The Role of Port Operations in Development of Marine Tourism: The case of Amed-Bali

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Abstract—This paper examines the significance of developing maritime tourism ports as part of coastal tourism and passenger transportation in Amed, Bali. Despite the absence of dedicated facilities for snorkeling and diving enthusiasts, known as marine tourism, Amed has demonstrated a noteworthy growth trend that can be considered a new opportunity for local economic and developmental prospects. To capture this phenomenon and ensure the sustainability of tourism, the establishment of a maritime tourism port is deemed essential. However, building a specialized port solely to cater to marine tourism demands is a rarity due to the complexities involved in managing such a facility from a visitor-centric perspective, especially in the context of marine tourism. This paper presents a systematic and comprehensive analysis and evaluation of the position and development plans for the maritime tourism port. The research aims to analyze, explain, visualize, and convey insights into the pivotal role of port operations in both the development of marine tourism and the facilitation of passenger transportation, particularly within the scope of tourism. Additionally, it explores the economic impact of port services on the region of Bali.

Key word; Amed Beach, maritime tourism port, passenger port.

I. INTRODUCTION

Before the global pandemic (Covid-19), tourism was one of the fastest-growing sectors in the world, providing livelihoods for millions of people. However, the global pandemic brought tourism to a halt, revealing the economic dependence of many coastal nations on coastal and marine tourism. As the world begins to recover and reopen, destinations have an opportunity to capitalize on this moment and invest in more sustainable coastal and marine tourism models that prioritize regeneration and resilience to ensure long-term environmental, economic, and cultural well-being of coastal and archipelagic nations [1].

Post Covid-19, tourist visits to Bali have continued to increase, with Marine Tourism registering significant growth. Activities such as surfing, underwater excursions for divers to enjoy the coral reef and ornamental fish have thrived in high-wave coastal areas. However, the concentration of tourists is mainly limited to the southern coast of Bali, including popular spots like Kuta Beach, Sanur Beach, Mertasari Beach, Seminyak Beach, Suluban Beach, Gunung Payung Beach, Melasti Beach, Pandawa Beach, Geger Beach, Serangan Beach, and numerous others. Even smaller islands around Bali, such as Kelingking Beach, Diamond Beach, and Crystal Bay on the Nusa Penida Island, attract considerable tourist attention. Unfortunately, the northern part of Bali, with its attractions like Lovina Beach, famous for its dolphins, and the western part, renowned for surfing, receive relatively lesser attention. Similar phenomenon happens to Bali's eastern part, which houses Blue Lagoon, despite its vivid blue sky and coastal waters, and destinations like Tulamben, with its diving experiences. To note further also, Pantai Amed, located in the village of Purwa Kerti, Karangasem Regency, Bali, which features several diving attractions but suffers from an imbalance in tourism development due to a concentration of tourism support facilities, including hotels, restaurants, nightlife entertainment, and port facilities, mainly in South Bali [2].

Despite these imbalances, the number of tourists visiting the Amed tourist destination has continued to increase. Amed's primary allure lies in its natural underwater scenery, with well-preserved coral reefs. This has made Amed Beach in Karangasem famous for activities like freediving, snorkeling, and scuba diving. Furthermore, Amed serves as an ideal base for diving in Tulamben, one of Bali's best diving spots, due to its proximity and availability of various public facilities, accommodations, and tour operators. Amed's volcanic black sandy beach with rocks and pebbles along the shore offers a tranquil and serene beach experience for tourists seeking a more peaceful setting (see Figure 1). However, the most critical natural resources of our beaches have not been adequately evaluated in economic terms, and past developments have not been oriented towards sustainable tourism. The existing tourism infrastructure may not be able to keep up with the growing number of tourists, leading to concerns of declining tourism sustainability. In this regard, the development of ports is crucial for sustaining marine tourism, as they serve as a primary hub for maritime enthusiasts and, concurrently, for catering to tourists. A well-developed port is essential for maintaining the sustainability of Amed's tourism, located in the eastern part of Bali, as it offers a solution to reducing income disparities from tourism across the island. The increasing involvement of local authorities brings hope, as it signifies growing awareness that ports are integral to maritime tourism and that their development should align with local authority influence.
Although several studies have been conducted on tourism, maritime tourism ports have not yet garnered significant attention from researchers. To date, there have been no systematic studies carried out to optimize the selection of locations and facilities for maritime tourism ports using various methods such as surveys, rankings, ratings, and Multi-Criteria Analysis (MCA). Maritime tourism ports remain a relatively new discipline, and thus, every academic work or research should contribute to enriching the existing knowledge on the subject. Consequently, in order to assist in optimizing the selection of locations and facilities for ports consistent with sustainable development, the research conducted by the author focuses on the issues, complexities, and importance of the maritime domain, its values, and conservation. The findings confirm the increasing interest in marine tourism over the years, but research agendas still remain relatively limited. Studies often concentrate on highly specific issues but overlook crucial research areas related to the economic relevance and impact of marine tourism, management and marketing issues for maritime tourism companies, as well as the infrastructure and behavior of maritime tourists. Research is also geographically concentrated, with three-quarters of the authors affiliated with institutions in the United States, Croatia, Spain, and Italy, which are also the most widely investigated regions [3]. This opens the way for further studies to fill gaps in the literature and stimulate the establishment of a stronger research framework.

