



THE VALUE OF NORTH SULAWESI ENDEMIC FAUNA AS AN ECOTOURISM ATTRACTION SUPPORTING TOURISM OF LIKRI ISLAND IN LAKE TONDANO, NORTH SULAWESI OF INDONESIA

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ABSTRACT

Introduction and aim: A strategic approach to the scientific management and sustainable conservation of endemic animals involves leveraging their value to positively influence the development of ecotourism areas. This research aims to identify the biodiversity present in an area designated for endemic-animal-based ecotourism, while also evaluating the local community's level of responsiveness, knowledge, and understanding regarding the development of this new destination on Likri Island in Lake Tondano.

Method: The method used in this study was the survey method which directly interviews the community with questions that have been prepared in the form of a questionnaire, then the collected data were tabulated and the percentages were calculated.

Results: Research indicates that the educational background of the local population in the area designated for the development of an endemic-animal-based ecotourism site (Tandengan and Tandengan Satu villages) consists primarily of individuals with a high school education (42.67%) and those with a bachelor's degree (2.67%). Regarding the endemic fauna found on Likri Island, eight species were identified; the white-tailed rat was the most prevalent (57.99%), while the babirusa was the least common (0.59%), alongside other endemic species. In terms of the community's perception of the benefits of endemic-animal-based ecotourism on Likri Island, the largest segment (50.25%) reported having an "understanding" of these benefits, while the smallest segment (2.54%) reported having "no understanding at all." A significant portion of the community (72%) expressed agreement with the proposal to develop Likri Island (Tondano) into a new tourist destination and a research center for the endemic fauna of North Sulawesi, with only a very small fraction (0.89%) expressing strong disagreement. Furthermore, there is varying interest among village residents regarding participation in vocational training for endemic-animal-based island ecotourism, with the highest level of interest at 57.40% and the lowest at 3.42%. In conclusion, the study reveals a diversity of perspectives among the local community—ranging from their awareness of the endemic animals in their region and their understanding of endemic-animal-based ecotourism in North Sulawesi, to their level of support for transforming Likri Island (Tondano) into an ecotourism destination and research hub, as well as their interest in pursuing professional training for the island's ecotourism sector.

Conclusion: Research conducted in the villages of Tandengan and Tandengan Satu in Eris District regarding the value of North Sulawesi's endemic fauna as an ecotourism attraction on Likri Island—and their role in supporting regional tourism—reveals a diverse range of educational and employment perspectives among the local community, alongside frequent sightings of these endemic animals. Public perspective is positive regarding the transformation of Likri Island into an ecotourism destination and a research center for North Sulawesi's endemic fauna.

Implications: Supporting ecotourism on Likri Island, the intensive outreach programs—led by the government and academic institutions—are required, particularly regarding the conservation and development of North Sulawesi's endemic species. Developing the Likri Island nature ecotourism destination necessitates increasing the variety of endemic bird species—such as the Local Manguni owl, hornbills, and the Sulawesi hawk-eagle, among other avian species. Furthermore, the Likri island requires spatial reorganization, addressing factors such as total area and habitat carrying capacity; including the systematic arrangement of tree species for animal feed sources to create suitable activity spaces for the endemic animals that serve as the ecotourism attractions.

Keywords: Ecotourism, Endemic animals, Likri Island, Local community socio-culture.

1 INTRODUCTION

North Sulawesi Province boasts numerous locations with unique appeal, owing to their abundant natural resources and island clusters that harbor endemic flora and fauna found nowhere else. Observations suggest that the area surrounding Dorbolaang Village on Lembeh Island (Bitung City) is rich in biodiversity, hosting species such as hornbills, tarsiers, babirusas, bats, kus-kus (*Sulawesi bear cuscus*), and white-tailed forest rats, alongside various reptiles [1]. The region's natural beauty and distinctive flora and fauna offer significant value; consequently, these assets require scientifically grounded management and planning to support the conservation of endemic species through the development of island or village-based ecotourism.

