Ecotourism Market Segmentation in Bali, Indonesia: Opportunities for Implementing REDD+

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Abstract: Ecotourism has been promoted in many regions of Indonesia as a viable platform for reducing emissions from deforestation and forest degradation in developing countries (REDD+) by providing incentives to local communities for their forest conservation efforts. This study aims to find opportunities for implementing REDD+ in Bali through ecotourism market segmentation analysis, and to provide policy implications to other developing countries under similar circumstances. The results indicate that two clusters—"nature-seeking responsible tourists" and "wellness-seeking responsible tourists"—were selected as Bali's target clusters. Since both have higher motivation and a more responsible attitude than other clusters, they are capable of not only sustaining a symbiotic relationship between the ecotourism destination and the visitor, but also attracting potential tourists with similar characteristics, ultimately contributing to the sustainable tourism business in the region. In conclusion, building a marketing strategy based on the understanding of the tourists will promote forest conservation effectively, while also playing an important role in REDD+ implementation by bringing sustainable tourism income to the local community.

1. Introduction

Tourism is one of the fastest-growing industries of the world that contributes significantly to the rapidly increasing carbon dioxide emissions [1]. Conversely, it has been heavily affected by the destruction of the environment, which is caused by human intervention and climate change [2]. As noted in [3], it is generally believed that the tourism sector must implement adaptation strategies for the continuous and inevitable impacts of climate change, while also considering participation in mitigation efforts to avoid the increased damages inflicted by climate change, which have become too large to be resolved through adaptation. To this end, the tourism sector is seeking sustainable ways of doing business in the wake of growing concerns over environmental degradation. With that said, ecotourism is considered the most reliable choice against climate change because it not only generates financial profits but also conserves the local environmental resources by encouraging low-impact and non-consumptive usage patterns [4].

The 3rd Asia-Pacific Rainforest Summit (APRS Indonesia 2018), themed "Protecting forests and people, supporting economic growth", was filled with discussions regarding better ways to achieve socioeconomic developments and carbon emission reduction goals together. During the summit, ecotourism was acknowledged as an "on-the-ground way to aid land rehabilitation and biodiversity conservation while still turning a profit" [5]. This was also discussed within the reducing

emissions from deforestation and forest degradation in developing countries (REDD+) framework. Considering that the core aspect of REDD+ is a benefit-sharing mechanism, locally-led ecotourism, or so-called community-based ecotourism (CBET), could serve as an additional financial pipeline for the local communities in compensation of their efforts towards conservation of the natural environment. The World Travel and Tourism Council (WTTC) has also suggested that "governments should combine tourism with REDD+ actions to develop and incentivize small scale, high-value nature-based tourism in forest communities that can provide alternative sources of income" [6].

Indonesia—as the largest archipelago in the world and a country with one of the most profound natural resources—has continued its efforts toward developing ecotourism to conserve environmental resources and improve the welfare of the local community. Currently, ecotourism contributes to 45% of Indonesia's entire income from the tourism sector [7]. Consequently, ecotourism has been promoted in many regions of Indonesia as a viable means to protect its natural rain forests and help the indigenous communities to uncover alternative sources of income for sustainable development in line with REDD+ interventions.

Despite the national efforts to develop ecotourism in line with enhancing REDD+ implementation, many tourism destinations in Indonesia are still in need of more efficient management strategies for conserving nature and helping local communities. Consequently, it is necessary for local managers of ecotourism destinations to understand the tourists' motivations and attitudes towards the natural environment and local residents, in order to develop a more proper and suitable management plan for the ecotourism destinations. In particular, recent research has focused on "environmentally responsible tourists", who behave pro-environmentally and cautiously in order to conserve the local environment [8]. This would be the ideal segment of the tourists that one would choose as a target for marketing, adding to the conventional sustainable destination management strategy [9]. Previous studies [10] have shown that tourists in this segment were more concerned with conserving the region's natural and cultural resources and paying more for it. In other words, eco-friendly tourists will play an important role in helping REDD+ implementation by promoting local forest conservation and bringing tourism income to the community.

In this context, this study examined the following objectives: (1) conducting a market segmentation analysis using the two factors of motivation and responsible attitude; (2) determining valid cluster-appropriate strategies based on the results of the analysis, and finally, (3) finding opportunities for implementing REDD+ in Bali and other developing countries under similar circumstances. This enhanced market knowledge could enable local tourism operators to optimize the tour experience of visitors and improve revenue generation of local communities while conserving natural resources. This also highlights the relationship between REDD+ and communities, on how they could evolve together in an incentive-based conservation context [11]. The implications drawn from this study provide guidance to those REDD+ practitioners and policymakers in developing countries who desire to implement incentive-based conservation mechanisms.