Based on this background, there is a need for research on the development strategies of Bali's coastal tourism destinations oriented towards maritime tourism. Given the size and complexity of the tourism industry, this study adopts a place-based approach for coastal and marine tourism industries, focusing on tourism destinations and decisions that can be referenced to enhance tourist destinations’ sustainability. The research subject discussed in this article is centered on the role of port operations in the development of marine tourism, using the case of Amed Bali to emphasize the significance of developing maritime tourism ports for tourism development in Amed. However, specific ports dedicated solely to coastal and marine tourism entities are rare because it is challenging to manage ports solely from the perspective of tourist needs. Additionally, Amed has been commonly used by tourists as a port to reach Gili islands. Maritime ports, whether universal or specific, offer passenger services, partly or entirely, as embarkation or debarkation points and as locations for customs and passport checks in international traffic, thus fulfilling crucial tourism functions [4]. In other words, there are ports (in addition to ships and operators) that create material and organizational conditions for the development of maritime tourism journeys.

II. COASTAL AND MARINE TOURISM PORT

Over the years, tourism has become an important and dynamic economic sector for the Bali region, providing significant contributions to the region's socio-economic development through income and foreign exchange earnings, job opportunities, the preservation of natural and cultural heritage, and contributing to the realization of Bali's regional development vision - "Nangun Sat Kerthi Loka Bali," which means preserving the sanctity and harmony of Bali's nature and its contents through planned development patterns towards a new era of Bali in achieving a prosperous and happy life for its people, Sakala-Niskala.

In the tourism industry, historically dominated by external influences, the island of Bali has sought to involve the local population to a greater extent, such as in the management of almost all coastal ports that previously served only local residents but, due to tourism, have transformed into tourist ports. Community-Based Tourism (CBT) has thus become a preferred approach to tourism development rooted in the promise of more inclusive opportunities for community empowerment, an idea reflected in the United Nations' Sustainable Development Goals.

The diversity of activities taking place in Bali, both in the coastal areas and coastal waters, involves various interests [5]: (1) the interests of the local community, such as fishermen, salt farmers, and Hindu ceremonies in Bali that emphasize the importance of the sea in purifying worship tools (pratime) known as Melasti. Cremation, known as Ngaben or Pelebon, then spreads the ashes to the sea, (2) the interests of tourism accommodations such as hotels, resorts, restaurants, etc., and (3) the interests for port operational activities. Coastal and marine tourism heavily rely on the quality of coastal and marine ecosystems to attract visitors - but they are also highly vulnerable to threats such as climate change and biodiversity loss. Therefore, a healthy ocean serves as the foundation to support the growth of this sector. Ensuring the long-term health of the sea is crucial to supporting the local community and the economy that depend on these interests. For this reason, the development profile takes into account cultural and sociological requirements, as well as the needs of the local population.

The expected sustainable growth in coastal tourism, encompassing not only the nights spent in coastal regions but also the number of tourists, has implications for land-use planning, primarily through infrastructure development, including ports, to accommodate...
all vessels. This development has led to significant changes in the demand for specialized port services, such as "Coastal and Marine Tourism Ports," which cannot be technically or economically met by the services offered by traditional public ports or specialized terminals. In this context, multi-purpose terminals emerge as a solution [6].

When discussing the effects of maritime tourism on the overall tourism industry, it encompasses all activities or economic sectors and their components that are directly or indirectly related to tourism (Zabica, 2006) [7], including marinas, boat rentals, boat construction and repair, retail trade, hotels and restaurants, land transportation, and various other related activities. Interventions in three areas are required to strengthen the coastal and marine tourism sector: 1) policies, planning, and financing; 2) nature-based infrastructure solutions; and 3) operational practices and diversification.