Lake Tondano in Minahasa Regency features Likri Island, which has been developed as a nature tourism site; this area has garnered attention from the Central Government, as North Sulawesi is one of the five "super-priority" provinces designated for tourism development. To further optimize the site, a new concept is required—specifically, modifying regional development through an ecotourism model centered on the island's endemic fauna and natural attractions, which are unique to the region [2]. Ecotourism, as a business activity within the nature tourism sector, can serve as a component of sustainable development [3]. The research objectives are: a) to maintain Indonesia's biodiversity, which is essential for the sustainability of life; b) to sustainably preserve biodiversity potential as an asset for sustainable development; and c) to study the existing biodiversity as a fundamental basis for its conservation and utilization. The success of village-based ecotourism development in a given area is closely linked to the local community's level of understanding, knowledge, and interest regarding ecotourism centered on the endemic fauna found within the development zone. In the Minahasa Regency area, information remains very limited regarding the biodiversity of endemic fauna inhabiting and active on Likri Island within Lake Tondano [4].

2 RESEARCH METHODS

2.1 Research Location

This study was conducted in the Minahasa Regency area surrounding Lake Tondano, North Sulawesi Province, Indonesia, from March to November 2026 (Figure 1). The data collected consisted of secondary data obtained from relevant agencies and primary data gathered through direct interviews with the local community. The study employed an observational survey method at the research site [5], carried out in two stages: a) a field orientation period of approximately one month to assess the situation and conditions of the study area and the community as an initial step [6]; and b) data collection involving the direct distribution of questionnaires to community members who met the criteria for respondents. Data collection relied on respondents freely answering prepared questions regarding the observed variables [7].

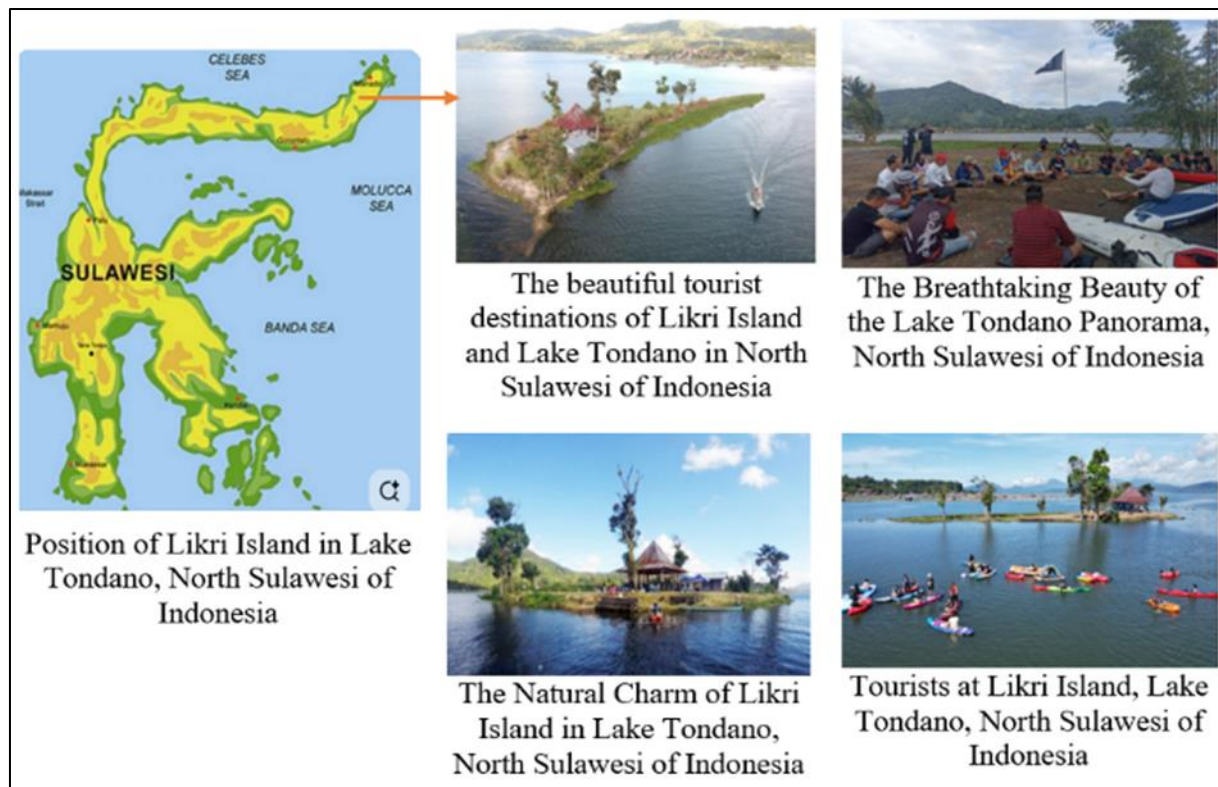


Figure 1: Likri Island Inspires a Spirit of Togetherness, Education, and Potential Local and Global Tourist Destination

