

THE EFFECTS OF BIODIVERSITY
KNOWLEDGE ON
ENVIRONMENTAL AWARENESS
AND PRO-ENVIRONMENTAL
BEHAVIOR TOWARDS
PROBOSCIS MONKEY
CONSERVATION IN THE AREA
OF PT. ANTANG GUNUNG

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MERATUS

by Muhammad Naparin



THE EFFECTS OF BIODIVERSITY KNOWLEDGE ON ENVIRONMENTAL AWARENESS AND PRO-ENVIRONMENTAL BEHAVIOR TOWARDS PROBOSCIS MONKEY CONSERVATION IN THE AREA OF PT. ANTANG GUNUNG MERATUS

Muhammad Naparin¹
Muhammad Helmi²

ABSTRACT

Objective: The proboscis monkey is included in Appendix I, the 2023 Convention on International Trade in Endangered Species (CITES) as the most threatened and protected fauna. This species is endemic to the island of Borneo and is designated as the mascot of Indonesia's South Kalimantan Province.

Theoretical Framework: Biodiversity conservation studies focus on improving the physical quality of habitats, the impact of environmental changes and natural resources. In addition, this research explores knowledge about biodiversity from the social aspect in the form of community participation, so that it can provide good knowledge about diversity to the community

Purpose: of this study is to provide education from the public about environmental awareness around the proboscis monkey's habitat. This study used a quantitative method, where confirmatory factor analysis (CFA) was carried out using SmartPLS software version 3.2.9.

Method: The research model was tested on 163 respondents living around the proboscis monkey conservation area of PT. Antang Mount Meratus, South Kalimantan, Indonesia.

Results and Conclusion: The results showed that there is a significant influence of Knowledge of Biodiversity on Environmental Awareness and Pro-Environmental Behavior. This study also shows the significant influence of Environmental Awareness on Pro-Environmental Behavior. This study can conclude that the role of the community is very important to preserve the environment, especially in the context of conserving flora and fauna which are threatened with extinction

Research Implications: This study provides a managerial contribution to policy makers and companies to focus on providing in-depth knowledge about biodiversity and conducting ongoing education to the community around the proboscis monkey's habitat. from the social aspect this research provides an understanding to the community to behave in an environmentally friendly manner

Keywords: Biodiversity Knowledge, Environmental Awareness, Pro-Environmental Behavior, Bekantan, Proboscis Monkey (*Nasalis larvatus*), Environmental Conservation.

OS EFEITOS DO CONHECIMENTO SOBRE BIODIVERSIDADE NA CONSCIENTIZAÇÃO AMBIENTAL E NO COMPORTAMENTO PRÓ-AMBIENTAL EM RELAÇÃO À CONSERVAÇÃO DO MACACO-PREGO NA ÁREA DE PT. ANTANG GUNUNG MERATUS

RESUMO

Objetivo: O macaco probóscide está incluído no Apêndice I da Convenção sobre o Comércio Internacional de Espécies Ameaçadas de Extinção (CITES) de 2023 como a fauna mais ameaçada e protegida. Essa espécie é endêmica da ilha de Bornéu e é designada como o mascote da província de Kalimantan do Sul, na Indonésia.

¹ Universitas Lambung Mangkurat, Banjarmasin, Kalimantan Selatan, Indonesia.

E-mail: Muhammad.naparin@ulm.ac.id Orcid: <https://orcid.org/0000-0002-9462-4572>

² Universitas Lambung Mangkurat, Banjarmasin, Kalimantan Selatan, Indonesia.

E-mail: Muhammad.helmi@ulm.ac.id Orcid: <https://orcid.org/0009-0006-2242-5861>



Estrutura teórica: Os estudos de conservação da biodiversidade concentram-se em melhorar a qualidade física dos habitats, o impacto das mudanças ambientais e os recursos naturais. Além disso, esta pesquisa explora o conhecimento sobre a biodiversidade a partir do aspecto social na forma de participação da comunidade, de modo que possa fornecer bons conhecimentos sobre a diversidade para a comunidade

Objetivo: o objetivo deste estudo é educar o público sobre a conscientização ambiental em torno do habitat do macaco probóscide. Este estudo usou um método quantitativo, em que a análise fatorial confirmatória (CFA) foi realizada usando o software SmartPLS versão 3.2.9.

Método: O modelo de pesquisa foi testado em 163 entrevistados que vivem ao redor da área de conservação do macaco-prego da PT. Antang Mount Meratus, Kalimantan do Sul, Indonésia.

