators. Percentage of reef fish abundance and number of fish species in three observation areas (Figure 3).

Suitability of marine ecotourism

Tourism suitability is crucial before determining a location as a tourist destination. A visual assessment of an area for tourism can be performed. However, several parameters must be ecologically assessed to determine their suitability. If the assessment indicates damage or degradation of the ecosystem, rehabilitation measures should be considered before the area is opened to tourism. Therefore, understanding tourism suitability is crucial so that the development process can estimate degradation, control measures, and manage limitations to align tourism objectives (Mutmainah *et al.* 2016). Determining the suitability class of an area for marine ecotourism activities, such as snorkeling and diving, is carried out by referring to the marine ecotourism suitability analysis proposed by Yulianda (2019). Based on observations in three areas, the area's suitability for snorkeling and diving activities is categorized as highly suitable (S2).

Snorkeling tour

Snorkeling in the three observation areas has different suitability categories: S1 (very suitable) and S2 (suitable). The S1 category is only found in Area I (at a depth of 4 m), while Area II (at a depth of 5 m), and Area III (at a depth of 4 m), are in the S2 category.

Ecotourism suitability for snorkeling tourism shows the highest coral community cover in Area I, with a value of 98.4% (very suitable), followed by Area II with a value of 61% and Area III with a value of 87.06% (suitable). The analysis results indicate that the suitability levels at the three observation locations are in the S1 and S2 categories. However, snorkeling can only be conducted at certain depths for marine ecotourism purposes. Determining coral reef depths aims to ensure that visitors' snorkeling activities do not damage the ecosystem, such as touching or stepping on coral reefs, thus maintaining ecosystem sustainability (Figure 4).

Table 3. Environmental parameters in the research area at Cemara Beach, Wangi-Wangi Island.

Environmental Parameters	**Units**	**Observation Area**					
		Area I		**Area II**		**Area III**	
Depth	M	10	4	9	5	8	4
Temperature	°C	29	27	28	28	28	29
Current	cm/second	12	13	15	14	12	14
Transparency	%	100	100	100	100	100	100

Source: Results of environmental parameter analysis at Cemara Beach, Wangi-Wangi Island, Wakatobi.

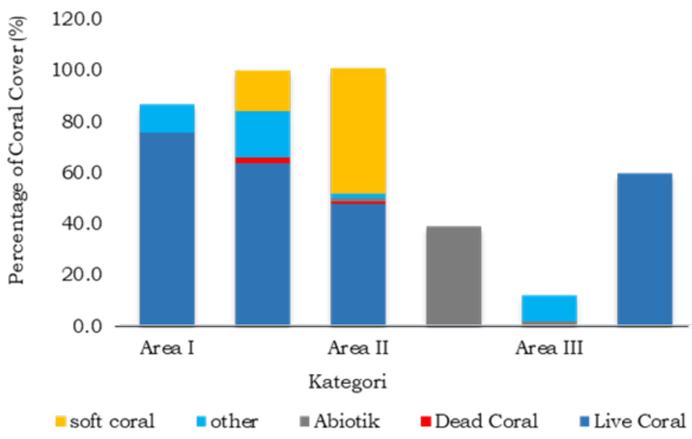

Figure 2. Coverage of coral reef life forms on the coast of Waha Raya Village.

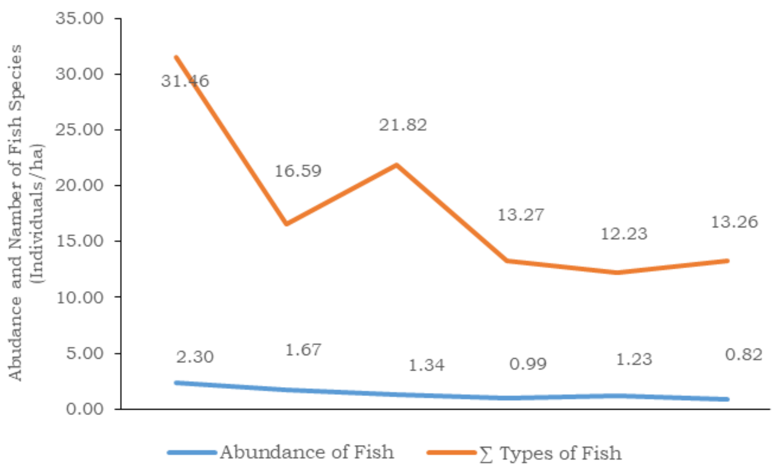

Figure 3. Abundance and number of fish species in the observation area on Cemara Beach, Wangi-Wangi Island, Wakatobi.