2.2 Data Collection

This study employed a survey method. Data were collected using a multi-stage cluster random sampling technique [5]. Data collection in each village focused on residents aged 17 and older. A total of 750 residents were involved across the villages, with the analysis focusing on a 20% sample of respondents; all information gathered in the field was recorded, particularly regarding the residents' understanding of the value and benefits of North Sulawesi's endemic animals within the context of the proposed island-based ecotourism development [8]. Supplementary data (secondary data) were obtained from relevant agencies in the Eris District of Minahasa Regency.

The variables observed in this study included the following community characteristics: (1) residents' education and occupation; (2) residents who had previously seen endemic animals in the Tondano area; (3) the specific endemic animals seen by residents in the Tondano area; (4) residents' understanding of ecotourism centered on North Sulawesi's endemic animals; (5) community approval regarding the proposed ecotourism and research center for endemic animals on Likri Island, Tondano; and (6) community interest in participating in workforce training for this island-based ecotourism initiative [9].

2.3 Data analysis

Data collected from the observed variables were tabulated and statistically analyzed, with percentages calculated to facilitate a scientific narrative discussion; this discussion addresses the community's perspective on conditions within the study area—informed by observational findings recorded in simple tables [10].

3 RESULTS AND DISCUSSION

3.1 Education and Employment of the Communities in Tandengan and Tandengan Satu Villages, Eris District Around Lake Tondano

The role of education in rural areas regarding plans for developing island-based ecotourism centered on endemic wildlife is increasingly evident and highly varied, as illustrated by research findings from the Eris Tondano district (specifically the villages of Tandengan and Tandengan Satu). The results indicate that in Tandengan village, the most common highest level of education attained is Senior High School (SMA) at 42.67%, followed by a Bachelor's degree (20%), Primary School (SD) (12.67%), Junior High School (SMP) (10%), Postgraduate studies (2.67%), Diploma III (D3) (3.33%), and current university students (4%) (Table 1.1). A comparison with Tandengan Satu village reveals

significant variation; the most common highest education level there is Senior High School (52%), followed by Junior High School (18.67%), Vocational School (8.67%), Diploma III (8%), and Primary School (6.67%).

An examination of research findings regarding the role of education in the two aforementioned villages reveals that it plays a crucial part in shaping community awareness concerning the conservation of North Sulawesi's endemic wildlife within the context of environmentally-based tourism management. Both formal and informal education foster an understanding among residents regarding the importance of conserving endemic flora and fauna, as well as building the adaptive capacity needed to support balanced and sustainable ecotourism management that protects endemic animal species from the threat of poaching. Local government bodies and academics are actively engaged in the preservation of North Sulawesi's endemic wildlife through training programs focused on sustainable tourism—covering topics such as island carrying capacity and nature interpretation techniques for tourists. In terms of specific variables, the level of education has a positive and significant impact on labor absorption, and it also exerts a simultaneous influence on labor absorption across cities in North Sulawesi Province [11].

Table 1: Education Levels of the Community in Tandengan Village and Tandengan Satu Village

No	Survey Location	Description	Amount	Percent (%)
1	Tandengan, Minahasa Regency	Elementary school	19	12.67
		Junior High School	15	10
		Senior High School	64	42.67
		Bachelor (S1)	30	20
		Master (S2)	4	2.67
		Vocational	7	4.67
		Diploma (D3)	5	3.33
		Student	6	4
Total			150	100
No	Survey Location	Description	Amount	Percent (%)
2	Tandengan Satu, Minahasa Regency	Elementary school	10	6.67
		Junior High School	28	18.67
		Senior High School	78	52
		Bachelor (S1)	9	6
		Master (S2)	-	-
		Vocational	13	8.67
		Diploma (D3)	12	8
		Student	-	-
Total			150	100

