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THE EFFECTS OF NATURAL LANDSCAPE AND ENVIRONMENTAL KNOWLEDGE ON ENVIRONMENTAL AWARENESS AND GREEN BEHAVIOR IN ECOTOURISM INDUSTRY

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ABSTRACT
Climate change mitigation has become the responsibility of everyone on earth, therefore all businesses related to the environment not only aim to make financial profits, but must also be able to create an environmentally conscious culture for customers/visitors who ultimately having green behavior. This study builds the concept of environmental values in the businesses of environmental service, especially in the ecotourism industry, which can create visitors' eco-friendly based culture and behavior. This shall be started from conditioning the natural landscape to be the place that can be enjoyed and provides various benefits for visitors, as well as effort to disseminate environmental knowledge to visitors which is expected able to create environmental awareness and green behavior to the visitors. Based on the hypothesis developed into a model, this study aims to test the effects of Natural Landscape and Environmental Knowledge on Environmental Awareness, to test the direct effects of Natural Landscape and Environmental Knowledge on Green Behavior, and to test the effects of Environmental Awareness on Green Behavior. This model was tested on the environmental services business in the ecotourism industry in South Kalimantan Province, Indonesia. Statistical analysis was carried out using SmartPLS software version 3.2.9. Result of the study shows a significant effect of Natural Landscape on Environmental Awareness, but the study shows the Natural Landscape has no significant effect on Green Behavior. The result also shows that Environmental Knowledge has a significant effect both on Environmental Awareness and Green Behavior. In addition, it shows that Environmental Awareness has a significant effect on Green Behavior. The study is able to conclude that in the environmental services business, especially in the ecotourism industry, the natural landscape is effectively able to encourage environmental awareness for the better which will ultimately increase the green behavior through intervening variables, namely Environmental Awareness. On the other hand, environmental knowledge is also effectively able to encourage environmental awareness as well as the green behavior of the visitors. Likewise, the environmental awareness has been proven to be able to encourage visitors to behave as green behavior.

KEY WORDS
Natural landscape, environmental knowledge, environmental awareness, green behavior, ecotourism, forestry business, anthropogenic elements, climate change mitigation.

Nowadays, the development of the forestry business is getting better by opening up opportunities for communities inside and around forests to participate and be responsible for sustainable forest sustainability which ultimately becomes a part of climate change mitigation efforts. In Indonesia, the social forestry program opens up opportunities for communities to carry out multi-business forestry by managing forests in an integrated manner that can be realized through the use of forest products in the form of timber, non-timber forest products and environmental services. In the environmental services sector, several forestry businesses have developed such as ecotourism, river rapids ride, education forest, nature baths, campgrounds, adventure tourism, caravan house cars, and others.

The question is, how can this environmental services business preserve the environment and participate in climate change mitigation efforts? This of course shall be viewed on two sides. First, the environmental service business has to responsible for an

environmentally friendly landscape and to manage it in a way of sustainability. Second, the environmental services business has to responsible for creating environmental awareness and green behavior to the visitors and getting financial profits from them.

In order to create the visitors to behave as a green behavior, it is necessary to study the factors that are affecting. In the context of socio-culture, known that cultural aspects are able to influence the behavioral aspects of individuals. In this context, environmental awareness is considered as the cultural aspect and green behavior as the behavioral aspect. Based on conceptual and empirical studies, the two factors effecting them are natural landscape (Nguyen, 2022; Medhat and Kenawy, 2016; Bergou, et al, 2022; Turovtseva, et al, 2022) and environmental knowledge (Temizkana, 2022; Trisnawati and Muafi, 2022; Zhang, et al, 2021; Fawehinmi, et al, 2020).

THEORY DEVELOPMENT AND HYPOTHESES

There are two drivers that trigger people to behave in favor of the environment, those are (1) environmental benefits, (2) environmental threats.

The first driver is environmental benefits, people behave in green behavior because they feel and/or they have an interest in psychological benefits and/or economic benefits. For example, a clean and healthy environment will make a healthy of human body, so they do not throw any garbage in any place, people maintain forest sustainably because they expect the forest will provide continuous supply of oxygen for human life, keeping the trees around the house because they are as a part of therapy to relieve stress or bringing new inspiration, people behave to protect the green environment because they expect to be the source of financial benefits such as ecotourism business, fruit and green tourism, rafting business, etc. This driver is also consistent with the studies conducted by Medhat and Kenawy (2016), Bergou, et al (2022), Turovtseva, et al (2022).

The second driver is environmental threats; people behave in green behavior because they realize that a damaged environment will cause a detrimental impact on human life both in the short and long term. For example, people protect the environment in ways such as turning off the air conditioner when it is not needed, because it can produce CFC (chlorofluorocarbon) gas which makes the ozone layer damage as well as causing the global warming, people do not like to throw any garbage to anywhere because it will probably cause flooding in the long run, someone does not throw cigarette butts carelessly in the forest because it will be the trigger of forest fire, someone buys a green product which is aimed to participate in protecting environment from the long run damage. This driver is also consistent with the study conducted by Wardhana (2022) which provides the view that green behavior is related to the behavior that favors the environment to minimize things that can harm the environment.

Based on the above view, green behavior is defined as an eco-friendly based behavior which is consistently made by individual either for the reason of benefits or environmental damages.

In work activities, Yang, et al (2020), green behavior is implemented in (1) the things related to working tasks, such as to reduce paper usage by printing the worksheets in a way of double-sides printed, turning off lights and air conditioner when the work ends, etc. (2) proactive actions of employees, such as being actively involved in environmental protection activities, taking the initiative to adopt eco-friendly ways in the workplace, and the other proactive actions.