**Definition of Coastal and Marine tourism**

Often combined, there are two broad types of "maritime tourism": (i) coastal tourism and (ii) open-sea or ocean-based tourism. Coastal tourism encompasses the entire spectrum of tourism, recreational, and leisure-oriented activities occurring in the coastal zone and offshore coastal waters, including the development of supporting coastal infrastructure (Dwyer and Gill, 2019; Hall, 2001) [8]. Open-sea or ocean-based maritime tourism includes activities that take place further away from the coastline, such as sailing and deep-sea fishing. Both forms of tourism hold significant promise for many new destinations, following the same demand and supply factors as the global industry (i.e., economic growth, migration, technology, and globalization).

[9] Defined Coastal, Maritime, and Inland Water Tourism as follows:

- Coastal tourism refers to land-based tourism activities such as swimming, surfing, sunbathing, and other beach recreational and sports activities that take place along the shores of seas, lakes, or rivers. The proximity to the coast is also a prerequisite for providing services and supporting facilities for beach tourism.
- Maritime tourism pertains to sea-based activities such as cruising, yachting, boating, and water sports and includes the respective land-based services and infrastructure.
- Inland water tourism, also known as Inland Waterway Tourism, refers to tourism activities such as cruising, yachting, boating, and water sports that take place in environments influenced by inland water bodies, including lakes, rivers, ponds, streams, groundwater, springs, cave waters, and others traditionally classified as inland wetlands.

According to [10], Coastal Tourism involves the sustainable utilization of coastal environments to attract tourists. Natural elements such as beach sands, waves, and cottages play a crucial role in coastal tourism. Factors such as the quality of beach sands, wave conditions, water depth along the area, safety, visible landscapes, and the ability to establish environmentally friendly cottages are essential in coastal tourism.

The concept of coastal tourism encompasses various tourism, recreational, and leisure-oriented activities that take place in coastal and offshore coastal waters. This includes the development of coastal tourism (accommodations, restaurants, food industries, and vacation homes) and the supporting infrastructure for coastal development (e.g., retail businesses, marinas, and activity suppliers). It also involves tourism activities such as recreational boating, coastal and marine-based ecotourism, cruise ships, swimming, recreational fishing, snorkeling, and diving [11]. Maritime tourism is closely related to the concept of coastal tourism but also includes sea-based tourism activities such as deep-sea fishing and sailing on cruise ships.

According to [12], the composition of the coastal and maritime tourism sector can be distinguished based on: i) location and ii) sub-sectors, as shown in Table 1.

<table>
<thead>
<tr>
<th>Composition</th>
<th>Typologies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>By location</strong></td>
<td>Coastal tourism covers tourism in the coastal area as well as the supplies and manufacturing industries associated to these activities.</td>
</tr>
<tr>
<td><strong>By sub-sector</strong></td>
<td>Beach-based covers beach-based recreation and tourism (e.g., sunbathing, walking in the beach, kite competitions, etc.), and non-beach related land-based tourism in the coastal area (all other tourism and recreation activities that take place in the coastal area for which the proximity of the sea is a condition), as well as the supplies and manufacturing industries associated to these activities.</td>
</tr>
</tbody>
</table>

Source: [12]

In this study, a broad definition of coastal and maritime tourism is adopted, with a focus on destinations and operators. This definition is derived from the United Nations World Tourism Organization (UNWTO) 2017 definition, which categorizes coastal tourism as activities near the coast, such as swimming, surfing, and diving, and land-based tourism activities such as sunbathing, beach hiking, and driving, coastal heritage, recreational and sports activities occurring on or along the coast. Maritime tourism is defined as sea-based activities such as cruising, yachting, boating, recreational fishing, observing marine mammals (including whales and dolphins), and other water sports, including their respective land-based services and infrastructure.
Marine and Coastal Resources Management Project

Marine and coastal resources (MCR) provide vital support to Indonesia's economy, and coastal and maritime tourism are significant at both national and global levels due to their rich biodiversity. According to [13], natural attractions in Indonesia account for 35% of tourist preferences, with 45% preferring ecotourism, 35% choosing maritime tourism, and 20% opting for adventure tourism. The shift from mass tourism to ecotourism or sustainable tourism has taken place in marine environments, offering opportunities for community welfare improvement and conservation, such as through Community-Based Tourism/CBT. CBT is defined as ecotourism that emphasizes enhancing the active role of local communities.