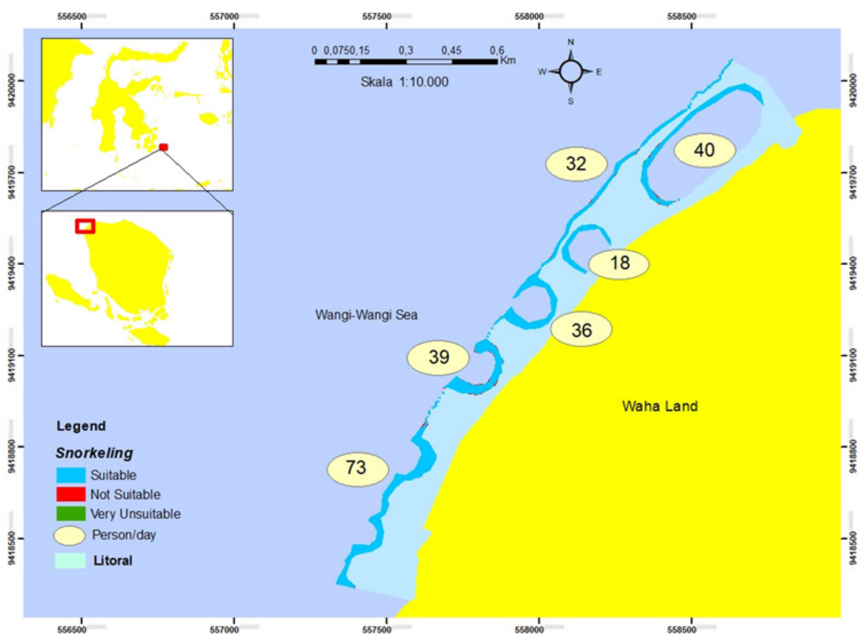

Figure 4. Map of marine ecotourism suitability for the snorkeling category at Cemara Beach, Wakatobi.

Diving tourism

Calculations were performed to determine the suitability class for diving activities based on relevant environmental parameters (Figure 5). Coral reef cover analysis showed that the coral cover value in Area II, with a depth of 8 m, had the highest percentage of 99% (very suitable). In comparison, in Area III, with a depth of 9 m, there was 96% (very suitable), and Area I, with a depth of 10 m, had the lowest percentage value of 93% (very suitable). The results of the observation showed that the coral reefs in the 3 areas were suitable for marine ecotourism activities in the diving tourism category. The allocation of areas for diving tourism activities must consider limiting factors. According to Yulianda (2019), diving activities can be carried out at depths of more than 6–15 m. The results of the observation showed that the depth level ranged from 8 to 10 m.

Regional carrying capacity (RCC)

The development of ecotourism areas must carefully consider their carrying capacity. Carrying capacity can be calculated if the tourism suitability index for the area to be utilized is known, both for snorkeling and diving. Tourism activities on small islands are vulnerable to degradation of natural and human resources (Bentz *et al.* 2013; Friess 2016). Regulating visitor numbers is a crucial effort to adjust the capacity of available space and resources to maintain the comfort and quality of the tourist experience.

Tourist numbers exceeding the available carrying capacity have the potential to degrade the quality of ecosystem services and affect tourist psychological satisfaction (Cisneros *et al.* 2016). This measure also aims to mitigate the impact of ecotourism activities on resource quality and ensure the sustainability of ecosystem services on small islands (Romadhon *et al.* 2014). Yulianda (2019) explains that environmental carrying capacity determines the maximum number of visitors to avoid disrupting nature or humans. Limiting the number of visitors is crucial in managing tourism activities (Domo *et al.* 2017). Area management must consider the maximum land capacity that can support activities without causing environmental damage. Implementing the concept of environmental carrying capacity is expected to reduce negative impacts on ecosystems (Wardani *et al.* 2017). Management based on ecological conservation is a crucial component of natural resource management studies (Koroy *et al.* 2017). Furthermore, scheduling tourism activities alternately and based on time clusters is necessary to avoid overlapping tourism activities. Grouping is based on the time of tourism activities based on the natural resources visited, as an effort to organize tourism (Setyahandani *et al.* 2021). Differences in the use of time spent and time available at each beach can be caused by factors such as environmental conditions and tourist preferences (Putri *et al.* 2020).