Research findings regarding the occupations of residents in the Eris Tondano District (specifically the villages of Tandengan and Tandengan Satu) reveal a wide variety of employment statuses. In Tandengan village, the largest segment of the population (37.33%) is unemployed; among the employed, the most common occupations are teachers (11.33%) and entrepreneurs (11.33%), followed by farmers/livestock breeders (8%), civil servants (7.33%), private-sector employees (6.67%), drivers (5.33%), retirees (4.67%), skilled tradespeople (2.67%), lecturers (2%), and seafarers (2%). In Tandengan Satu village, field data indicates that approximately 53.33% of residents are unemployed, while the employed population consists of farmers/livestock breeders (20%), entrepreneurs (6.67%), skilled tradespeople (6.67%), teachers (3.33%), drivers (3.33%), civil servants (3.33%), and private-sector employees (1.33%), as shown in Table 1.2.

Table 2: Occupations of the Community in Tandengan Village and Tandengan Satu Village

No	Survey Location	Description	Amount	Percent (%)
1	Tandengan, Minahasa Regency	Government employees	11	7.33
		Private employees	10	6.67
		TNI/Polri (Indonesian National Armed Forces and Indonesian National Police)	2	1.33
		Sailor	3	2
		Teacher	17	11.33
		Farmers/Livestock Farmers	12	8
		Businessman	17	11.33
		Craftsman	4	2.67
		Retired	7	4.67
		Driver	8	5.33
		Doesn't work	56	37.33
		Lecturer	3	2
Total			150	100
No	Survey Location	Description	Amount	Percent (%)
2	Tandengan Satu, Minahasa Regency	Government employees	5	3.33
		Private employees	2	1.33
		TNI/Polri (Indonesian National Armed Forces and Indonesian National Police)	-	-
		Sailor	-	-
		Teacher	5	3.33
		Farmers/Livestock Farmers	30	20
		Businessman	10	6.67
		Craftsman	10	6.67
		Retired	3	2
		Driver	5	3.33
		Doesn't work	80	53.33
		Lecturer	-	-
Total			150	100

Integrating employment opportunities through ecotourism supply chains—such as the provision of local culinary specialties or handicrafts—ensures that the community reaps direct economic benefits from the conservation of endemic wildlife featured in ecotourism activities, while also being closely linked to local community education [12]. Education serves as a process for enhancing the mastery of theories and decision-making skills regarding issues relevant to achieving specific objectives. It is a continuous method grounded in the learners' developmental stages, the scope of educational material, and learning goals; these elements must be aligned with the curriculum and the specific educational level, ensuring that the content is tailored to the learners' developmental capacity to effectively grasp information suited to the situation at hand [13].

Strong integration between education and industry needs is crucial for enhancing workforce competence; specifically, synchronization between educational institutions and the tourism sector produces job-ready graduates through curricula that are continuously updated to align with trends, technology, and consumer preferences [14].

3.2 Endemic animals frequently found in the Tondano area

North Sulawesi's endemic animals represent a valuable asset—offering economic potential if managed in a balanced and sustainable manner—as well as an opportunity to develop new wildlife-based tourism destinations in the Likri Island area of Eris District, Tondano. Research findings (Table 2) indicate that residents of the two villages (Tandengan and Tandengan Satu) have encountered these endemic animals within their settlement areas; the species most frequently sighted by Tandengan villagers were the white-tailed rat (57.99%), *patola* snake (16.57%), *manguni* owl (12.43%), bats (8.88%), hornbills (2.37%), and anoa (1.18%). The species with the lowest sighting rate among Tandengan villagers was the babirusa, at 0.59% (Table 3).