Bali, like other international mass tourism destinations, faces a classic tourism dilemma: tourism relies on culture, but it can also pose a threat to culture. However, Bali’s approach to tourism emphasizes the contribution and control of indigenous communities, setting an example of alternative, decolonial development in an intercultural environment. "Slow Tourism," as advocated by Conway, "can function as an identity promotion in which high-quality offerings, community-level participatory initiatives, and specific alternative tourism can be marketed and supported." This approach promotes well-being based on moral and ethical principles often overlooked in more escapist tourism approaches, allowing tourists to experience their cultures in a slow and respectful manner beyond Western modernity [14].

Bali’s success in developing community-based tourism can also be understood through the concept of "Tri Hita Karana" to evaluate projects [15], which refers to the relationship between people and places created through specific geographical experiences continuously. By empowering local voices and fostering self-governance through strategies like CBT, community participation is encouraged, and the community’s capacity to achieve their goals is strengthened without interference from external parties or government intervention.

Currently, most of the existing coastal ports in Bali grow, develop, and are managed by local communities or local villages, but their management lacks professionalism, and supporting facilities are limited. Nevertheless, the number of tourists using these ports continues to increase. On the other hand, large-scale port developments built by the government have experienced complete failure, such as the Tanah Ampo port in Karangasem. According to research conducted [16], the failure of Public-Private Partnership (PPP) in the development of the Tanahampu tourism port in Bali is caused by several factors, including: (1) procurement aspects, two failed tenders resulted in no interested parties submitting bids; (2) legal aspects, a power struggle between the local government (penada) and the Central Government. The local government was reluctant to hand over assets to the central government due to reasons related to regional autonomy; (3) consortium aspects, the unclear PPP model to be implemented; as the government was tendered with the BOT model, while most of the infrastructure had already been built by the government; (4) social and cultural factors, the community demanded up to 30% of the workforce during the operation, which may not necessarily match the required skills, and there was no clear form of cooperation in handing over land owned by the local community in the PPP.

According to [17], the situation is mainly caused by the lack of (i) integrated approaches to planning and managing coastal areas; (ii) information and/or data underlying resource management decisions; (iii) transparency in resource allocation; and (iv) involvement of local governments and communities in resource management.

According to [15] and [18], research investigates the "social empowerment" resulting from the interaction between actors in Community-Based Tourism (CBT) and the factors that support or hinder the empowerment of residents through CBT in rural Bali. This paper presents empirical evidence from an ethnographic study in three villages at various stages of tourism development. Through the conceptualization of generative power, embedded in the somewhat hierarchical socio-cultural context of Bali, this paper contributes to a new understanding of empowerment in CBT, particularly in terms of how partnerships and collaborations create space for community empowerment and greater inclusion for sustainable CBT development, aligning with Agenda 2030.

Due to varying interests, especially in public governance at the local and regional levels, and considering the highly localized nature of tourism, one set of recommendations will not universally applicable to all destinations or industry players. Similarly, the emphasis on sustainability, regeneration, and resilience should be determined based on local priorities. For some, this may involve a focus on the restoration and recovery of local ecosystems to offer new opportunities for ecotourism and coastal resilience. For others, it may require a novel approach to revitalize local traditional knowledge and culture through new tourism offerings and partnerships with local communities and indigenous populations [1]. Thus, involving local communities is crucial due to their strong knowledge of the natural and cultural aspects of their habitat. The success of CBT is heavily driven by these essential aspects: appreciation of community and culture, benefits to the community and economy, and sustainability [8].

An analysis of characteristics that present the environmental impact and business activities relevant to the development of coastal tourism ports in line with the principles of sustainable development is essential. This includes achieving quality standards, appropriate location planning, reaching the level of building construction, and employing sustainable technical and technological conditions for development.

