

Socialization and Dissemination of Three Ecotourism Models Based on Traditional Bendega Institutions in the Coastal Area of Canggu Traditional Village, Badung Regency

I Komang Putra^{1*}, I Ketut Darma², Ni Nyoman Rusmiati³, Mohd Raziff Jamaluddin⁴, Anak Agung Putu Agung Caturyarta Nugraha Udayana⁵, I Made Cahyadi Putra⁶

^{1,2,3,5,6}Universitas Warmadewa

⁴Universiti Teknologi MARA

Corresponding Author: I Komang Putra komangputra@warmadewa.ac.id

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ABSTRACT

This service activity aims to socialize three ecotourism models based on Bendega institutions, namely Traditional Sea Tourism Mina, Coastal Conservation Tourism, and Marine Products Culinary Tourism, to 62 Bendega Krama, village officials, and business partners. The activity will be held on July 6, 2026 at Segara Canggu Temple through a dissemination forum, an international speaker plenary session, the handover of safety jacket assistance, and interactive discussions. The results of the activity show that the estimated combined income potential of the three models reaches ±Rp25,000,000/month, with a positive response from the Bendega krama to the hybrid model that maintains the ritual function while opening an ecotourism economic unit based on SDGs 8, 12, and 14.

INTRODUCTION

Bendega is a traditional institution in the field of marine and fisheries in the Balinese indigenous people that are economic, social, cultural, and religious at the same time, based on the Tri Hita Karana philosophy that regulates the harmony of human relations with God (Parahyangan), humans with others (Pawongan), and humans with nature (Palemahan). The existence of Bendega has received formal legal recognition through Bali Provincial Regional Regulation Number 11 of 2017 concerning Bendega, which places it on par with Subak as a state-recognized customary institution (Bali Provincial Government, 2017; Suarjaya, 2022).

Canggu Village, located in North Kuta District, Badung Regency, has transformed into one of the most prominent global tourism destinations in Bali, characterized by the proliferation of beach clubs, villas, and restaurants along the coastal area. This rapid growth in tourism, on the one hand, contributes significantly to regional income, but on the other hand, it creates socio-economic pressure for indigenous communities, especially traditional fishermen known as Bendega (Knudsen, 2012). Bendega Adat Canggu, which is affiliated with Segara Canggu Temple on Jalan Nelayan, faces heavier pressure compared to fishing communities in other parts of Bali because it is located in the heart of the fastest-growing tourism area.

Based on the results of the study of the Research Progress Report on Ecotourism Studies of Warmadewa University (May 2026), three main issues faced by Bendega Canggu were identified: (1) the decline in fish catches due to overfishing by fishermen outside the region and the reduction of fish populations in coastal waters; (2) low fishermen's income because the effective season at sea only lasts ± 3 months per year, so that the contribution of the fisheries sector to the GDP of Badung Regency is only 0.477%; and (3) the weak institution of Bendega as a business entity, so that it has not functioned optimally as a modern economic management unit in the midst of high tourism demand (Warmadewa University Research Team, 2026). Of the total 62 fishermen groups with 2,126 members in Badung Regency, Bendega Canggu is in the North Kuta District area which only has 3 groups with 131 members, a relatively small number compared to the huge tourism potential of Canggu.

Socio-culturally, the Canggu Bendega view themselves primarily as fish hunters, not as service providers or tourism hosts, thus limiting their ability to position themselves in the ever-evolving tourism landscape. The limitations of storytelling skills and structured interpretation of cultural values also hinder the conversion of intangible heritage into meaningful tourism experiences for foreign tourists, who dominate up to 90% of the tourism market in Canggu (Khakzad, 2018). On the other hand, there are concerns from traditional leaders regarding the potential shift of Bendega's sacred values into purely commercial value if ecotourism is developed without care. Therefore, a hybrid approach is needed that maintains the functions of ritual and conservation as the main functions, while the ecotourism economic unit is positioned as a supporting unit under the full authority of the Bendega Adat.