Table 3: Endemic animals sighted by the community in the Tondano region

No	Survey Location	Description of Animal Species	Number Viewers	of	Persen (%)
1	Tandengan, Kab. Minahasa	Bat (<i>Chiroptera sp.</i>)	15		8.88
		White Tailed Rat (<i>Maxomys hellwaldii</i>)	98		57.99
		Sulawesi Scops Owl (<i>Otus manadensis</i>)	21		12.43
		Sanca Patola (<i>Morelia amethistina</i>)	28		16.57
		Black Hornbill (<i>Rhyticeros cassidix</i>)	4		2.37
		Lowland Anoa (<i>Bubalus depressicornis</i>)	1		0.59
		Babirusa Sulawesi (<i>Babyrousa babyrussa celebensis</i>)	1		0.59
		Black Monkey (<i>Macaca nigra</i>)	1		0.59
Total			169		100
No	Survey Location	Description of Animal Species	Number Viewers	of	Persen (%)
2	Tandengan Satu, Kab. Minahasa	Bat (<i>Chiroptera sp.</i>)	9		6.12
		White Tailed Rat (<i>Maxomys hellwaldii</i>)	111		75.51
		Sulawesi Scops Owl (<i>Otus manadensis</i>)	5		3.40
		Sanca Patola (<i>Morelia amethistina</i>)	12		8.16
		Black Hornbill (<i>Rhyticeros cassidix</i>)	10		6.80
		Lowland Anoa (<i>Bubalus depressicornis</i>)	-		-
		Babirusa Sulawesi (<i>Babyrousa babyrussa celebensis</i>)	-		-
		Black Monkey (<i>Macaca nigra</i>)			
Total			147		100

The findings of this study serve as a scientific basis for organizing and designing endemic-species-based ecotourism around Likri Island in Lake Tondano. Regarding the percentage of endemic animals sighted, the white-tailed rat was observed by 75.51% of the residents in Tandengan Satu village—a higher figure than that reported by residents of Tandengan village. Sightings of the *patola* snake were less frequent (8.16%) compared to Tandengan village. While the reported sighting rate for the *manguni* owl was only 3.40%, the rate for hornbills was higher (6.80%) among residents of Tandengan Satu. The observed variations in sighting percentages between the two villages are influenced by social environmental factors and human activities in the area surrounding Lake Tondano. These differences stem from habitat conditions and proximity (environmental accessibility); some areas may be closer to the vegetation along

the lake's edge. Observations also revealed varying levels of land clearing for agriculture or settlement, which affects the range of movement for endemic species—such as birds and small mammals—differently in each village (Figure 2).

Conversely, residents working as farmers or fishermen on Lake Tondano frequently conduct their activities in natural habitats, often during the night. In contrast, the village of Tandengan serves as a hub for public facilities—such as healthcare and the sub-district administration—meaning many residents spend more time indoors or in built-up areas than in the open outdoors; furthermore, daily activity schedules in the village influence the likelihood of encountering nocturnal endemic animals. Wildlife conservation efforts require careful attention to ensure sustainable use that prevents population decline and species extinction, as well as harmonious utilization that considers the interests of other stakeholders [15], thereby fostering balance and harmony for the endemic wildlife of North Sulawesi.