Marine Tourism Port infrastructure and Superstructure

Infrastructure refers to the fundamental physical and organizational structures required for the operation of a society or company. In the context of port infrastructure, it is typically divided into two categories: 1) basic infrastructure, and 2) operational infrastructure. Basic port infrastructure includes the harbor channel (maritime access) to accommodate vessel operations. It usually comprises the port entrance, harbor protection (including breakwaters and coastal defenses), and easy access to the port for land transportation. Additionally, it includes rail connections between the hinterland and the port. The operational infrastructure of a port involves tuning and the port basin. It often features revetment coastal protection structures positioned on the edge or slope to absorb the energy of incoming water. The operational infrastructure also includes dock walls, jetties, and finger piers. Furthermore, a port's operational infrastructure includes patrol vessels and firefighting equipment for emergency situations. Dry docks are also present for ship repairs. On the other hand, the Superstructures include terminal lighting, parking areas, open storage areas, covered warehouses, offices, etc. [6]. It emphasizes the general and specific requirements of structural facilities needed for planning and
designing port facilities to accommodate vessels for docking, mooring, loading, and unloading cargo, as well as embarking and disembarking passengers, commonly known as port terminals. Specific requirements cater to specialized ports, such as container terminals, dry bulk terminals, liquid bulk terminals, etc.

Investment and development of infrastructure are typically carried out by port authorities, while investment in superstructures is handled by terminal operators, many of which are private companies that lease the terminal. All these activities are necessary for the planning, development, and operation of the port and constitute part of the expenses incurred. In the context of ports, infrastructure refers to terminal facilities, which are non-moving port facilities such as docks, navigation channels, lane systems, and terminal buildings. On the other hand, superstructures encompass both moving and non-moving facilities, such as crane systems, warehouses, and industrial equipment.

When considering the fundamental functions of a port, one can identify not only major commercial ports but also specialized ports such as passenger ports or marine tourism ports. However, the latter type of specialized port (marine tourism) is rarely present as a separate entity, as it is challenging to manage a port solely from the perspective of tourist needs, especially for marine tourists [4].

Considering the above, it can be stated that:

- First and foremost, port services, regardless of the port's nature, encompass ship services (such as pilotage, towing, mooring, bunkering, waste disposal, etc.), and
- Secondly, both universal and specialized maritime ports offer passenger services, either in part or entirely (as embarkation or debarkation points, as well as locations for customs and passport inspections in international travel) – thus fulfilling essential tourism functions. In other words, there are ports (alongside vessels and their operators) that create the material and organizational conditions for the development of marine tourism travel.

Furthermore, passenger ports can be further classified [19]: (a) Coastal passenger ports, which serve national and international coastal shipping; (b) Cruise ports, which serve cruise shipping; and (c) Hybrid passenger ports, which serve both coastal and cruise shipping. The classification employed in the research or planning is Coastal passenger ports, which offer passenger services, either in part or entirely (as embarkation or debarkation points) for the development of marine tourism travel.

As pleasure boaters, the clients (users) of maritime tourism ports have access to new information, value orientation, and needs. Therefore, the evolving business processes in maritime tourism ports should be based on flexibility, adaptability, and the creation of new maritime services [20]. Shaping such maritime needs is followed by the impact on traditional offerings that are easily recognizable, leading to significant changes in port offerings and additional services. Considering the aforementioned facts, it can be concluded that the requirements of maritime tourism ports encompass offerings that can be tailored to each pleasure sailor, which implies appreciation for marketing approaches, sustainable development principles, and economic profitability in the planning of maritime tourism port development.

The subject of the research discussed in this article is focused on analyzing the characteristics that demonstrate the impact of maritime tourism port development on the business activities of the tourism industry, in line with sustainable development principles. Hence, based on the research conducted so far on the possibilities and limitations of maritime tourism development, the authors illustrate a model for the development of maritime tourism ports, incorporating several significant development elements: human resources, achievement of quality standards, location planning, construction level attainment, and adequate technical and sustainable development technology conditions.

**Site and Locations**

Maritime activities can develop and be located solely in coastal areas, and their structure and position significantly impact the selection and performance of business operations. Areas where maritime activities thrive are naturally vulnerable and face many challenges in the use of natural resources. Any form of new economic activity in coastal areas demands evaluation and reorganization of these areas. Therefore, in planning and selecting the optimal location, facilities, and best services for maritime tourism ports, it is crucial to enhance the management of maritime tourism. This can be achieved through the application of appropriate decision-making procedures.

The socio-demographic results of maritime tourism port development are mostly positive and can be summarized as follows [23]:

- By constructing maritime ports, a service system is implemented that can be compared technically and technologically with advanced maritime nations.
- Established maritime ports can be classified as attractions within the overall tourism offerings. They serve as extensions of existing infrastructure and introduce new concepts of urbanism and environmental quality.
- Building maritime ports has a positive effect on employment growth in the areas where they are constructed (Luković and Kovačić, 2007), in [23].
- New opportunities for indirect benefits emerge, such as improved living standards and regional infrastructure, which are crucial at both local and regional levels.
- Constructed maritime ports influence the general transformation of the areas where they are built by expanding offerings to meet the needs of seafarers.
- The development of maritime ports contributes to enhancing the quality of life for the local population.

