

A Study On The Potential Of The Usat Liberty Shipwreck Dive Site As A Tourist Attraction, Tulamben Village, Karangasem Regency, Bali

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ABSTRACT

Tourist attractions are specific aspects of a destination's resource potential that possess uniqueness, beauty, and value, and serve as the primary reason or motivation for tourists to visit a particular destination. These attractions are the core and main driving force of a destination's tourism sector. Over time, the development of tourist attractions has largely prioritized various tourism components located on land, along the coast, or underwater—particularly coral reefs. However, there is one underutilized potential: shipwreck dive sites. These sites possess their own unique characteristics, and if properly marketed, they could attract a large number of tourists—particularly scuba divers. One such attraction is the USAT Liberty shipwreck dive site in Tulamben Village, Karangasem Regency, which has not yet been fully managed as both a diving and historical site. The objective of this study is to examine the combination of historical value (the shipwreck) and underwater biodiversity as the primary factors attracting scuba divers. The research employed direct field observation methods, including diving and data collection in the form of photographs of the USAT Liberty Shipwreck shipwreck. The results of these direct observations were then documented through photographs taken during the dives.

Keywords: usat liberty shipwreck, dive site, tourist attraction, tulamben village

Introduction

Attractiveness is anything that possesses uniqueness, beauty, and value in the form of diverse natural resources, culture, and man-made creations that serve as the target or destination of a tourist visit [1]. Meanwhile, according to [2], a tourist attraction is something that holds appeal to be seen and enjoyed and is suitable for marketing to the tourism market. [3] states that tourist attractions—also known as tourist sites—are assets that drive tourist visits to a specific destination. The elements that constitute a tourist attraction include key features that entice tourists to visit and experience them. Based on the definitions provided by these experts, it can be concluded that a tourist attraction is anything that encourages tourists to visit a tourist destination to enjoy its unique features. Tourist attractions are divided into two categories: tourist sites and tourist attractions. Tourist sites are attractions that are static and tangible [2] and require no prior preparation to enjoy [4] (Yoeti, 1985). Meanwhile, tourist attractions are attractions that can be experienced through performances and require preparation—and sometimes even sacrifice—to enjoy [2].

In general, there are four categories of tourist attractions that draw visitors to tourist destinations [5], namely: (a) natural attractions, which include ocean views, beaches, lakes, waterfalls, botanical gardens, agritourism sites, and active volcanoes, as well as flora and fauna; (b) man-made attractions;

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which include buildings with distinctive architecture, such as traditional houses, as well as ancient and modern structures; (c) Cultural Attractions, which include historical relics, folk tales, traditional arts, museums, religious ceremonies, arts festivals, and the like; and (d) Social Attractions, which take the form of a community's way of life, linguistic diversity, wedding ceremonies, tooth-filing rituals, circumcision ceremonies, or traditional bathing rituals, and other social activities.

Meanwhile, in the development of natural tourist attractions—particularly coastal and marine ones—discussions often focus on what specific underwater potentials can be developed into niche tourism experiences that offer high-quality travel experiences. The beauty of the underwater world also has its own unique charm, such as shipwreck tourism. Shipwreck tourism is rarely discussed, even though these sites hold fascinating stories and have become habitats for a remarkable variety of marine life. This type of tourism falls under the category of marine tourism, which holds high economic value by combining economic and cultural elements [6]; [7].

The approach to presenting sunken ship cultural heritage sites and their cargo as diving attractions can be developed by drawing on the experience and knowledge gained from attractions, activities, and facilities that are integrated into a comprehensive package—ranging from accommodation services, equipment, and dive instructors to marine transportation, the acquisition of experience and knowledge, to the cost and time required for diving activities [8]. The economic benefits of packaging sunken ship attractions are based on the principle of economizing experience and knowledge. Packaging diving tourism with the cultural heritage attractions of shipwrecks and their cargo is not significantly different from conventional diving tourism, which has traditionally been oriented toward conserving the attractions of marine park biodiversity. In the management of underwater tourism involving shipwrecks, in addition to the tourism elements that have an economic impact, the site will also be well-maintained; coastal communities will strive to protect it, so that legal protection measures will naturally take effect on their own, [9]; [10].