Based on these conditions, a team of lecturers from Warmadewa University together with international partners from Universiti Teknologi MARA (UiTM), Malaysia, carried out Community Service activities in the form of socialization and dissemination of three ecotourism models based on the empowerment of Bendega Customary Bendega to Krama Bendega, village officials, and business partners in Canggu. This activity is a step to downstream research results into real implementation in the field, while supporting the achievement of SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 14 (Ocean Ecosystem). This activity is also in line with the Main Performance Indicators (KPIs) of universities, namely KPI 2 through student involvement in field activities, KPI 3 through the involvement of lecturers in off-campus activities, and KPI 5 through the use of lecturers' work directly by partner communities.

IMPLEMENTATION AND METHODS

The service activity was held on Monday, July 6, 2026, at 09.00-11.00 WITA, at Segara Canggu Temple, Jalan Nelayan, Canggu Village, North Kuta District, Badung Regency, Bali. The target of the activity included Krama and Prajuru Bendega Adat Canggu, Canggu Village and Kelihan Traditional Village officials, tourism business partners (hotels, villas, and local business actors in the Canggu area), accompanying students, and guest speakers from Malaysia within the framework of the *knowledge transfer program (Knowledge Transfer Program)*. The total participants who attended included Benega krama, students, lecturers, and business partners, with age backgrounds that varied from the younger generation to senior traditional leaders.

The implementation method refers to the *Participatory Action Learning System (PALS)* approach, where partners are not positioned as mere objects, but as active subjects in the learning and transformation process. The preparation stage includes coordination with the Canggu Traditional Bendega, the Head of Canggu Village, the Banjar Canggu Traditional Kelihan, the management of permits for the implementation of activities at Segara Canggu Temple, the preparation and printing of socialization materials (presentations, *handbooks*, and scientific posters), as well as coordination with guest speakers related to the substance of the material. The socialization material was prepared based on the results of previous academic studies, namely the Research Progress Report on the Ecotourism Study of Warmadewa University (May 2026), which identified the profile, potential, and problems of Bendega Canggu.

The series of activities at the peak event consisted of: (1) participant registration and venue preparation; (2) opening, prayer, and report of the chairman of the committee in accordance with local customary procedures; (3) remarks by the Head of the Environment and the Head of Study Program; (4) symbolization of the handover of safety *jackets* to Bendega Canggu; (5) *Plenary Speaker session* with the theme "*Ecotourism for Sustainability Economic Growth*" delivered by Assoc. Prof. Dr. Mohd Raziff Jamaluddin (UiTM, Malaysia) with Kelihan Bendega Canggu and representatives of business partners (ZIN Hotel); (6) interactive discussion with Bendega krama and students; and (7) closure and documentation of activities. The core materials disseminated were three

ecotourism models based on Bendega Customs, namely Mina Traditional Sea Tourism, Coastal Conservation Tourism, and Marine Products Culinary Tourism, which was compiled based on a SWOT analysis of Bendega's institutional strength, local wisdom *awig-awig*, and high demand for tourism in Canggu. Supporting instruments included audiovisual presentation materials, activity banners, and *handbook* "Mina Bahari Tourism x Bendega Canggu Culture" as a pocket book containing the profile, history, philosophy, and model of Bendega ecotourism, which was distributed to participants as a sustainable educational medium.

RESULTS AND DISCUSSION

Existing Conditions and the Urgency of Empowerment

Data presented at the socialization forum showed that out of a total of 62 fishermen groups with 2,126 members spread across 4 coastal sub-districts of Badung Regency, the contribution of the fisheries sector to the district's GDP was only 0.477%, a very low figure considering the large tourism potential in the Canggu coastal area. The effective seagoing season, which lasts only ± 3 months per year, also exacerbates the uncertainty of fishermen's income in Bendega. This condition is the basis for the argument that economic diversification through ecotourism is a relevant strategy to strengthen the economic resilience of the Bendega community without sacrificing the ritual and conservation functions that have been maintained for generations.