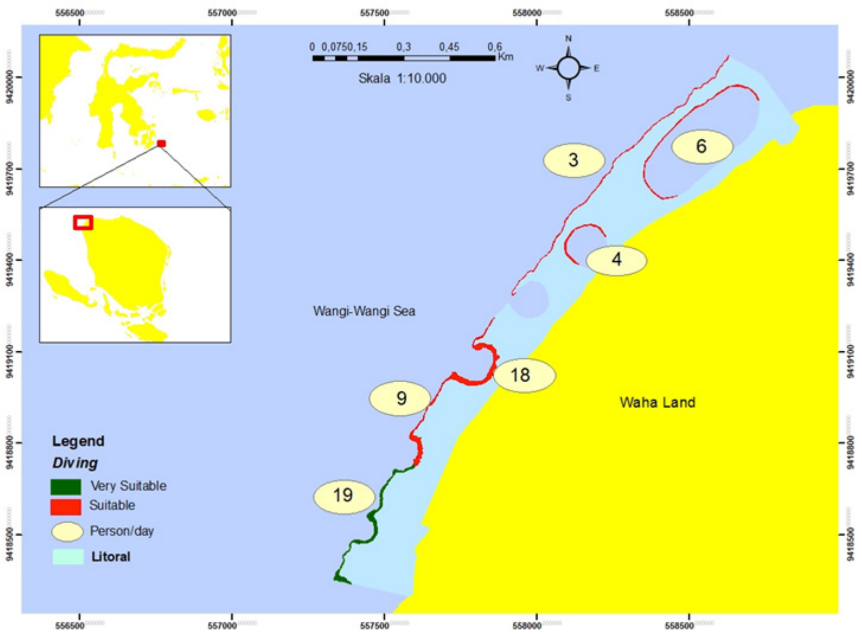

Figure 5. Map of marine ecotourism suitability for the diving category at Cemara Beach, Wakatobi.

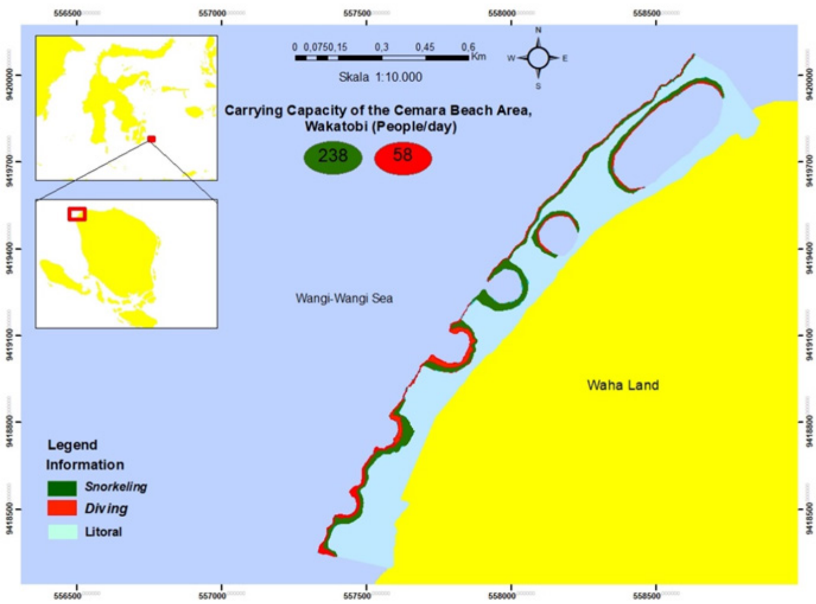

Figure 6. Map of the carrying capacity of the Cemara Beach area, Wakatobi.

The carrying capacity of the marine ecotourism area is based on the results of the land suitability evaluation for each specific activity type with suitability values in categories S1 and S2. The overall suitability class for diving and snorkeling activities at Cemara Beach is included in groups S1 and S2. RCC calculations for marine ecotourism show that the diving category can accommodate 76 people/day with an area of 59,965 ha. The snorkeling area is 19,191 ha with a capacity to accommodate 238 people/day. Analysis of the carrying capacity of marine ecotourism at Cemara Beach shows that this area can accommodate up to 314 visitors per day for two types of tourism activities (Figure 6).

CONCLUSION

The physical and ecological conditions of the waters of Cemara Beach, Wakatobi, demonstrate significant potential for the development of sustainable marine ecotourism. Optimal water temperatures, relatively calm currents, and high water transparency make this area highly conducive to snorkeling and diving. The diversity of coral reefs, with live coral cover ranging from 46% to 76%, and the high abundance of reef fish further enhance the appeal of underwater tourism. Therefore, management based on good governance and environmental carrying capacity is a key aspect in maintaining the sustainability of marine ecotourism at Cemara Beach.

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