2. Literature Review

2.1. REDD+ and Ecotourism

At the 11th Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) in 2005, REDD was first negotiated with the aim of reducing carbon emissions through enhanced forest management in developing countries. The main concept of REDD is to reduce carbon emissions by providing financial incentives for carbon sequestration resulting from decreased deforestation and forest degradation in developing countries. This is because deforestation will continue unless their basic economic needs are improved [12,13].

Two years later, at the COP 13 in Bali, 2007, REDD became a key mechanism of the mitigation agenda in the Bali Road Map. Subsequently, REDD was modified to REDD+ including three additional aims—the role of conservation, sustainable management of forests, and enhancement of forest carbon

stocks [14–16]. It was later evolved to include co-benefits to carbon sequestration, such as biodiversity and strengthening the rights of indigenous communities [17].

As mentioned above, the core of the REDD+ mechanism is to provide developing countries with financial incentives to protect their forests rather than to deforest, so as to reduce greenhouse gas emissions. These activities aim to protect and enhance the existing carbon storage represented by old growth forests, and also have aesthetic importance to tourists, as well as biological and ecological importance [18]. In that sense, forests may become important tourism destinations. In other words, tourism activities are "the most coherent, non-extractive, economic activities for forest communities and can act as a major tool for REDD+" [6].

As a form of sustainable tourism, ecotourism is capable of serving as a viable platform for REDD+ by providing incentives to local communities for their forest conservation efforts. Although the precise definition of ecotourism has been much debated and studied, the following key elements are generally included: (i) reference to where ecotourism occurs, e.g., natural areas; (ii) conservation; (iii) culture; (iv) benefits to locals; and (v) education [19]. In other words, ecotourism can help to conserve the natural, cultural, and other tourist resources so that future generations can continue to use them while benefiting present societies [20]. This is in line with the core idea of REDD+, in that it is possible to achieve the economic benefits of local communities by tourism activities while reducing emissions through nature conservation.

As seen in Figure 1, the authors of [18] have framed a model for an ecotourism paradigm that clarifies the relationship between tourism, biodiversity, local communities, and REDD+. Within this framework, each element is influencing the other, and REDD+ serves as a platform for these elements.
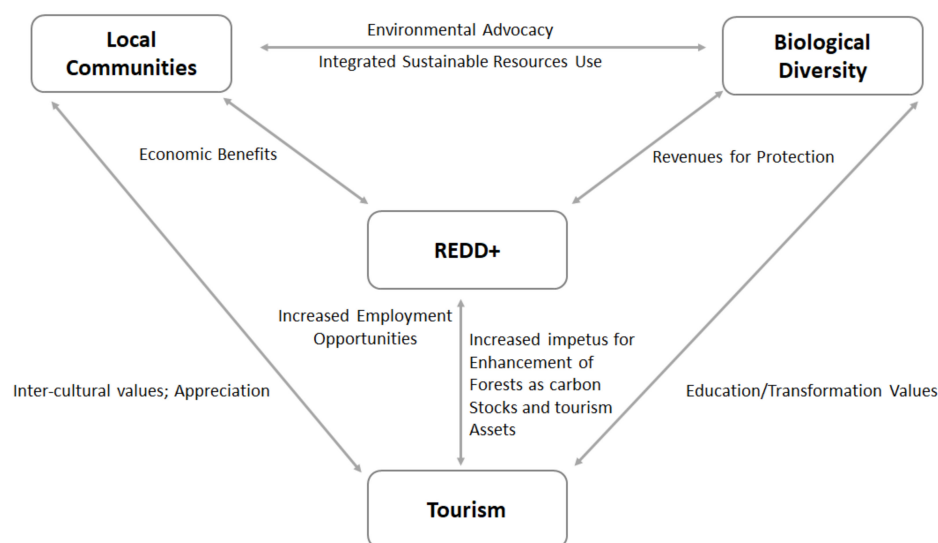

Figure 1. Relationship between local communities, biodiversity, ecotourism, and REDD+ (adapted from [18], modified from [21]).

For this reason, many developing countries are introducing REDD+ and promoting ecotourism development as a means to bring benefits to the local community. For example, community-based forest management (CBFM) in protected forestland area is the most important strategy for Tanzania to develop REDD+ [22]. As for the CBFM, ecotourism can increase income, stimulate new businesses through tourism, improve living standards, and create jobs for local residents. Similar cases in Indonesia include that of Biak Island, where the forest management units applied customary community partnerships to implement ecotourism and operate timber concessions [23]. These REDD+ oriented approaches have the potential to improve the economic and livelihood values of forests than logging.

In conclusion, ecotourism in the context of REDD+ can be an alternative for many developing countries where forest conservation is difficult for economic purposes.