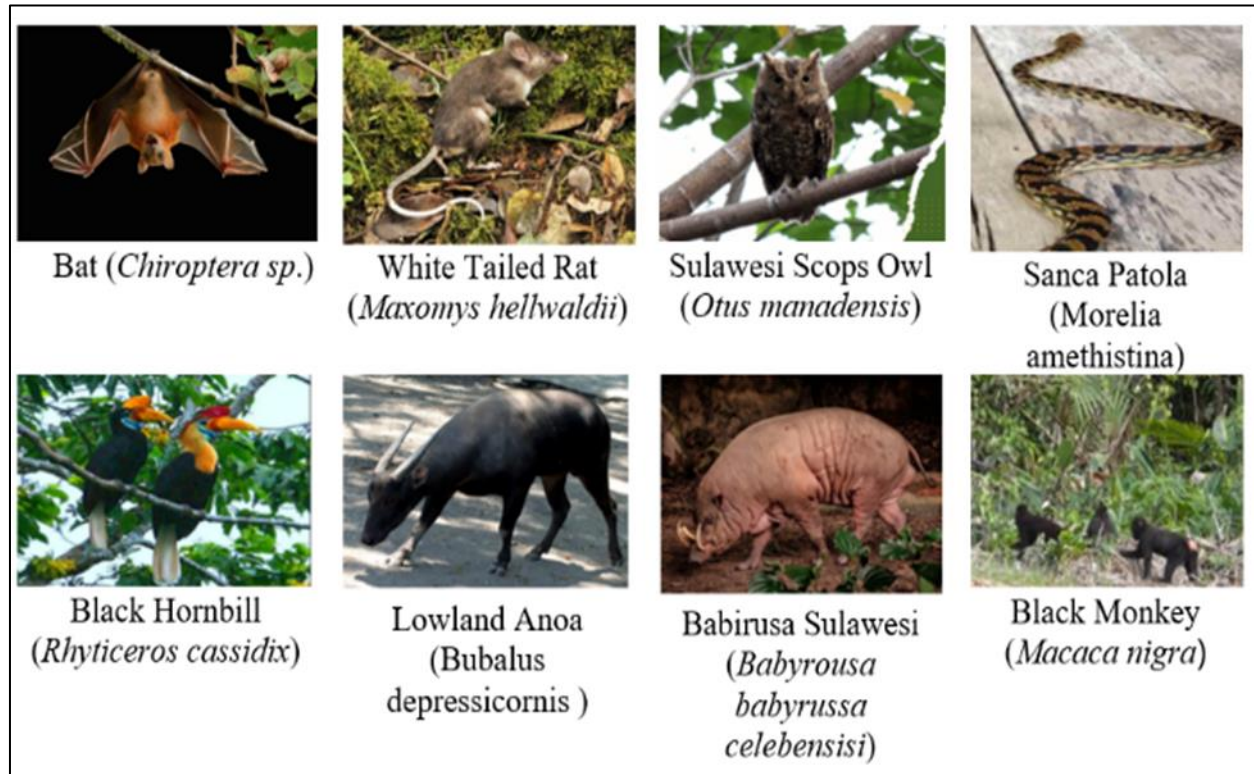


Figure 2: The potential endemic animals as the objects of supporting ecotourism development on Likri Island in Lake Tondano, North Sulawesi of Indonesia

3.3 Public Perceptions Regarding Ecotourism Centered on North Sulawesi Endemic Species around Likri Island, Lake Tondano

Communities surrounding Lake Tondano—the largest lake in North Sulawesi, which supports nearly every aspect of local life—hold varying views regarding ecotourism centered on North Sulawesi's endemic fauna. Research findings indicate that the largest group—198 individuals (50.25%) in Tandengan village—possesses an understanding of ecotourism based on North Sulawesi's endemic fauna, while 96 individuals (24.36%) demonstrate a deep understanding of such ecotourism specifically on Likri Island. A total of 90 individuals (22.84%) have limited understanding of endemic fauna-based ecotourism on Likri Island, and only 10 individuals (2.54%) in the Tandengan village area have no understanding of it at all. Among residents of the Tandengan Satu village area, 261 individuals (66.75%) understand ecotourism on Likri Island based on fauna endemic to North Sulawesi; a smaller group of 28 individuals (7.16%) possesses a deep understanding, while 92 individuals (23.53%) have limited understanding, and 10 individuals (2.56%) have no understanding whatsoever (Table 3).

Table 4: Perceptions of the village community regarding North Sulawesi endemic animal ecotourism.

No	Survey Location	Description	Score value	Frequency (people)	Number (orang)	Percent (%)
1	Tandengan, Minahasa Regency	FU	4	24	96	24,36
		U	3	66	198	50,25
		DCU	2	50	90	22,84
		DCU at All	1	10	10	2,54
Total				150	394	100
No	Survey Location	Description	Score value	Frequency (people)	Number (orang)	Percent (%)
2	Tandengan Satu, Minahasa Regency	FU	4	7	28	7,16
		U	3	87	261	66,75
		DCU	2	46	92	23,53
		DCU at All	1	10	10	2,56
Total				150	391	100

Note: FU = Fully Understands, U= Understands, DCU = Do not completely understand, DCU at All = Don't Understand at All

Insights from observers and researchers of region-specific animals can serve as a foundation and a catalyst for researchers studying the endemic wildlife found in North Sulawesi. Previous research reveals that these unique animals are high-value targets in the illegal wildlife trade—a global illicit industry estimated to be worth billions of dollars [16].