Figure 1. Photo with the Implementation Team, Resource Persons, and Krama Bendega Canggu at the Gate of Segara Canggu Temple at the Opening of the Activity, July 6, 2026

Implementation of Socialization and Dissemination Forum

The activity took place in the Wantilan area of Pura Segara Canggu which faces directly to the coastline, so that the material can be delivered in an atmosphere that is contextual with the lives of fishermen. The forum was opened with a prayer and a report by the chairman of the committee who followed local customary procedures, followed by remarks from the Head of the Environment and the Head of the Economics Study Program at Warmadewa University. As a form of concrete support for fishermen's work safety, the implementation team symbolically handed over safety equipment assistance (*safety jackets*) to representatives of Bendega Canggu as a form of academics' concern for safety aspects, in addition to economic empowerment.



Figure 2. Symbolic Handover of Safety Jackets to Representatives of Bendega Canggu

The main session of the activity was filled by *Plenary Speaker* Assoc. Prof. Dr. Mohd Raziff Jamaluddin from Universiti Teknologi MARA (UiTM), Malaysia, with the topic "*Ecotourism for Sustainability Economic Growth*", which provided an international perspective on good practices for coastal community-based ecotourism development. This session also presented Kelihan Bendega Canggu and representatives of ZIN Hotel Canggu as practitioner partners, so that the discussion took place in a tripartite format between academics, traditional leaders, and tourism business actors. The presence of these international speakers is a form of cross-border collaboration that strengthens the academic legitimacy of the program while opening up Bendega's understanding of ecotourism standards and practices at the global level.



Figure 3. Dissemination Session and Interactive Discussion with Krama Bendega, Students, and The Implementation Team in the Wantilan Area of Pura Segara Cangu

The interactive discussion that took place after the plenary session showed the high enthusiasm of the Bendega krama, especially related to the mechanism for sharing the economic results of ecotourism and how to keep new business units from disturbing the rhythm of the sea and traditional rituals that have been running. Participants from the younger generation showed special interest in their role as guides in the traditional maritime tourism Mina model, while senior participants emphasized the importance of maintaining the authority of the Traditional Bendega overall economic units to be formed.

Three Ecotourism Models Based on Traditional Bendega

The core material disseminated at this forum is three ecotourism models designed based on a SWOT analysis of Bendega's institutional strength, local wisdom awig-awig, the threat of ecosystem degradation due to *overfishing*, and the opportunity for premium tourism demand in Canggu. Model 1, Mina Wisata Melaut Adat, invites tourists to go to sea with fishermen using traditional boats (jukung), witness prayer rituals before going to sea (Sembahyang Segara), learn traditional fishing techniques, and enjoy catches cooked together on the beach, with Bendega krama as an authentic tour guide. This model targets premium foreign tourists who stay in villas and hotels in the Canggu area, with an estimated income of IDR 300,000-500,000 per tourist or the equivalent of $\pm$ IDR 12,000,000 per month assuming eight trips per month.

Model 2, Coastal Conservation Tourism, offers education on fishing zoning based on awig-awig and Bendega culture, fishing activities in group groups that function as fish habitats as well as tourist attractions, and the granting of participation certificates to participants. This model targets communities, student groups, and tourists who care about the environment (*green tourists*), with an estimated income of IDR 150,000-250,000 per person or ±IDR 8,000,000 per month. Model 3, Culinary and Processed Seafood Tourism, involves tourists in the trash-packing-serving flow of seafood into value-added products such as smoked fish, shredded fish, and fish crackers, which are then distributed as premium souvenirs to hotels, villas, and restaurants in Canggu through a network of business partners, with an estimated additional income of Rp2,000,000-5,000,000 per month per fisherman's group. A summary of the comparison of the three models is presented in Table 1.