Marine tourism has a direct influence on the increase of accommodation capacity in coastal areas. It not only affects but also drives the development of various service activities directly or indirectly related to the need to provide occasional and diverse services to seafarers.

Undoubtedly, localization becomes the most determining factor for the disparities and specific characteristics of small and larger ports. Similar to larger ports, the road access to Amed port remains an issue. Specifically, referring to the quality of roads and the
number of parking spaces. It is important that despite the unquestionable weak points, the advantage of localization also determines the smaller ports in the region to not only be beach tourism centers (e.g., cruise boating) but also deep-sea tourism hubs.

### III. ANALYSIS DATA AND CASE APPLICATION

Given the size and complexity of the tourism industry, this study uses a place-based approach for the coastal and marine tourism industry, with a focus on the operation of tourism ports as a significant component of coastal and marine tourism. It attempts to reveal the potential of coastal and marine tourism in Amed. In this sense, decisions that can be taken by tourist destinations to enhance their sustainability are explored. Tourism ports represent one of the most significant subsectors of coastal and marine tourism. However, this report is beyond the scope of comprehensive discussion regarding the sustainability of the entire shipping industry. It discusses opportunities to enhance the sustainability of cruise destinations, which will have an impact on the sustainability of the tourism industry, but does not include recommendations specifically aimed at parent companies and shipping operators.

#### Method

In this research, a qualitative research method was chosen, and a semi-structured interview technique was employed. Semi-structured interviews, which lie between structured and unstructured interviews, are the most widely used interview technique. Semi-structured interviews have predetermined main topics for the discussion, but without a fixed sequence of questions, allowing for the generation of new questions during the interview. This type of interview allows for additional questions to be created during the interview process and is often used in exploratory research. Some questions may be omitted depending on the situation, and the order of questions may change during the conversation (Yükse, 2004) in [21]. This method is recognized as the most effective way to gather general and technical information from participants about selected topics, ideas, comments, attitudes, and behaviors, as well as to study causes and effects. The interviews were conducted face-to-face with port managers, including village officials, tourists, hotel and restaurant owners/managers, and local community members in Amed. Pre-determined semi-structured questions were presented to ship operators or owners.

#### Analysis on the Current State of Tourism in Amed

Although maritime tourism has been recognized in regional plans and visions, it has not yet been significantly developed; nevertheless, several potential locations have been identified. The development is based on the Minister of Transportation Decree No. 432 of April 25, 2017, concerning the National Port Master Plan (Rencana Induk Pelabuhan Nasional - RIPN), which designates Amed Port as a Local Feeder Port (Pengumpuan Lokal - PL). According to Provincial Regulation No. 3 of 2020 on Amendments to Provincial Regulation No. 16 of 2009 of Bali, up until 2029, to enhance public services in infrastructure development, the regional infrastructure system development strategy states that the Amed area serves as a local feeder port for passenger and cargo transportation by traditional boats. Additionally, based on Regional Spatial Planning (Rencana Tata Ruang Wilayah - RTRW) of Karangasem Regency No. 17 of 2012, Amed Port in Bali is categorized as a local feeder port for maritime transport. Legally, Amed Port in Bali is in accordance with the spatial planning of Bali Province and the detailed spatial planning of Karangasem Regency. Based on the Draft Zoning Plan and Coastal Area of Small Islands (Rencana Zonasi dan Wilayah Pesisir Pulau-Pulau Kecil - RZWP3K), which is still in draft form under discussion in Bali Province, the entire coastal area of Amed has been mentioned as a local port according to RIPN.

Amed Beach is situated on the east side of Bali Island, precisely in Abang District, Karangasem Regency, Bali. It is approximately 97 kilometers away from I Gusti Ngurah Rai International Airport in Denpasar, with a travel time of approximately 2.5 hours. Although some infrastructure objects are in somewhat poor condition (both the port itself and access from one port to another), the overall situation in passenger-tourist traffic is improving, and actions are being aligned with contemporary marine tourism development trends. However, new approaches to economically activate the port must be pursued, with a greater emphasis on passenger traffic services, particularly tourism services. Firstly, an increase in demand for sea travel can be anticipated due to: 1) the utilization of market niches and 2) the expansion of marine tourism product coverage. Moreover, considering various locations to establish a marine tourism center on Amed Beach, one can demonstrate the reasons to visit the area.