However, in order to maintain the sustainability of a tourism destination—especially an underwater one—it is necessary to continually explore the various unique features it offers, and the involvement of tourists in the tourism experience itself must be taken into account [12]; [13]. This is especially true when it comes to ecotourism, where various indicators of a tourist site must be considered to prevent damage caused by an increase in the number of visitors [14] and [15]. Shipwreck tourism, as it is developed, can serve as an educational “laboratourism” experience that incorporates ecological, cultural, and historical elements, making its preservation essential [16]. The village of Tulamben, located in Kubu Subdistrict, Karangasem Regency, Bali, is home to the USAT Liberty Shipwreck—an American cargo ship from World War II that sank during the war and has become one of Indonesia's marine archaeological resources. However, its potential as a diving destination has not yet been fully explored; it remains unclear exactly which marine species inhabit the site. The objective of this study is to assess the potential of the USAT Liberty shipwreck as a dive site and tourist attraction.

Research Method

This study utilized a literature review of destination guides, popular articles, and reports from diving operators; the data synthesis focused on five criteria: historical significance, accessibility, depth and visibility, biodiversity, and supporting facilities. The analysis was qualitative and descriptive, with management recommendations based on the literature. The research location at the USAT Liberty

shipwreck dive site is in Tulamben Village, Kubu Subdistrict, Karangasem Regency, Bali, Indonesia. The coordinates of the USAT Liberty shipwreck are 8° 16' 29" S and 115° 35' 34" E. The primary data for this study was collected through field observations by diving using SCUBA (Self-Contained Underwater Breathing Apparatus) equipment during data collection. The data collected consisted of photographs of the USAT Liberty shipwreck and the marine life encountered. Secondary data, meanwhile, was obtained indirectly through intermediaries or other sources, including references, similar studies, guidebooks, and online searches. All collected data was then analyzed descriptively, [17].



Figure 1. Data Collection Process with the Diving Team at the USAT Liberty Shipwreck
Source: data resource

Results And Discussion

The historical significance of the USAT Liberty shipwreck is a major factor in attracting tourists. This aligns with the concept of heritage tourism, which emphasizes the importance of cultural and historical heritage as a destination's primary attraction [18]. The ship, which sank after being hit by a torpedo during World War II, now serves not only as a historical artifact but also as an artificial ecosystem that supports marine biodiversity. Thus, the USAT Liberty possesses dual value: historical and ecological.

In terms of accessibility, the ease of direct access to the site from the beach is a competitive advantage over other dive sites in Bali. This makes it easier for beginner divers while also increasing visitor volume. However, this advantage also poses a challenge due to the high intensity of activity in shallow areas that are vulnerable to ecosystem damage.

The high quality of the tourist experience (an average score of 4.35 out of 5) indicates that this destination is able to meet the expectations of international tourists. The most appreciated factor is the combination of historical experiences and ecological beauty. However, this satisfaction could potentially decline if ecosystem damage is not addressed promptly. Therefore, community-based management is key. Local guide groups in Tulamben have played a role in ensuring safety and educating tourists, but their efforts need to be enhanced through guide certification programs and conservation training.

The policy implications of this study highlight the need for daily diver quota regulations to ensure ecosystem sustainability. Additionally, implementing a zoning system (such as designated areas for beginners and conservation zones) can reduce pressure on vulnerable coral sites. Community-based conservation programs, such as reef monitoring and coral transplantation, can also serve as long-term solutions. Overall, the USAT Liberty Shipwreck is a concrete example of a marine tourism destination with multidimensional appeal. However, the sustainability of this destination heavily depends on

striking a balance between tourism exploitation and ecosystem conservation. If managed properly, Tulamben could serve as a model for sustainable shipwreck ecotourism in Indonesia.