2.2. Ecotourism Development in Bali Island

Bali is located at the east of Java and is the westernmost of the Lesser Sunda Islands in the Indonesian archipelago. Bali is also well known as "the primary home for the Hindu community in Indonesia, with 83.5% of the population adhering to Balinese Hinduism" [24]. Over the past decades, Bali's unique culture and environmental resources have attracted a large number of Western travelers, making the island the most important international tourism destination of Indonesia. The island's tourism industry has quickly become its main economic driver [25].

However, such rapid developments came with costs. With the increasing number of tourists, Bali was helplessly exposed to increasing damage to natural resources, disease outbreaks, social conflicts, and changes in the tourists' attitude that are considered harmful to local culture [26]. As the island started paying its toll for the relentless development, sustainability became a popular topic of discussion. In 1989, the Bali Sustainable Development Project (1989–1996)—funded by the Canadian International Development Agency (CIDA)—was implemented with an aim to develop an "institutional capacity and human and societal resources to promote and enhance sustainable development on this fragile island" [27].

Over the years, sustainable tourism concepts such as community-based ecotourism (CBET) have become notable forms of tourism in Bali. For example, in 2002, four village communities have gathered and established a CBET village network named Jaringan Ekowisata Desa (JED), driven to create tourism that is "by and for the people" [28]. Through this initiative, the network aims to achieve the development of tourism projects that are planned and managed by the local community, which seeks to minimize the negative impact on society and the environment along with income generation for community development [28].

2.3. Market Segmentation: Understanding Tourist Motivations and Attitudes

Market segmentation refers to subdividing a market which is composed of heterogeneous customers into multiple sub-markets composed of homogeneous customers, grouping the buyers based on their preferences [29,30]. In this context, market segmentation would enable the tourism site managers to subdivide the tourists into segments, better comprehend their preferences, and communicate more efficiently. In previous tourism literature, a number of segmentation criteria, such as geographic characteristics, socio-demographics, benefits, psychographics, activities, expenditures, and communication channels have been employed [31].

There are many variables used for segmentation approaches in understanding tourists' characteristics, but motivation is one of the most effective and crucial indicators to explain the behavior of tourists [32–35]. The motivation of tourists can be defined as "the combination of needs and desires that affect the propensity to travel" [36]. Therefore, analyzing motivations of tourists provides a tourism operator with an enhanced comprehension of their preferences [37], which is vital in developing tourism products and devising marketing strategies and promotions. Previous studies [38] have shown that the motivation factor can be categorized into the following: escape, relaxation, relationship enhancement, and self-development. For ecotourism, in particular, the motivation of ecotourists is generally "wanting to experience and learn about nature" [39–43]. However, as noted by Beaumont [39], not all ecotourists have already turned to the pro-environment cause or are interested in environmental concerns [44,45].

In this sense, attitude can be used as a complementary variable for market segmentation. Tourists' responsible attitudes toward host communities play a significant part in sustainable tourism management of the destinations. Attitude predicts a person's behavior and refers to all judgmental beliefs about a specific perceptual object, such as a person, object, service, subject, or concept [46]. In fact, selectively targeting the segment of tourists who are conscious about conserving local environments and resources has already been suggested as a viable approach to the sustainable management of a destination [47]. The author of [48] has argued that such approaches complement current sustainable tourism management tools that have usually worked with tourists at the destination rather than

selectively inviting them to the destination. As Dolnicar [10] noted, the "eco-segments", who have much attention on the natural environment and are willing to spend more money and stay longer at the destination than other segment groups, are highly attractive characteristics for implementing sustainable tourism. Adongo, Taale, and Adam [49] investigated that tourists with anthropocentric features have a positive empathic attitude to nature conservation. For that reason, statistical data (socio-demographic profile, tourism behavior, motivations, and attitude) of tourists visiting ecotourism destinations have been regularly collected in some developed countries, and marketing strategies for each tourist attraction are established on the basis of these data [31,50,51].

From the REDD+ implementation point of view, it is very important to find the "appropriate segment" that will help forest conservation and local economic development. This is because there must be no other damage from tourism in order to achieve REDD+ based on ecotourism.