Table 1. Comparison of Three Ecotourism Models Based on Canggu Traditional Bendega

Criteria	Model 1: Traditional Sea Tourism Mina	Model 2: Coastal Conservation Tourism	Model 3: Seafood Culinary Tourism
Main focus	Fishermen's culture and traditions	Ecosystem conservation	Added value of fish products
Target participants	Premium foreign tourists	Green communities and tourists	Family and culinary travellers
Estimated revenue/month	±Rp12.000.000	±Rp8.000.000	±Rp5.000.000
SDG support	SDGs 8 and 14	SDG 14	SDG 8 dan 12
Strategi SWOT	SO (<i>Strength-Opportunity</i>)	ST (<i>Strength-Threat</i>)	WO (<i>Weakness-Opportunity</i>)

Source: PkM Dissemination Material, Warmadewa University, 2026

The estimated total combined income from the three models if implemented simultaneously reaches ±Rp25,000,000 per month, a significant additional potential considering the contribution of GDP in the Badung fisheries sector which is only 0.477% and the limited effective season of sea ±3 months per year. The formula for estimating total combined income can be stated as follows:

$$Y = M1 + M2 + M3 \dots\dots\dots (1)$$

Where Y is the estimated total ecotourism income per month, M1 is the income of the Traditional Sea Tourism Mining Model, M2 is the income of the Coastal Conservation Tourism Model, and M3 is the income of the Marine Products Culinary Tourism Model.

Hybrid Principles and Institutional Models

The discussion at the dissemination forum emphasized that the development of the three ecotourism models must follow *the hybrid principle*, which is to maintain the ritual and conservation functions of Bendega as the main function that cannot be compromised, while the ecotourism economic unit is positioned as a professionally managed support unit, but remains under the full authority of the Customary Bendega. This principle responds to the concerns of indigenous leaders that emerged in *the previous group discussion forum* (FGD) that commercialization should not displace the sacred values that have been maintained for centuries. This approach is in line with the findings of Khakzad (2018) who showed that the success of cultural tourism based on the fishing community is highly dependent on the community's ability to maintain the authenticity of cultural identity amid the pressure of tourism commercialization.

The discussion also highlighted the importance of strengthening the Bendega institution as a modern business entity without eliminating its traditional function as an indigenous institution. This is relevant to Suarjaya's (2022) study on the implementation of Bali Provincial Regional Regulation Number 11 of 2017 concerning Bendega, which emphasizes that strengthening the institutional capacity of Bendega at the customary village level requires cross-party support, including universities, village governments, and business partners. The positive response from the Bendega Canggu krama to the three disseminated models indicates the initial readiness of the community to start the transformation process towards the hybrid economic model, although concrete implementation still requires advanced stages in the form of selecting priority models, establishing management units, cooperation with business partners, and training in tourism service skills.

CONCLUSIONS AND RECOMMENDATIONS

Community service activities in the form of socialization and dissemination of three ecotourism models based on Bendega Adat Canggu have been successfully carried out on July 6, 2026 at Segara Canggu Temple, involving krama and Prajuru Bendega, village officials, tourism business partners, students, and international resource persons from Universiti Teknologi MARA, Malaysia. This activity succeeded in disseminating three ecotourism models, namely Traditional Marine Tourism Mina, Coastal Conservation Tourism, and Marine Product Culinary Tourism, with an estimated potential combined income of ±Rp25,000,000 per month, which can significantly strengthen the economic resilience of Bendega Canggu outside the effective sea season which only lasts ±3 months per year. The hybrid principle that places ritual and conservation functions as the main functions, with the ecotourism economic unit as the supporting unit under the authority of Bendega Adat, received a positive response from participants as an approach that maintains a balance between the preservation of sacred values and the improvement of economic welfare.

Based on the results of the activity, it is recommended that Bendega Canggü immediately follow up on this dissemination forum through five concrete stages, namely: (1) choosing one priority ecotourism model through krama (paruman) deliberation; (2) forming an ecotourism management unit under the authority of Bendega Adat; (3) establishing formal cooperation with hotels and villas in the Canggü area as distribution and marketing partners; (4) organizing training in simple tour guide skills for Bendega krama, including basic cultural and foreign language storytelling skills; and (5) conducting an initial tour package trial with invited guests before being commercially launched. The sustainability of the program also requires further assistance from Warmadewa University in the form of making documentary videos, strengthening Mina Bahari tourism services, and preparing ready-to-sell tour packages based on a priority model agreed with Bendega Adat.

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