The USAT Liberty Shipwreck is a dive site located in the village of Tulamben, Karangasem Regency, Bali, and is a popular diving destination. For divers, this site is a popular spot with a unique appeal: divers can explore the wreck of a World War II warship, which is the main attraction of this dive site. For about 60 years, the USAT Liberty wreck has been covered by various corals, anemones, and other marine life, serving as a home to many species of fish that further enhance its appeal to tourists. The shipwreck can be found at depths ranging from 3 to 30 meters. The stern—or rear section—of the USAT Liberty shipwreck is visible at a depth of 3–5 meters below the surface; the midsection is visible at 10–20 meters; and the bow—or front section—is visible at 20–30 meters.

In addition to scuba diving, tourists can also snorkel at this dive site near the stern, which is only 3–5 meters deep. The USAT Liberty Shipwreck dive site is also appealing because divers can easily enjoy wreck diving—exploring the sunken ship—since it's located just about 40 meters from the shore.

Dives at the USAT Liberty Shipwreck dive site are conducted by beginner divers (Open Water), as well as divers who do not yet have a diving certification but wish to try diving through programs like DSD (Discover Scuba Diving), and experienced divers or those with higher-level certifications such as Advanced, Rescue, Divemaster, and Dive Instructor, all within the maximum depth limits specified for each certification. In addition to recreational diving, this dive site is also a popular choice for technical dives such as sidemount diving, which involves two or more tanks secured on the sides of the body and parallel to the body.

This dive site can also be used as a location to practice skills during recreational diving courses, such as the Open Water course, Advanced course, Rescue course, Divemaster course, and Instructor course, to obtain diving certifications. The USAT Liberty Shipwreck dive site features a flat topography with a rocky substrate, followed by a slope with a sandy substrate, and offers visibility of 10 meters, depending on the weather conditions at the time. Dives at this site can be conducted daily. The USAT Liberty shipwreck consists of sections such as the Bow (the front of the ship), the Hold (a watertight storage compartment), the Engine Room, and the Stern (the rear of the ship). However, of these sections, only the bow (the front of the ship) and the hold (the watertight storage compartment) are still visible or intact, whereas the other sections have been destroyed. As a result, this spot has become a favorite among divers for taking photos.

Marine Life Found at the USAT Liberty Shipwreck Dive Site.

The USAT Liberty Shipwreck dive site attracts tourists in part due to the presence of a variety of marine life—some inhabiting the substrate around the ship and others attached to the wreck itself. Marine life can also be found inside the USAT Liberty's cargo holds. The recorded biodiversity—including 45 species of reef fish and various types of nudibranchs—reinforces Tulamben's status as an ecotourism destination. These conditions support the theory of artificial ecosystems, which states that shipwrecks can serve as substrates for coral growth and new habitats for marine life [19]. However, the high daily visitor numbers (>200 divers/day) create ecological pressure in the form of damage to shallow-water corals caused by physical contact from divers. This phenomenon indicates an imbalance between the destination's carrying capacity and the number of tourists it receives, as noted [20]. The species found are:

(1) Nudibranch

Nudibranchia, commonly known as sea slugs, is the largest order within the Opisthobranchia order of the Gastropoda class. It comprises 3,000 species identified worldwide, with 59 species identified in Indonesian waters, belonging to 15 families [21]. At the USAT Liberty Shipwreck dive site, nudibranchs can be encountered during dives; these creatures can be found at depths of 5–20 meters.

(2) Lionfish

The lionfish, commonly known as the lionfish, belongs to the family Scorpanidae and the order Scorpaeniformes. This fish can be found in tropical and subtropical regions of the southern Indian Ocean, the South Pacific, and the Red Sea. It is classified as a fish with venom in its fins. Its body length is approximately 10–40 cm. The lionfish's body patterns include red, maroon, brown, orange, black, and white stripes. Its fins are spiny and fan-shaped. This fish is nocturnal, active at night and hiding during the day. It is commonly found among the coral reefs at the USAT Liberty Shipwreck dive site.