Resultados e conclusões: Os resultados mostraram que há uma influência significativa do Conhecimento sobre Biodiversidade na Consciência Ambiental e no Comportamento Pró-Ambiental. Esse estudo também mostra a influência significativa da conscientização ambiental no comportamento pró-ambiental. Este estudo pode concluir que o papel da comunidade é muito importante para preservar o meio ambiente, especialmente no contexto da conservação da flora e da fauna que estão ameaçadas de extinção

Implicações da pesquisa: Este estudo fornece uma contribuição gerencial para que os formuladores de políticas e as empresas se concentrem em fornecer conhecimento aprofundado sobre a biodiversidade e realizar educação contínua para a comunidade em torno do habitat do macaco proboscis.

Palavras-chave: Conhecimento sobre Biodiversidade, Conscientização Ambiental, Comportamento Pró-Ambiental, Bekantan, Macaco Proboscis (*Nasalis Larvatus*), Conservação Ambiental.

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1 INTRODUCTION

Proboscis Monkey (*Nasalis larvatus*) in Indonesia is known as Bekantan, characterized by having a large nose and exhibiting sexual dimorphism behavior. Body size of male proboscis monkeys are larger (> 20 kg) and have larger noses than female. In one male is found a multi-female group, each group consists of between 3 and 32 members (Jadi, et al, 2020). This species is an endemic animal of Borneo island and designated as the mascot of Indonesia's South Kalimantan Province. The Proboscis Monkey (*Nasalis larvatus*) is listed on Appendix I, Convention on International Trade in Endangered Species (CITES) 2023 as the most endangered and most protected fauna. Maintaining and preserving this species is the responsibility of all parties from government, business, academia, environmental activists, to the community. Many things can threaten their extinction, especially the decrease in the quantity of habitat that supports their lives, such as land conversion, mining, palm oil plantations, aquaculture, agriculture, housing, forest fires, illegal trade, etc.

Given the importance of maintaining and protecting the conserved Proboscis Monkey (*Nasalis larvatus*), it is necessary to conduct research on the factors that influence behavior of the surrounding community so that they play an important role in maintaining and conserving the environmental ecosystem of Proboscis Monkey (*Nasalis larvatus*), avoiding any behavior that potentially has negative impacts, and able to advocate for others to behave environmentally friendly as stated by Pro-Environmental Behavior (PEB).

Pro-Environmental Behavior is based on the theory of human behavior. Farrukh, et al (2020), Human behavior is a reasonable, planned and controlled personal action. It is the output of a positive or negative assessment of self-behavior that is influenced by his knowledge and

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awareness. environmental awareness is able to awaken residents to new consumption habits and adopt new attitudes of social responsibility, care about conserving resources and implementing sustainable practices. (Macêdo, et al, 2021) A person will do something if he feels that it will bring benefits, or is interesting to do, or feels that he has the ability to do, or is the best choice, or can provide satisfaction, or some other positive effect that comes from knowledge and self-awareness of an action (Aliedan, et al, 2022; Hati, et al, 2020; Meyer et al 2022). In this case, knowledge is a justification of personal beliefs (King, 2009), information that is interpreted and based on the beliefs and commitments of individuals (Toften and Olsen, 2003), it is product of complex learning, such as interpretation of information, beliefs about cause-effect relationships (Huber, 1991:89). While awareness is the product of affective processes related to psychological factors that determine behavior (Wardhana, 2022).

Based on the theoretical concepts mentioned above, it can be concluded that knowledge is a person's cognitive foundation that affects awareness and behavior, supported by the study of Temizkana (2022), Trisnawati and Muafi (2022), Fawehinmi, et al (2020), and Zhang, et al (2021). On the other hand, awareness is the affective foundation of a person who influences behavior, supported by the study of Ahmad, et al (2021) and Venghaus (2022). so it is important to mark the return of the relationship between humans and Nature, (Catão, 2022),

Given the importance of Proboscis monkey conservation efforts in South Kalimantan, especially those whose habitats blend with residential areas, this study explores knowledge and finds social solutions for Proboscis monkey conservation efforts, as well as the development of environmental sustainability science. This study was conducted in a conservation area, situated in Tapin Regency, South Kalimantan, founded and developed by PT. Antang Gunung Meratus, Regional Government of Tapin Regency, South Kalimantan Indonesia, Bekantan Research Group, and Bogor Institute of Agriculture, was designated as "A Valuable Bekantan Conservation Area" through the Decree of the Regent of Tapin Number 188.45/060/KUM/2014 dated April 14, 2014 with an area of 90 hectares.