3. Materials and Methods

3.1. Research Sites

Data for this research were collected through a survey of tourists at two major ecotourism sites of Bali: Sacred Monkey Forest Sanctuary, which is located in the mountainous regions of northern Bali, and Uluwatu Monkey Forest, which is also known as Uluwatu Temple, located in the southernmost area of Bali, as shown in Figure 2. In Bali, free-ranging commensal macaques are closely connected with people around Hindu temple sites and tourist areas, where they represent not only cultural and spiritual value, but also the economic value of local communities [52]
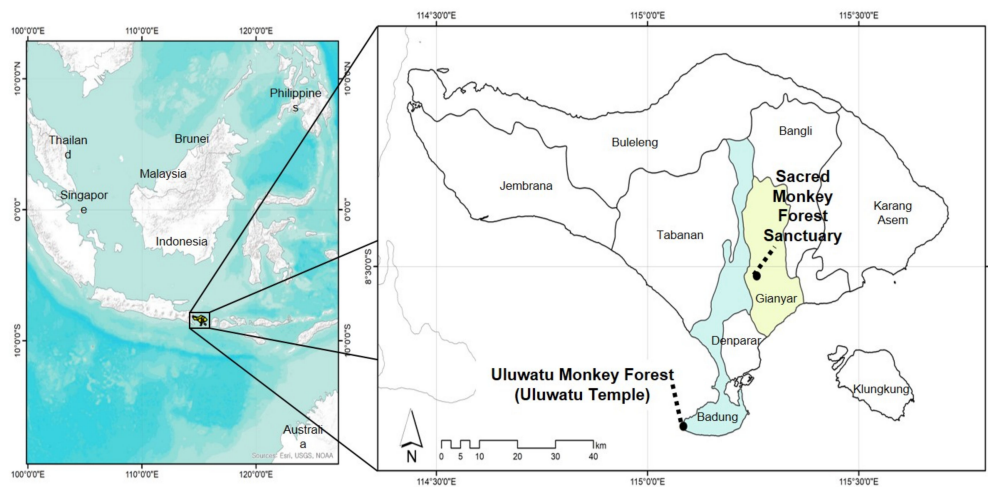

Figure 2. Research sites.

The Sacred Monkey Forest Sanctuary is located in the Padangtegal Village (Desa Padangtegal in Balinese), Ubud. This sanctuary is well known in the international tourism destinations in Bali, consisting of forestlands with the Balinese long-tailed macaques (*Macaca fascicularis*) and various species of trees according to the management authority [53]. However, the Monkey Forest is not only a tourism attraction but also an important element of Balinese culture in Ubud [54]. Located inside the Sanctuary are three temples that were built in the 14th century, with traditional rituals still practiced by local community members to worship the gods and goddesses of Hinduism.

The Uluwatu Monkey Forest is also inhabited by the Balinese long-tailed macaques, and they are treated as the loyal guardians of the temple. Uluwatu Temple (Pura Uluwatu in Balinese) was built at the top of the rock cliff of South Kuta, the southernmost area of Bali. The temple is a popular destination for archeologists for its relics from the 10th century when the temple is known to be built.

3.2. Questionnaire Design

After minor revisions in light of the results of a pilot study conducted in February 2019, a questionnaire was drafted to collect information regarding (1) tourism behavior, (2) motivations, (3) attitudes, (4) visitor experience, and (5) demographics, in the two major ecotourism destinations of Bali. The first part—specific motivation items (4 categories, 18 statements)—was adopted from [55], and the second part—(14 statements) measuring visitors' attitudes toward aspects of responsible tourism behavior—was adopted from [56]. Respondents were asked to indicate their responses on a five-point Likert scale.

3.3. Data Collection

The survey was carried out from March to April 2019 among tourists visiting the Sacred Monkey Forest Sanctuary and Uluwatu Monkey Forest. The survey was written in two languages—English and Bahasa Indonesian—for the sake of a smoother data collection process. With cooperation from local government authorities, a team of local surveyors from Warmadewa University distributed self-administered questionnaires to the randomly chosen respondents at the exits of each premises throughout the operation hours of 09:00–18:00, resulting in the collection of 756 questionnaires from the 2 sites.

3.4. Analysis

The questionnaires were then analyzed through the six-step statistical procedure that this study has employed: (1) motivation factor analysis, (2) motivation factor clustering, (3) responsible attitude factor analysis, (4) responsible attitude comparison of clusters, (5) cluster selection, and lastly, (6) derivation of cluster-appropriate strategy.

4. Results

4.1. Sample Profile

The general demographics of the 756 respondents are provided in Table 1. Of the respondents, 54.3% were women and 45.7% were men. The 20s (45.1%), 30s (28.3%), and 40s (11.6%) were the three most common age groups. In education, college graduates (46.3%) and those with master's degrees (23.1%) formed the majority. The most common companions of these visitors were spouse/partner (39.2%), followed by relatives/friends (27.7%), and then family with children (20.8%). There was a small portion of those traveling on package tours (2.1%). In nationality, the majority of tourists are from countries in Asia (38.8%) followed by Europe (32.1%), with nearly half of them (47.3%) earning less than 3000 USD. However, those with a monthly income of 5000–5999 USD were the third most populous group in the category (15.7%).

4.2. Motivation-Based Segmentation

The results of the factor analysis on motivation are presented in Table 2. Different from previous research [55]—in which there were 18 statements and 4 factors: escape, healthy activities, learning about nature, and cohesion—3 factors (15 motivation statements) were extracted from the factor analysis in this study: (a) healing (healthy and escape), (b) nature, and (c) cohesion. This was largely because two of the factors—escape and healthy activities—merged into one in this study. As Bali is also the world's largest yoga community, one's intention to travel for the purpose of yoga could exhibit both factors of escape and healthy activities simultaneously.