#### Tourism Traffic in Ports

The most significant external factor of port development as a tourism center is the demand for port services, evident from ship visits and passenger traffic. The number of ship arrivals and passenger traffic per port service in Amed is a crucial indicator. Data in Table 2 presents the passenger traffic at Amed port.

<table>
<thead>
<tr>
<th>Description</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Average/Year</th>
<th>Average/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port of Call</td>
<td>3,480</td>
<td>3,268</td>
<td>2,684</td>
<td>3,144</td>
<td>9</td>
</tr>
<tr>
<td>GT</td>
<td>43,551</td>
<td>71,902</td>
<td>69,778</td>
<td>61,743</td>
<td>169</td>
</tr>
<tr>
<td>Passengers board</td>
<td>159,063</td>
<td>219,901</td>
<td>194,079</td>
<td>191,015</td>
<td>523</td>
</tr>
<tr>
<td>Passengers get off</td>
<td>86,320</td>
<td>149,153</td>
<td>154,399</td>
<td>129,957</td>
<td>356</td>
</tr>
<tr>
<td>Passengers get on and off</td>
<td>245,384</td>
<td>369,054</td>
<td>348,479</td>
<td>320,972</td>
<td>879</td>
</tr>
</tbody>
</table>

Source: KSOP Padangbai dan KSOP Benoa Tahun 2021

The passenger data for the last three years at Amed port, from 2016 to 2018, are as follows: 60,114 people, 56,322 people, and 39,367 people, respectively. The ship arrivals during the same period were as follows: 1,072 ships in 2016, 1,058 ships in 2017,
and 566 ships in 2018. The Gross Tonage (GT) of ships during the same period were: 9,393 tons in 2016, 17,359 tons in 2017, and 12,838 tons in 2018.

Amed tourism port potential

Amed, a small underwater paradise in East Bali, is considered as such due to its unique combination of coastal and sea interface resources. The allure of Amed lies in its beautiful beaches, scenic landscapes, and rich biodiversity, with its main attraction found in the coastal and underwater beauty. The Amed coastline stretches for 14 kilometers, encompassing seven villages: Jemeluk, Amed, Selang, Lipah, Bunutan, Aas, and Banyuning. It has become a dominant tourist destination, particularly renowned for its maritime tourism, offering various attractive marine locations (see Figure 2), including well-preserved colorful coral reefs. There is also a sunken Japanese patrol boat from World War II, located just 20 meters from the shore of Amed Beach. Many tourists enjoy swimming and diving in this shipwreck site, fascinated by the underwater scenery. Lucky visitors might even encounter turtles, rays, and reef sharks. Amed has strategically positioned the maritime tourism industry as a crucial interest, devising development policies and defining the government's role in the advancement of maritime tourism, particularly for vessels longer than 12 meters (see Figure 3). This is the reason why, based on the research conducted so far on the possibilities and limitations of maritime tourism development, the author illustrates a model for the development of maritime tourism ports, based on significant development elements: continuous professional training for human resources, achieving quality standards, arranging locations, attaining construction levels, and ensuring adequate technical and sustainable development technologies.

![Figure 2 Amed Coastal Area](https://www.bing.com/images/search?view=

Maritime tourism, also known as water tourism, combines sailing and boating activities. Tourists can travel from port to port on cruise ships or join other vessels. The government program of Bali Province aims to create a tourist attraction by offering tours around Bali through sea routes, which will increase the number of passengers embarking and disembarking at Amed port. The Planning Consultant assumes that 40% of Amed port's passengers will be obtained from those who previously used the Sanur port for touring around Bali. Passenger data from Sanur port for the years 2016 to 2018, assuming 40% of the existing passengers, are as follows: 185,270 people, 312,732 people, and 309,112 people.

The Significance and Role of Marine Tourism Ports in Tourism and Economic Development

The success or failure of a port's development depends on whether there is a systematic and detailed development planning. Each port development plan should align with its business policies; however, various external factors from the environment need to be considered [22]. External factors (comprising natural-spatial, socio-cultural, legal-political, and economic environments) often lie beyond the scope of a port's business policies, even though they have highly interactive long-term relationships. Therefore, in its development, while keeping in mind the principles of sustainable development as one of the most crucial external factors, maritime tourism ports can formulate models and development plans that enhance efficiency not only in their business processes but also in...
environmental preservation and the improvement of quality of life standards. This new dimension of maritime reality is also evident in the advanced European maritime tourism ports and can be reflected in the overall level of development achieved and in the constant process of flexibility and adaptation to changes in the environment [20].