2 THEORY DEVELOPMENT AND HYPOTHESES

2.1 Pro-Environmental Behavior

Pro-environmental behavior (PEB) is commonly defined as behavior that has a reduced negative impact on the environment. It describes the actions of individuals and advocates the sustainable use of natural resources to others (Ramkissoon and Mavondo, 2014). Xu, et al (2020) grouped two types of PEB, (1) Domestic PEB, which is the behavior of individuals in and home surrounding that have a positive environmental impact, including among others resource efficiency behavior (example, buying energy-efficient appliances), green consumption (example, buying organic food), recycling household resources (example, batteries), choosing environmentally friendly transportation (example, bus travel), encouraging and motivating others to behave sustainably, (2) Tourists's PEB, which is the behavior of tourists who promote and avoid behaviors that potentially damage natural ecosystems, such as choosing environmentally friendly products and travel modes.

In line with the Domestic PEB mentioned above, operational definition of pro-environmental behavior (PEB) in the context of this study is the behavior of individuals or groups of individuals in communities around the conservation area of Proboscis Monkey (*Nasalis larvatus*) to play an important role in maintaining and conserving the environmental ecosystem of Proboscis Monkey (*Nasalis larvatus*), avoiding any behavior that potentially has negative impacts, and able to advocate for others to behave environmentally friendly.



2.2 Environmental Awareness

If there are no people who are environmentally conscious and have green behavior, then no effort can be done to save the earth from environmental damage. Environmental awareness is defined as a culture that places environmental sustainability on the top priority of one's thinking and personality (Naparín, 2022). The environmental awareness owned by the community is a fundamental value that they devote to environmental sustainability. Efforts to instill environmental awareness in the community must be carried out from an early age and become a shared responsibility, including business people, parents, school educational institutions, academics, and others. Wardhana (2022), environmental awareness is related to psychological factors that determine green behavior. In the context of biodiversity conservation, it can be reflected with a sense of pride and affection for flora and fauna, a sense of pleasure for a clean and healthy environment that can support the life of flora and fauna, believing that plastic waste can damage the habitat of flora and fauna.

2.3 Biodiversity Knowledge

Knowledge is defined as information that is interpreted based on belief and commitment (Naparín, 2022), it is an intangible resource that is valuable, rare, inimitable, and non-substitutable (VRIN) so that it becomes an important resource in determining the direction of human behavior. Knowledge is a dynamic process of continuous learning outcomes, built from information interpreted from cause-effect relationships, stemming from beliefs, containing goals, becoming shared commitments. Zhang, et al (2021) distinguishes environmental knowledge into knowledge application (utilization of environmental knowledge) and knowledge sharing (exchange of information).

In the context of biodiversity, biodiversity knowledge is defined as information about flora and fauna either living in a specific area or in public areas that has been interpreted and believed to be a common commitment. Operationally, knowledge about biodiversity including knowledge about types of flora and fauna, direct and indirect benefits of the flora fauna, negative or positive impacts on the existence of flora and fauna, relational flora and fauna to daily life (e.g. cultural heritage values), as well as everything related to biodiversity.

¹ 2.4 A Model of The **Effects of Biodiversity Knowledge on Environmental Awareness and Pro-Environmental Behavior** Towards Proboscis Monkey Conservation

Biodiversity knowledge owned by communities around the conservation area provides a deep understanding of the importance of the existence of flora fauna for human life, environmental balance, emotional relationships and interdependence, the impact of habitat destruction both short and long term, and others. Public knowledge about flora and fauna is an important driver in fostering environmental awareness. In addition, biodiversity knowledge can change a person's behavior in response to environmental phenomena that are considered incompatible with what they understand (Naparín, 2022). People who have greater environmental knowledge, they will have greater attention to the environment (Zhang, et al, 2021). In addition, biodiversity knowledge is a cognitive foundation that affects awareness and pro-environmental behavior. Thus hypotheses can be drawn as follows:

Hypothesis 1: Biodiversity Knowledge has a significant effect on Environmental Awareness..

Hypothesis 2: Biodiversity Knowledge has a significant effect on Pro-Environmental Behavior.



Communities around the conservation area who have high level of environmental awareness will have a high sensitivity and sense of care, and appreciate and behave in preserving the environment (Kusumawati, et al, 2020). Therefore, awareness of the importance of maintaining and preserving the environment is an important factor in encouraging or even changing individual behavior into pro-environment. Thus Hypothesis can be drawn as follow:

Hypothesis 3: Environmental Awareness has a significant effect on Pro-Environmental Behavior.