Table 1. Demographic background of sampling.

Demographics		N	%
Gender	Male	337	45.7
	Female	401	54.3
Age	10–19	48	6.5
	20–29	335	45.1
	30–39	210	28.3
	40–49	86	11.6
	50–59	33	4.4
	60–69	26	3.5
	70s or older	5	0.7
Education	Below Middle	48	6.5
	Tech/Voc School (Enrolled)	22	3.0
	Tech/Voc School (Graduated)	50	6.8
	In College/Univ	105	14.3
	College/Univ (Grad)	340	46.3
	Master's degree or above	170	23.1
Nationality	Africa	10	1.5
	Asia	264	38.8
	Europe	218	32.1
	North America	94	13.8
	South America	15	2.2
	Oceania	79	11.6
Monthly Income (USD)	less than 1000	87	13.3
	1000–1999	124	18.9
	2000–2999	99	15.1
	3000–3999	63	9.6
	4000–4999	62	9.5
	5000–5999	103	15.7
	6000–6999	38	5.8
	7000–7999	23	3.5
	8000–8999	12	1.8
	9000–9999	14	2.1
	10,000 and more	30	4.6
Companions	Alone	30	4.0
	Spouse/Partner	292	39.2
	Family with Children	155	20.8
	Relatives/Friends	206	27.7
	Other Group of Peers	46	6.2
	Package Tour	16	2.1

Through cluster analysis using the factor scores of healing, nature, and cohesion, respondents were divided into four clusters, as shown in Table 3. Factor scores are expressed as low (lower than −0.44), mid (−0.44. 0.44), and high (higher than 0.44).

Based on clustering results, it is quite apparent that Cluster 1 has relatively lower motivation factor scores, while Clusters 2, 3, and 4 have relatively higher motivation factor scores. The result of the Analysis of Variance (ANOVA) test of motivation factors of the clusters revealed a noticeably high F-value of above 200, indicating that the differences among motivation factors according to the clusters were significant.

4.3. Responsible Attitude Comparison of the Clusters

Different from previous research [33]—in which there were 14 statements—a total of 13 statements were used in this study; one statement was eliminated because it exhibited a factor loading of less than 0.6, as shown in Table 4.

Table 2. Motivation factor analysis.

Item	Factor		
	Healing (Healthy and Escape)	**Nature**	**Cohesion**
Helps me to stay in shape	0.776		
Develops my skills and ability	0.756		
Improves my physical health	0.751		
I thought it would be challenging	0.743		
For the solitude	0.698		
Get away from other people	0.659		
Be in a natural setting		0.779	
Observe the scenic beauty		0.722	
Enjoy the sound and smell of nature		0.700	
Experience the tranquility		0.639	
Learn more about nature		0.635	
I could be with friends/family			0.818
I could do things with my companion			0.677
To be with others who enjoy the same			0.654
Eigen Value	4.791	2.087	1.186
Cronbach alpha	0.849	0.774	0.651

Table 3. Motivation-based segmentation.

	Factors	Cluster 1	Cluster 2	Cluster 3	Cluster 4	F
Segmentation	Healing	Mid (0.221)	Mid (−0.306)	Low (−1.247)	High (0.785)	339.04 **
	Nature	Low (−0.961)	High (0.753)	High (0.538)	Mid (0.109)	219.12 **
	Cohesion	Low (−1.692)	Mid (−0.205)	High (0.630)	High (0.501)	352.61 **
	N(%)	238 (31.5%)	106 (14.0%)	169 (22.4%)	243 (32.1%)	

** $p < 0.01$.

Table 4. Attitude factors analysis.

Question	Factor Loading
	1
09. It is good to learn and understand natural environment of the destinations.	0.781
13. It is good to make efforts in learning and understanding local culture.	0.771
04. It is good to follow nature conservation rules at the destinations.	0.766
05. It is good to respect locals' lives and their cultures when traveling.	0.765
14. It is good to have opportunities of meeting local people and understanding their cultures.	0.738
06. It is good to use environment-friendly travel packages and/or facilities.	0.733
10. It is good that a part of my travel expenses is spent on improving locals' welfare.	0.710
08. It is good to use restaurants /accommodations operated by locals.	0.706
03. It is good that a part of my travel expenses is spent on nature conservation.	0.693
12. It is good to know about local lifestyles before visiting the destination.	0.691
02. It is good to know about the natural environment of the destinations before visiting there.	0.666
01. It is good to follow local norms or rules when traveling.	0.659
07. It is good to actively participate in environmental education programs when traveling.	0.652
Eigen Value	6.722
Cronbach alpha	0.920

The results of the mean comparison between clusters of the factor scores of responsible attitudes are shown in Table 5. The results of the ANOVA test indicated that the differences among the groups were

significant. Factor scores are expressed as low (lower than 0.0), mid (0.1–0.2), and high (higher than 0.3), respectively. Cluster 1—which exhibited relatively lower overall motivational factor scores—showed the lowest responsible attitude score, and Cluster 3 had the middle-level score. In contrast, Cluster 2 and Cluster 4 scored the highest.