The specific significance of maritime tourism in promoting the overall economic development of a country is manifested in its numerous advantages. Maritime tourism has a high multiplier effect, making it one of Amed's most competitive products in Bali. Regarding hotel capacity, the turnover of invested capital is much more dynamic. Investments in maritime tourism are lower in comparison to other tourism branches while achieving a return on invested capital twice as fast, as it attracts financially stable quality clients, thus promoting the country's image and strengthening its reputation. Compared to its direct competitors in the Bali Sea maritime market, Amed is relatively abundant in important benefits for the development of maritime tourism.

Maritime tourism is considered one of the most stimulating forms of recreational tourism. Thanks to its multiplier effect, it contributes to a richer and more versatile quality of life, urbanization, and regional planning, thus paving the way for other effects, directly or indirectly related to the overall humanization of tourist spaces. Through the consumption of pleasure sailing and especially by foreign visitors, numerous direct and indirect effects (Boškovic et al. 2006) on individual economic subjects and on the country as a whole are achieved. For instance, maritime tourism ports, especially marinas as complex facilities offering various services, often yield a higher return on invested capital compared to other forms of tourism investment. Furthermore, the development of maritime tourism ports also involves constructors, shipbuilders, and other industries through the sale of their products to sailors, complementing the hospitality and commercial services provided. Maritime tourism contributes to the overall economic development of a country or region by fostering their growth and development through current and horizontally related activities (tourist excursions, diving tourism, photo safaris, services, etc.) or vertically related activities (crafts, shipbuilding, etc.). All these activities contribute to the growth of local employment, which is essential for rural economies. From a social perspective, maritime tourism's contribution is evident in the transfer of information, knowledge, culture, and lifestyle. In this way, maritime tourism has a significant impact as foreign vessels and yachts, along with their equipment, attract local inhabitants, thereby encouraging the development of ideas, creativity, and free thinking. The impact of maritime tourism on the overall social development of an area or country mainly influences the education of the youth. From the recipient country's point of view, maritime tourism represents a vital source of foreign exchange and is considered a particular form of export (known as invisible export). Foreign tourism spending in any country contributes to the host country's balance of payments. Tourism revenues are a crucial source for developing countries, including Indonesia.

Protecting local marine resources is one of the most pressing needs in promoting sustainable tourism. Sustainable coastal tourism can help preserve artisanal fishing communities, enable subsistence fishing, protect the environment, and positively contribute to sustainable economic development [8]. Interventions in three areas are required to strengthen the coastal and maritime tourism sector: 1) policy, planning, and financing; 2) nature-based infrastructure solutions; 3) operational practices and diversification.

The planned location for the development of Amed Port is in Purwa Kerthi Village, Amed waters, Karangasem Regency, Bali. Currently, at Amed Beach, although there is no formal port (in the sense of lacking port facilities such as a dock, passenger terminal, etc.), there are already passenger embarkations and disembarkations in the Jemeluk Bay area, with five operating boats recorded. The Padangbai Port Authority (KSOP) Padangbai is frequently used by tourism operators to obtain permits for transporting their guests to neighboring islands such as Gili Terawang, Gili Meno, Gili Air, and the Senggigi tourist destination.

Considering Bali's market imbalance, Amed Port is situated in the periphery, which means that without improved access to the hinterland, they could also lose passenger traffic. This implies that achieving a favorable position for Amed Port in Bali's maritime tourism sub-market is a serious challenge for many economic participants and tourism organizations alike.

IV. CONCLUSION

The above analysis and comments regarding the significance and role of maritime tourism ports in tourism and economic development, along with the development position and potential of Amed Port in Bali's maritime tourism landscape, allow us to formulate the following general conclusions:

- The trend in maritime tourism development emphasizes the crucial role of seaports as significant tourism centers;
- The current analysis of Amed Port indicates that it is being planned and developed to become a key maritime tourism hub in the region, with a growing trend in passenger traffic;
- Pleasure boaters, as clients and users of maritime tourism ports, highly value the location and facilities provided by these ports.

Sustainable strategies are essential in formulating plans for sustainable coastal tourism management to mitigate the degradation of coastal communities, considering the local physical, economic, and cultural environments, and involving non-coastal tourism-related local industries.

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