Based on the background, theory development and hypotheses, a conceptual model of this study can be built as shown in Figure 1.

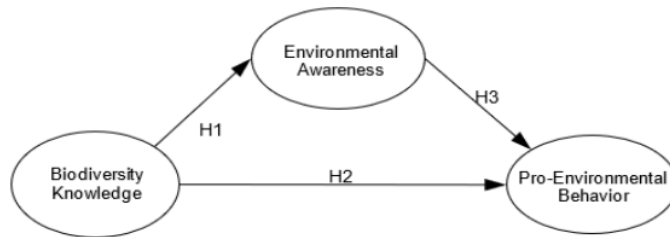


Figure 1. Conceptual Model
Source: Prepared by the authors (2023)

3 METHODS

3.1 Population and Data Collection

The model testing in this study was conducted on community around the Proboscis monkey conservation area of PT. Antang Gunung Meratus, Tapin Regency, South Kalimantan, Indonesia on 163 respondents in various professions. Data collection was carried out for 2 (two) months during January and February 2023 by asking respondents to fill out a questionnaire.

3.2 Measures of Variables

In this research model, exogenous, intervening, and endogenous variables are latent variables or variables that must be measured using indicators. The indicators used are perceptions, opinions, attitudes and views of respondents on the object of the questionnaire. Measurements were made using a Likert scale with a score range of 5 points (1 to 5), namely (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree.

Biodiversity Knowledge is an exogenous variable measured using 6 indicators developed from Kim, et al (2018) and used as a questionnaire item as follows:

1. I make biodiversity knowledge accessible to those who need it.
2. I quickly link sources of biodiversity knowledge to solving problems.
3. I have processes for applying biodiversity knowledge learned from mistakes.
4. Person involved in the conservation project explains everything about biodiversity thoroughly.
5. Person involved in the conservation project answers all my biodiversity questions immediately.
6. Person involved in the conservation project tells me exactly what I need to know about biodiversity in the area.



Environmental Awareness is an intervening variable measured using 5 indicators developed from Naparin (2022) with 1 additional indicator and used as a questionnaire item as follows:

1. I feel proud if I can see a wide range of biodiversity.
2. I feel that the green environment has provided health benefits to biodiversity in the conservation project.
3. I feel the need for maintaining a healthy environment in the conservation project.
4. I believe that plastic waste will cause habitat damages in conservation project.
5. I believe that the existence of flora fauna provides environmental benefits for human life.

Pro-Environmental Behavior is an endogenous variable measured using 4 indicators developed from Xu, et al (2020) dan Ramkissoon and Mavondo (2014) and used as a questionnaire item as follows:

1. I am very careful to enter the area where proboscis monkeys live so as not to interfere with their activities.
2. I voluntarily pick up garbage that can harm Proboscis monkeys.
3. I tell others to protect Proboscis monkey habitat.
4. I tell those close to me (e.g. family, friends, sacred, etc.) not to give food that harms Proboscis monkeys In our surrounding area.

4 RESULTS AND DISCUSSION

¹ 4.1 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) test is needed to test the validity and reliability of the indicators used to measure each latent variable. In this study, testing was carried out with Partial Least Squares (PLS), using SmartPLS 3.2.9 software.

Validity test ³

The validity test is carried out with two stages of testing, namely the convergent validity test and the discriminant validity test. The results of the convergent validity test of all indicators are declared valid, thus the next test can be carried out. The results of the convergent validity test can be seen in table 1.

Table 1. Convergent Validity: Outer Loadings

	Indicators	Loading
Biodiversity Knowledge		
X11	I make biodiversity knowledge accessible to those who need it.	0.8842
X12	I quickly link sources of biodiversity knowledge to solving problems.	0.7953
X13	I have processes for applying biodiversity knowledge learned from mistakes.	0.8977
X14	Person involved in the conservation project explains everything about biodiversity thoroughly.	0.8799
X15	Person involved in the conservation project answers all my biodiversity questions immediately.	0.9405
X16	Person involved in the conservation project tells me exactly what I need to know about biodiversity in the area.	0.9471
Environment Awareness		
Y11	I feel proud if I can see a wide range of biodiversity.	0.8567
Y12	I feel that the green environment has provided health benefits to biodiversity in the conservation project.	0.8464
Y13	I feel the need for maintaining a healthy environment in the conservation project.	0.8332
Y14	I believe that plastic waste will cause habitat damages in conservation project.	0.6576*
Y15	I believe that the existence of flora fauna provides environmental benefits for human life.	0.8947