Table 5. Responsible attitude comparison of the clusters.

Steps	Factors	Cluster 1	Cluster 2	Cluster 3	Cluster 4	F
Segmentation	Healing	Mid	Mid	Low	High	339.04 **
	Nature	Low	High	High	Mid	219.12 **
	Cohesion	Low	Mid	High	High	352.61 **
	N(%)	238 (31.5%)	106 (14.0%)	169 (22.4%)	243 (32.1%)	
Attitude		Low (−0.603)	High (0.337)	Mid (0.199)	High (0.320)	49.43 **

** $p < 0.01$.

4.4. Market Segmentation

Thus far, the motivational factors were analyzed in Step 1 and on the basis of the findings, the tourists were subdivided into segments in Step 2. In Step 3, the tourists' responsible attitude factors were analyzed; in Step 4, it was confirmed that Clusters 2 and 4 had the highest responsible attitude factor scores, as shown in Table 6. The four clusters were labeled as "general tourists", "nature-seeking responsible tourists", "nature-cohesion seeking tourists", and "wellness seeking responsible tourists". Among the clusters, two clusters (Clusters 2 and 4) were selected as target segments, based on these rationales: (1) the clusters of tourists with higher factor scores in motivation and responsible attitude would be the ideal segments for ecotourism sites to synergize together in the symbiotic relationship between the sites and the visitors. (2) Satisfying the tourists from the selected ideal clusters would not only be relatively easier to achieve than the other clusters with relatively lower motivation and responsible attitude factor scores, but also more likely to induce more visits from other tourists who are in the same (or similar) segments, through referrals and recommendations, thereby expanding the ecotourism business sustainably.

Table 6. Market segmentation.

Steps	Factors	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Segmentation	Healing	Mid	Mid	Low	High
	Nature	Low	High	High	Mid
	Cohesion	Low	Mid	High	High
	N%	31.5%	14.0%	22.4%	32.1%
Targeting	Attitude	Low (−0.603)	High (0.337)	Mid (0.199)	High (0.320)
	Target	X	O	X	O
Label		General tourists	Nature-seeking responsible tourists	Nature-cohesion seeking tourists	Wellness-seeking responsible tourists

Table 7 shows the results of the comparison between clusters on gender, age, education, companion, nationality, monthly income, and budget. For each variable, either chi-square or ANOVA has been applied accordingly. If the differences between the groups were significant, the distinctive features of Cluster 2 or Cluster 4 were shaded.

Table 7. Cluster profiling and comparison: demographic variables.