3.4 Local Community Perspectives on Likri Island in LakeTondano, as a Tourist Destination and Research Center for North Sulawesi's Endemic Fauna

Table 5: Community Approval Regarding Ecotourism and the Endemic Animal Research Center on Likri Island, Tondano

No	Survey Location	Description	Score value	Frequency (people)	Number (orang)	Percent (%)
1	Tandengan, Minahasa Regency	FU	4	23	92	20.44
		U	3	108	324	72
		DCU	2	15	30	6.67
		DCU at All	1	4	4	0.89
Total				150	450	100
No	Survey Location	Description	Score value	Frequency (people)	Number (orang)	Percent (%)
2	Tandengan Satu, Minahasa Regency	FU	4	23	92	21.91
		U	3	95	285	66.43
		DCU	2	20	20	9.32
		DCU at All	1	12	12	2.80
Total				150	409	100

Note: FU = Fully Understands, U= Understands, DCU = Do not completely understand, DCU at All = Don't Understand at All

Ecotourism centered on endemic fauna holds a unique appeal, as it showcases North Sulawesi's endemic animals—species not found in other provinces. Research findings for Tandengan Village indicate that 324 respondents (72%) agreed with the proposal to transform Likri Island into a new ecotourism destination and a research center for North Sulawesi's endemic animals. Additionally, 92 respondents (20.44%) strongly agreed, while 30 respondents (6.67%)

were somewhat hesitant about the plan; a small fraction—4 respondents (0.89%)—completely disagreed with developing Likri Island into an ecotourism and research hub for the region's unique wildlife. A similar pattern was observed in Tandengan Satu Village, where 285 respondents (66.43%) agreed with the ecotourism and research center proposal for Likri Island, 92 (21.91%) strongly agreed, 20 (9.32%) were somewhat hesitant, and 12 (2.80%) completely disagreed (Table 5).

An in-depth examination of the diverse mindsets among the respondents reveals that many people have not yet received consistent information regarding the benefits of endemic animals—specifically, how their balanced and sustainable management could create positive opportunities at both national and international levels, ultimately benefiting the local economy and the community. From the perspective of sustainable development theory, the success of a Community-Based Ecotourism initiative—avoiding the pitfalls seen at other lakes—depends on actively involving the communities of Eris, Remboken, and Kakas; residents would serve as guides and guardians of the island and its endemic wildlife. In short, Likri Island fits the criteria for an ecotourism site, an island conservation area, and a research station, given its location within a unique endemic lake ecosystem and its distinct scientific and cultural value. The research data highlights the need for a shared scientific understanding regarding the development of Likri Island as a new ecotourism destination and a research center for North Sulawesi's endemic fauna. A primary challenge in sustainable tourism management is ensuring the orderly participation of the community—who act as both key stakeholders and beneficiaries of tourism development—making it crucial to study tourism sustainability while integrating the community and their local wisdom as an inseparable part of the process [17].

A closer examination reveals significant diversity in education levels among the communities of Tandengan and Tandengan Satu villages. This variation contributes to differing mindsets regarding the concept of utilizing endemic wildlife for ecotourism development on Likri Island and in the surrounding area [18]. Education shapes how individuals process information, assess economic benefits, and grasp the importance of wildlife-based conservation. Some community members view the economic benefits of local ecotourism merely as sources of immediate income—such as ticket sales, boat rentals, or trading activities—while others lack an understanding of conservation concepts, making it difficult for them to perceive the long-term link between protecting endemic species (such as the Tarsier, *Macaca nigra*, the Minahasan owl, or the hornbill) and the sustainability of tourism [19]. Conversely, higher levels of education are associated with the ability to think critically and understand that preserving endemic wildlife is essential for maintaining tourist interest.

The educated individuals are more likely to view ecotourism as a future-oriented investment that prioritizes ecological sustainability over short-term financial gain [20]. Thus, despite the varying levels of support expressed by residents of Tandengan and Tandengan Satu regarding the development of Likri Island (located in Eris District, Minahasa Regency), the community includes individuals with above-average education and relevant work experience. These individuals possess the perspective to view Likri Island not just as a tourist spot, but as a natural laboratory, a research hub, and an educational resource for the younger generation—fostering the preservation of North Sulawesi's biodiversity.