Pro-Environmental Behavior		
Y21	I am very careful to enter the area where proboscis monkeys live so as not to interfere with their activities.	0.8962
Y22	I voluntarily pick up garbage that can harm Proboscis monkeys.	0.9152
Y23	I tell others to protect Proboscis monkey habitat.	0.9252
Y24	I tell those close to me (e.g. family, friends, sacred, etc.) not to give food that harms Proboscis monkeys In our surrounding area.	0.9186

*) Outer loading < 0.7, invalid indicator

Source: Prepared by the authors (2023)

From the convergent validity test, the Y14 indicator was declared invalid, so it was excluded in the next test.

The next validity test is the discriminant validity test, which is to find out whether the indicators being tested are more correlated with the variables they measure. The test results show that the highest cross-loading value is clustered in each of the variables. Thus, it is known that all indicators are declared valid and correlated with the variables they measure respectively.

The cross-loading values X11, X12, X13, X14, X15, X16 have the highest value on the Biodiversity Knowledge variable, which are 0.884, 0.795, 0.898, 0.880, 0.940, 0.947 compared to the values of Environmental Awareness and Pro-Environmental Behavior respectively. The cross-loading values Y11, Y12, X13, X15 have the highest value on the Environmental Awareness, which are 0.876, 0.858, 0.828, 0.903 compared to the other variables. The cross-loading value of Y21, Y22, Y23, Y24 has the highest value on the Pro-Environmental Behavior, which is 0.896, 0.915, 0.925, 0.919 compared to the other variables. Complete discriminant validity test results can be seen in table 2.

Table 2. Discriminant Validity: Cross-Loading

Indikator	VARIABLE		
	Biodiversity Knowledge (X1)	Environmental Awareness (Y1)	Pro-Environmental Behavior (Y2)
X11	0.884	0.832	0.785
X12	0.795	0.661	0.694
X13	0.898	0.791	0.863
X14	0.880	0.781	0.828
X15	0.940	0.812	0.847
X16	0.947	0.846	0.848
Y11	0.804	0.876	0.775
Y12	0.690	0.858	0.717
Y13	0.664	0.828	0.685
Y15	0.883	0.903	0.823
Y21	0.838	0.814	0.896
Y22	0.837	0.763	0.915
Y23	0.863	0.815	0.925
Y24	0.790	0.781	0.919

Source: Prepared by the authors (2023)

³ 4.2 Reliability Test

Reliability test is needed to test the internal consistency of a construct being measured. In this study, using Cronbach's alpha and Composite Reliability values. As a standard, it is expected that both Cronbach's alpha and Composite Reliability values are more than 0.7 ("good" category). The test results on each construct show Cronbach's alpha and Composite Reliability values, respectively, as follows: Biodiversity Knowledge 0.9480 and 0.9589, Environmental Awareness 0.8897 and 0.9235, Pro-Environmental Behavior 0.9342 and 0.9530. Thus, it can be concluded that the constructs of Biodiversity Knowledge, Environmental Awareness, Pro-Environmental Behavior have Cronbach's alpha and Composite Reliability



¹ values more than 0.7 and are categorized as "good". Details of each value can be seen in table 3.

Table 3. Reliability: Cronbach's alpha and Composite Reliability

No	Variable	Cronbach's Alpha	Composite Reliability
1	Biodiversity Knowledge	0.9480	0.9589
2	Environmental Awareness	0.8897	0.9235
3	Pro-Environmental Behavior	0.9342	0.9530

Source: Prepared by the authors (2023)

³ 4.3 Structural Model Evaluation

The next step is to test the inner model, which is to test whether the research model built in this study is good or not. This is because the inner model in this study is the relationship between exogenous variable (namely Biodiversity Knowledge), intervening variable (namely Environmental Awareness), and endogenous variable (namely Pro-Environmental Behavior).

The test is done by measuring the Goodness of Fit Index (GoF) and Q-square Predictive Relevance. This can be done by knowing the value of Average Variance Extracted (AVE) and R2 of each endogenous variable as can be seen in table 4.