Categories		Percentage (%)					χ^2/F (*p*-Value)
		Total	Cluster 1	Cluster 2	Cluster 3	Cluster 4	
Gender	Male	45.7%	52.2%	40.6%	38.0%	46.9%	χ^2 = 9.10 (0.028)
	Female	54.3%	47.8%	59.4%	62.0%	53.1%	
Age	10–19	6.5%	6.4%	5.0%	9.0%	5.4%	χ^2 = 19.46 (0.364)
	20–29	45.1%	46.8%	46.5%	43.4%	44.0%	
	30–39	28.3%	25.5%	33.7%	28.9%	28.2%	
	40–49	11.6%	11.1%	5.9%	11.4%	14.5%	
	50–59	4.4%	4.7%	5.0%	3.0%	5.0%	
	60–69	3.5%	5.5%	3.0%	2.4%	2.5%	
	70s or older	0.7%	0.0%	1.0%	1.8%	0.4%	
Education	≤Middle School	6.5%	6.0%	7.0%	7.2%	6.3%	χ^2=36.61 (0.001)
	Vocational School	3.0%	2.2%	1.0%	2.4%	5.1%	
	Associate	6.8%	7.8%	3.0%	4.8%	8.9%	
	University	14.3%	16.4%	17.0%	16.9%	9.3%	
	Bachelor's	46.3%	49.6%	43.0%	35.5%	51.9%	
	Master's degree or higher	23.1%	18.1%	29.0%	33.1%	18.6%	
Partners	Alone	4.0%	1.3%	16.2%	1.8%	2.9%	χ^2 = 79.89 (0.000)
	Spouse/Partner	39.2%	41.4%	41.0%	40.2%	35.6%	
	Family with Children	20.8%	22.0%	5.7%	16.0%	29.7%	
	Relatives/Friends	27.7%	25.4%	30.5%	36.1%	22.6%	
	Other Group of Peers	6.2%	6.9%	4.8%	4.7%	7.1%	
	Package Tour	2.1%	3.0%	1.9%	1.2%	2.1%	
Nationality	Africa	1.5%	2.8%	1.1%	0.0%	1.3%	χ^2 = 102.7 (0.000)
	Asia	38.8%	41.7%	22.2%	15.6%	57.7%	
	Europe	32.1%	30.6%	46.7%	46.9%	18.1%	
	North America	13.8%	9.7%	17.8%	22.4%	10.6%	
	South America	2.2%	2.3%	4.4%	0.7%	2.2%	
	Oceania	11.6%	13.0%	7.8%	14.3%	10.1%	
Monthly Income (USD)	Less than 1000	13.3%	12.0%	9.4%	15.1%	14.8%	χ^2 = 59.33 (0.001)
	1000–1999	18.9%	21.5%	14.1%	11.8%	23.4%	
	2000–2999	15.1%	12.4%	18.8%	11.2%	19.1%	
	3000–3999	9.6%	10.0%	7.1%	11.8%	8.6%	
	4000–4999	9.5%	10.0%	9.4%	5.9%	11.5%	
	5000–5999	15.7%	19.1%	14.1%	16.4%	12.4%	
	6000–6999	5.8%	7.2%	8.2%	7.2%	2.4%	
	7000–7999	3.5%	2.9%	3.5%	5.3%	2.9%	
	8000–8999	1.8%	1.0%	3.5%	2.6%	1.4%	
	9000–9999	2.1%	1.0%	5.9%	2.0%	1.9%	
	more than 10,000	4.6%	2.9%	5.9%	10.5%	1.4%	
Budget	Group Size (Number of persons, A)	5.46	5.94	2.91	4.25	7.26	F = 3.518 (0.015)
	Daily Budget per Capita (USD; B)	63.7	60.4	89.6	64.5	53.5	F = 3.653 (0.013)
	Daily Budget per Group (USD; A*B)	347.8	358.8	260.7	274.1	388.4	-

4.5. Cluster-Appropriate Strategy

The characteristics of Cluster 2 (nature-seeking responsible tourists) and Cluster 4 (wellness-seeking responsible tourist) can be summarized as shown in Table 8. Cluster 2 is described as European women with advanced educational backgrounds of the above master's level with relatively high monthly income; they preferred to indulge in nature by traveling alone. The tourists in this cluster are most likely to be attracted by images or visual effects that present comfortable and well-managed facilities in the vicinity of a magnificent natural vista. They have shown patterns to travel individually, but with

their high level of income, they tend to make copious expenditures during their travels, which makes them an attractive target cluster for ecotourism managers.

Table 8. Summary of characteristics of Clusters 2 and 4.

Category	Cluster 2	Cluster 4
Common	High Satisfaction Level of Bali	
Motivation Factors	Nature	Healing, Cohesion
Gender	Female	No significance
Education	Above Master's	Bachelor's and Voc/Tech Schools
Partners	Alone	Family with Children
Nationality	Europe	Asia
Monthly Income	More than USD 9000	USD 1000–2999
Expenditure Features	Traveling alone but large expenditure per capita	Traveling in groups but small expenditure per capita

Cluster 4 could be characterized as Asians who preferred to travel in groups of families, relatives, friends, and children, in a more restful fashion; this strongly reflects their motivation factors of healing and cohesion. Therefore, they are likely to be more easily drawn to destinations that project and emphasize images of a family vacation, a family trip, or group activities. The members of this cluster exhibited a relatively lower level of monthly income (1000–2999 USD) compared to other clusters. Thus, while their per capita spending would also be relatively smaller than that of other clusters, their total spending would be a large sum as they travel in groups. Additionally, since the ecotourists in this cluster tend to travel in groups, the range and effects of their referrals and recommendations to their peers would be presumed to be wider and faster than the individual travelers, based on their headcounts.

5. Discussion and Conclusions

This research was based on the precondition that efficient management of ecotourism sites could be achieved by discovering the characteristics of the tourists, as the ecotourism market would be segmented based on the motivations, and that the segmented clusters would exhibit differentiated levels of responsible attitude towards ecotourism sites. This is because effective management of the ecotourism destination can be achieved by understanding the tourists, and REDD+ can be realized based on this.

To achieve the objectives, a questionnaire containing sets of statements and questions were distributed to randomly chosen tourists as they were exiting Sacred Monkey Forest Sanctuary and Uluwatu Monkey Forest, the two most popular ecotourism destinations of Bali, Indonesia. The collected responses enabled the measurement of the ecotourists' motivations and responsible attitudes. With these responses, a market segmentation analysis was performed.