3.5 Village Community Involvement in Ecotourism Workforce Training on North Sulawesi Islands Based on Endemic Fauna

Research regarding ecotourism on Likri Island—based on North Sulawesi's endemic wildlife and combined with nature tourism—yielded diverse responses from residents in the villages of Tandengan and Tandengan Satu. In Tandengan Village, the "interested" category had the highest frequency at 252 people (57.40%), followed by the "very interested" category at 140 people (31.89%); the "less interested" category accounted for 32 people (7.29%), while the lowest response was in the "not interested at all" category, with 15 people (3.42%). Conversely, in Tandengan Satu Village, 267 people (68.29%) were "interested," 64 people (16.37%) were "very interested," and 30 people (7.67%) were "less interested," while an equal number—30 people (7.67%)—were "not interested at all."

Differences in perspective among the communities of the two villages regarding the ecotourism workforce training for Likri Island typically stem from socioeconomic factors, access to information, and the level of initial involvement. The varied views on this training—focused on ecotourism involving endemic wildlife—may be attributed to a lack of economic understanding; some community members believe that conservation-related training does not yield quick financial returns compared to conventional jobs. Consequently, a shared mindset and a unified goal are needed to highlight the value of endemic wildlife in the context of ecotourism development across North Sulawesi.

Tourism villages represent a form of community-based tourism development with the potential to foster economic well-being while simultaneously preserving environmental sustainability and local culture [7]. The development of tourism villages today focuses not only on providing tourist attractions but also on creating educational and meaningful tourism experiences, including through the concept of eco-educational tourism. Tour guides play a crucial role; they do more than simply convey information—they help tourists understand the ecological, cultural, and historical values, as well as the local way of life, at the destination [21]. Research findings indicate that residents of Tandengan and Tandengan Satu

villages (Eris District, Minahasa Regency) remain interested in participating in ecotourism workforce training centered on North Sulawesi's endemic fauna; this presents a significant opportunity to leverage the value of these unique animals in the development of new tourism destinations on the Likri Island area of Lake Tondano.

Table 6: Public interest in participating the workforce training for endemic-fauna-based island ecotourism.

No	Survey Location	Description	Score value	Frequency (people)	Number (orang)	Percent (%)
1	Tandengan, Minahasa Regency	FU	4	35	140	31,89
		U	3	84	252	57,40
		DCU	2	16	32	7,29
		DCU at All	1	15	15	3,42
Total				150	439	100
No	Survey Location	Description	Score value	Frequency (people)	Number (orang)	Percent (%)
2	Tandengan Satu, Minahasa Regency	FU	4	16	64	16,37
		U	3	89	267	68,29
		DCU	2	15	30	7,67
		DCU at All	1	30	30	7,67
Total				150	391	100

Note: FU = Fully Understands, U= Understands, DCU = Do not completely understand, DCU at All = Don't Understand at All

4 CONCLUSION

Research conducted in the villages of Tandengan and Tandengan Satu in Eris District regarding the value of North Sulawesi's endemic fauna as an ecotourism attraction on Likri Island—and their role in supporting regional tourism—reveals a diverse range of educational and employment perspectives among the local community, alongside frequent sightings of these endemic animals. Public perspective is positive regarding the transformation of Likri Island into an ecotourism destination and a research center for North Sulawesi's endemic fauna.

To support ecotourism on Likri Island, the intensive outreach programs—led by the government and academic institutions—are required, particularly regarding the conservation and development of North Sulawesi's endemic species. Developing the Likri Island nature ecotourism destination necessitates increasing the variety of endemic bird species—such as the Local Manguni owl, hornbills, and the Sulawesi hawk-eagle, among other avian species. Furthermore, the Likri island requires spatial reorganization, addressing factors such as total area and habitat carrying capacity; including the systematic arrangement of tree species for animal feed sources to create suitable activity spaces for the endemic animals that serve as the ecotourism attractions.

STATEMENTS ON COMPLIANCE WITH ETHICAL STANDARDS

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Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

The present research work does not contain any studies performed on animals/humans subjects by any of the authors'.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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