¹ **Table 4.** R-Square and Average Variance Extracted (AVE)

No	Variable	R Square	AVE
1	Biodiversity Knowledge	-	0.7960
2	Environmental Awareness	0.7830	0.7513
3	Pro-Environmental Behavior	0.8480	0.8352
	Average	0.8155	0.7941

Source: Prepared by the authors (2023)

The Goodness of Fit (GoF) can be calculated as follows:

$$GoF = \sqrt{AVE \times R^2} \quad GoF = \sqrt{0.7941 \times 0.8155}$$

$$GoF = 0.8047$$

Where,

Note: GoF = 0.10 (small), GoF = 0.25 (medium),

GoF = 0.36 (large)

Q-square Predictive Relevance:

$$Q^2 = 1 - (1 - R_1^2)(1 - R_2^2); \quad Q^2 = 0.967$$

¹ Based on the calculation results of the Goodness of Fit Index (GoF) and Q-square Predictive Relevance as mentioned above, the research model built in this study is declared "good" and can measure the results of observations.

The next step in statistical testing is to test the hypothesis using the bootstrap method. Table 5 shows the Path Coefficients, t-Statistics and P-values values.

¹ **Table 5.** Path Coefficients, T-Statistics, P-Values

	Hypotheses	Path Coefficients	t Statistics	P-values
H1	Biodiversity Knowledge -> Env Awareness	0.8847	37.2679	0.000
H2	Biodiversity Knowledge -> Pro-Env Behavior	0.6553	9.8654	0.000
H3	Env Awareness -> Pro-Env Behavior	0.2892	4.2963	0.000

$\alpha = 5\%$, **significant at 0.05

Source: Prepared by the authors (2023)



From the results of the hypothesis test above, it is known that all hypotheses have P-values <0.05 which are considered as significant effect. Thus it can be concluded that the test results that support the hypotheses in this study are:

H1: Biodiversity Knowledge has a significant effect on Environmental Awareness.

H2: Biodiversity Knowledge has a significant effect on Pro-Environmental Behavior.

H3: Environmental Awareness has a significant effect on Pro-Environmental Behavior.

This study indicates that Biodiversity Knowledge has a significant effect on Environmental Awareness as well as Pro-Environmental Behavior. This means the knowledge of the community around the Proboscis monkey conservation area of PT. Antang Gunung Meratus, Tapin Regency, South Kalimantan on biodiversity, especially knowledge about flora fauna can influence environmental awareness and behavior that favors the environment in the context of Proboscis monkey conservation. They can pay attention to the conservation of nature and biodiversity, understand the benefits of the existence of flora and fauna, balance the environment and also they have an emotional connection to biodiversity. This finding is considered important for stakeholders to make the direction of learning to communities around the forest.

This study also indicates Environmental Awareness has a significant effect on Pro-Environmental Behavior. This shows that the community around the conservation area who environmentally aware about sustainability, they implement the awareness into supportive behavior towards the sustainability of Proboscis monkeys around their homes. Thus they show an environmentally friendly attitude and cooperative behavior in participating in preserving the environment, especially Proboscis monkeys and their habitat. There is an interesting point in the convergent validity test, in which an environmental awareness indicator about the dangers of plastic waste that can damage Proboscis monkey habitat. It shows the need for special attention for stakeholders to instill an understanding of the dangers of plastic waste both for human life and for the survival of flora and fauna around them.

5 CONCLUSION

Efforts to conserve the endangered and most protected Proboscis monkey population in the world is the obligation of all stakeholders including communities¹ companies, local government, environmental activists and academicians. This study reveals a significant effect of biodiversity knowledge on environmental awareness and pro-environmental behavior. It also reveals the significant direct influence of environmental awareness on pro-environmental behavior. These finding prove the importance of Proboscis monkey conservation efforts from a social aspect, where knowledge about biodiversity and environmental awareness owned by people living around Proboscis monkey habitats are key factors that encourage behavior to participate in efforts to maintain and conserve the Proboscis Monkey (*Nasalis larvatus*) environmental ecosystem, avoid any potentially harmful behavior, and be willing suggest for others to behave friendly towards the Proboscis monkeys.

This study provides strategic direction to policy makers and companies, especially PT. Antang Gunung Meratus in implementing various social approaches, especially focusing on counseling the community in order to provide in-depth knowledge about biodiversity and encourage their awareness of environmental sustainability. People who realize the importance of living side by side with nature will get valuable benefits both directly and indirectly to their lives. In addition, this study provides a new view for environmental science from the aspect of social approach.



For the development of future research in terms of biodiversity conservation from a social aspect, it is necessary to conduct further studies by digging deeper into the factors that influence community behavior through the Theory of Planned Behavior (TPB) approach involving elements of personal attitude, subjective norms and perceived behavioral control.

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