In conclusion, two clusters (nature-seeking responsible tourists, wellness-seeking responsible tourists) were selected as Bali's target clusters based on the following rationales: (1) clusters with high motivation and responsible attitude factor scores would also be better for the management of the sites, since the ecotourism sites and tourists share a symbiotic relationship. (2) Satisfying these ideal clusters would not only be relatively easier than other clusters with lower motivation and responsible attitude factor scores, but also a more effective method to attract potential tourists with similar characteristics, contributing to sustainable tourism business in the region.

Cluster 2 (nature-seeking responsible tourists) was best characterized as European women with a high level of education (master's degree or above) and a high level of monthly income (9000 USD or above), who preferred to travel alone. It would be safe to predict that tourists in this cluster would most likely be drawn to comfortable and well-maintained facilities surrounded by—or near the sights of—nature, based on their preferences and high level of monthly income. This is the same tendency as seen in previous research on the characteristics of ecotourists [57]; they were highly educated, had higher income, consisted of mostly females, and were more likely to travel alone compared to mass

tourists. In contrast, Cluster 4 (wellness-seeking responsible tourists) was defined as a group of Asians who traveled as groups of families, relatives, friends, and children. The tourists in this cluster tend to have a relatively lower level of education (bachelor's degree or lower) and monthly income (between 1000 and 2999 USD). Therefore, it could be predicted that they would prefer sites equipped with family (or group)-oriented activities. While their individual budget may be relatively lower, the budget per group is high as they travel in relatively larger groups. However, given that travel is one of the best forms of education for children and family bonding [58], this opportunity will allow the cultivation of "responsible tourist" from a long-term perspective if proper education is provided to them.

With the characteristics of each cluster uncovered, it became possible to identify the preferences and tendencies of the diverse segments of tourists, which further enabled this research to progress into the step of deriving the proper marketing strategy. This is in line with the result of previous studies which have investigated tourists' motivations and attitudes, which are useful variables in market segmentation [37,38,59,60]. The results of this study indicate that the attitude factor is a useful criterion for segmenting the tourist market and motivating tourists to visit ecotourism sites, along with motivation factors. The attitude factor is also relevant in market segmentation because it provides a more comprehensive basis that measures eco-friendly actions and responsible attitudes toward local communities.

Changes in tourism values, interests, and preferences have spawned a growing tourist segment that tends to protect the natural and cultural environment. This market segment is growing rapidly [61]. As mentioned in [61], the increasing number of tourists declaring themselves as ecotourists has implications for the concept's implementation and ecotourism activities' practice. However, as pointed out by Beaumont [39], not all ecotourists have already faced or are interested in environmental issues [44,45]. Therefore, it is necessary to consider ways to promote pro-environmental behaviors and attitudes. Ecotourism will be operated efficiently when tourists have these aspects, and this is the basis for successful REDD+ implementation. In the case of Tanzania [22], local Non-Governmental Organizations(NGOs) have partnered with the government to operate ecotourism programs, trying to build a more sustainable ecotourism model through tourist education.

It could be concluded that ecotourism conserves and enhances forest resources and improves the well-being of local communities through incentive-based conservation mechanisms. In other words, it helps to maintain the coexistence of forests, people, and wildlife. This also provides practical guidance to forest-based tourism destinations in developing countries, which have faced a reduction in global greenhouse gases through sustainable forest protection and carbon storage. However, this can be done sustainably when more responsible tourists visit the destinations.

According to [61], at least four government agencies (the Ministry of Forestry, the Ministry of Internal Affairs, the Ministry of Tourism and Creative Economy, and the Ministry of Marine Affairs and Fisheries) are involved in the development of ecotourism in Indonesia. This shows that REDD+ and ecotourism are very important agendas for Indonesia to conserve tropical forests while achieving economic development. Therefore, the findings of this research could further be used as a suggestion for the state government of Bali and their respective agencies and offices that handle ecotourism site management. The recommendations could contribute by providing valuable insights to them for developing their marketing strategy and management options for sustainable ecotourism and serving as useful resources for future research in related fields. Moreover, the implications drawn from this study provide guidance to those REDD+ practitioners and policymakers in developing countries who desire to implement incentive-based conservation mechanisms. As pointed out by Peskett et al. [62], ecotourism has proven helpful for social developments in REDD+ implementation through the effects such as (1) income from tourism, (2) job creation, (3) improved local services and support, (4) future income from bundled ecosystem services, (5) maintenance of local environmental services, and therefore local agricultural production. On that note, this study is meaningful since it has drawn implications on how to operate ecotourism when promoting REDD+. However, this study also has limitations in that the research has been conducted only in Bali Island. In future studies,

more practical REDD+ strategies could be derived through tourist surveys focusing on the sites where REDD+ has been already executed.

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