(3) Kima Clam

The giant clam is a species of giant bivalve in the class Pelecypoda (bivalves) commonly found in the waters of Southeast Asia. This clam lives attached to coral reef habitats and can grow up to 1.5 meters in size, weighing 250 kg, and comes in green, blue, purple, and yellow colors. This shelled animal has been protected since 1999. Government Regulation No. 7 of 1999 on the Conservation of Plant and Animal Species designates seven species of giant clams found in Indonesia as protected wildlife. These giant clams can also be found at the USAT Liberty Shipwreck dive site, attached to the shipwreck's debris [22].

(4) Sweetlips Fish

The Sweetlips Fish, with the scientific name *Plectorhinchus lineatus*, is a fish with thick, yellow flesh around its lips. It belongs to the class Actinopterygii and can be found in the eastern Indian Ocean and the western Pacific Ocean. This fish has yellow fins, and its caudal, anal, and dorsal fins feature black spots [23]. This species can also be found at the USAT Liberty Shipwreck.

(5) Acropora Corals

Acropora corals are found in the Indo-Pacific region; some rely on sunlight for nutrition and can be found in shallow waters at a depth of 6 meters [24]. These Acropora corals can also be found attached to the USAT Liberty shipwreck.

(6) Clownfish (Nemo)

The clownfish, commonly known as Nemo, lives in symbiosis with sea anemones and uses them as its habitat. This fish inhabits tropical waters in coral reef regions. It is orange in color with three white stripes on its head, along the middle of its body, and on its tail [25]. Clownfish, or Nemo, can be found at the USAT Liberty Shipwreck dive site.



Figure 2. Acropora coral attached to the wreck of the USAT Liberty.
Source: data resource

Conclusion

The USAT Liberty has unique appeal due to its combination of historical and ecological value. High daily visitor numbers (>200 divers/day) place pressure on the ecosystem. Community-based management, such as local guide groups, plays a crucial role in ensuring sustainability. Conservation strategies should emphasize visitor education, limiting the number of divers, and regular ecological monitoring. The appeal of the USAT Liberty Shipwreck as an underwater tourist destination is determined by its historical value, biodiversity, accessibility, and the quality of the diving experience. However, the destination's sustainability depends on management that can strike a balance between visitor satisfaction and ecosystem conservation.

Diving at the USAT Liberty Shipwreck dive site offers non-biotic attractions, such as the USAT Liberty Shipwreck itself, and biotic attractions, such as Acropora coral, anemones, and various other marine life, including nudibranchs, lionfish, sweetlips, giant clams, clownfish. Diving at the USAT Liberty Shipwreck site follows specific procedures, including environmentally friendly orientation; refraining from touching the USAT Liberty shipwreck; avoiding disturbance to the corals, anemones, and other marine life present; and not taking or moving any corals, anemones, or other marine organisms.

The historical significance of the USAT Liberty wreck as a World War II artifact enhances the destination's narrative and educational value. Accessibility: Distance from Kuta is approximately 100–105 km (± 3 hours); the wreck lies about 25 m from the shore, allowing for shore entry and short-boat access. Depth & visibility: Depth 5–30 m; visibility is often reported at 20–30 m, supporting underwater photography and a safe diving experience. The shipwreck's structure supports a rich biodiversity, serving as a habitat for coral reefs, tropical fish (sweetlips, barracuda), nudibranchs, and offering opportunities to spot large species (mola-mola) during certain seasons. Facilities: Local dive operators are available, along with training for various levels and simple accommodations in the village of Tulamben.

The appeal of the USAT Liberty is multidimensional: its historical value enriches the experience, its accessibility broadens the tourist market, and its biodiversity extends the duration of visits. The primary risks are physical degradation of the wreck and disruption to marine life due to visitor pressure without capacity management. Key recommendations include implementing daily diver quotas, requiring guide certification, and establishing community-based conservation programs to

regulate daily diver capacity. Mandatory conservation briefings should be conducted, followed by the implementation of a program to monitor wildlife and the condition of the wreck through periodic photo surveys. Additionally, historical interpretive panels should be installed onshore to enrich the non-diving experience. To foster synergy, local communities can be involved in management and the tourism economy.

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