Result of a study conducted by Trandafilovic and Blagojevic (2017) shows consumers try to help and participate in solving environmental issues through changes in their individual behavior. The individuals who tend to have higher green behavior are including women, married, educated people, environmental activists, individuals who have health conscious, individuals who have environmental knowledge, individuals who trust in the eco-labels/brands, individuals who have self-esteem, self-image, individuals who involve in various environmental activities, and individuals with higher incomes.

Environmental awareness is defined as a culture that places the spirit of environmental sustainability on the top priority in the center of the individual's mind and personality, while culture is values and beliefs inherent in the individuals. In relation to the environment context, the values are the extent to which a person feels worth for the environment, and the extent to which a person obtains values provided by the environment. These values are shaped in the form of self-values where someone feels having interest to protect and conserve the forest to provide his or her self-value to be a part of efforts in saving the environment. On the other hand, beliefs are the psychological statements considered as the trueness and being held firmly by the individual without necessarily to be physically proven. The definition is consistent with Wardhana (2022), that environmental awareness refers to psychological factors that determine individual tendencies towards environmental behaviors, which are currently become a common thing and to be a serious concern for the environmental observers/activists, students, colleges and universities, and all levels of society.

The culture of environmental awareness becomes a direction for a person to behave and becomes social norms about good and bad behavior, right and wrong, useful action or not. Therefore, efforts to disseminate environmental awareness to everyone are the very important psychological foundation in creating a clean and healthy environment which in turn becomes part of climate change mitigation efforts.

Landscape is the design of outdoor areas, landmarks (geographical markers), and structures to achieve a better environment and social behavior (Medhat and Kenawy, 2016). Landscape is also the form of green spaces overgrown by trees, plants or other vegetation such as forests, parks and gardens. Spending time in nature can improve mental health and reduce the risks of mental illness (Bergou, et al, 2022). Ilyin et al (2022) describe natural landscape as forests, protected areas, and steppe areas with natural vegetation. Prihayati and Veriasa (2021), landscape is seen as a mosaic of ecosystem interactions.

In term of nature, natural landscape consisting of plants, animals, and landscape (visually) in a primitive conditions without human intervention. However, this condition rarely occurs, therefore the natural landscape can be a combination of natural factors and cultural factors where the landscape is seen as a formation of a unique, recognizable, and consistent elements pattern. Quality of the natural landscape can be seen based on (1) variety of land cover such as forest vegetation, wetland vegetation, grasslands, meadows, agricultural land, etc. (2) variety of relief forms, such as canyons, bays, ravines, natural rocks (travertine), highlands, etc. (3) degree of landscape fragmentation, e.g. distance from anthropogenic elements, such as roads, settlements, landfills, etc. (4) type of water element, described as the availability of water whether flowing or not in the form of rivers or lakes sourced from land cover vegetation (Bogovac, et al, 2021). Anthropogenic elements are defined as elements built by humans such as buildings, walls, or cars. Mountain hiking can be done both in environment with more anthropogenic elements (e.g. ski lifts, highways, buildings) and in environment with fewer anthropogenic elements (Niedermeier, et al, 2019).

On the environmental service businesses such as ecotourism, rafting (river rapids ride), education forest, natural baths, campgrounds, adventure tourism, caravan house cars, etc., the terms of anthropogenic elements and the type of water element are more elaborated as follows: Anthropogenic elements are divided into two parts: (1) supporting anthropogenic elements. Those are infrastructures that support environmental services such as toilets, access roads, stalls, shelters, markers, directions, monumental objects, shuttle cars, and others. (2) social purpose anthropogenic elements, those are infrastructures that support daily social life, such as housing residents, roads, factories, buildings, schools, etc. Type of water elements are divided into two parts: (1) the availability or quantity of water either flowing or not (e.g. in rivers or lakes) sourced from land cover vegetation. (2) water quality such as color, smell, drinkable level, and others.

Based on the views mentioned above, natural landscape is defined as an open area that is occupied by various flora and fauna with its biodiversity as the outcome of human interaction with the environment, and being represented in the visual form of the environment.

In defining knowledge, it is necessary to distinguish between data, information and knowledge itself. To facilitate understanding, the explanations can be drawn from knowledge, then information and data. Knowledge is defined as information that has been interpreted on the basis of beliefs and commitment of individuals. Meanwhile, information is defined as data that have been filtered, organized, and/or transformed to become useful, meaningful, and beneficial. Data is defined as context-free (non-contextual) and the smallest pieces of material that can be detected consciously, where the data are the building blocks of higher-order construct such as information (Toften and Olsen, 2003).

Based on the views mentioned above, definition of knowledge in the environment context, environmental knowledge is defined as the information about environment that have been interpreted and believed to become a common commitment. Knowledge is contextual (context-specific), relational, dynamic, and humanistic (Nonaka, et al 2000) and gradually disappears when it is not used (Prahalad and Hamel, 1990). Because of the nature of knowledge that it can be disappeared gradually, the effort of disseminating environmental knowledge to ecotourism visitors has to be carried out in the continuous way. In addition, quality of providing and disseminating the environmental knowledge shall be improved continuously from time to time in order to make the visitors are not bore.

Natural landscape with rich biodiversity and beneficial interaction between human and the environment is represented in the form of a real environmental visual that can be seen and enjoyed by ecotourism visitors or other environmental service visitors. From the perspective of benefits, natural landscape generally provides enjoyment (e.g. fresh air, beautiful scenery, clean natural water, away from pollution, etc.), and admiration for nature (Nguyen, 2022). In addition, the natural landscape also provides an improvement in the quality of psychological health or mental health (Medhat and Kenawy, 2016; Bergou, et al, 2022; Turovtseva, et al, 2022). From the perspective of environmental threats, natural landscape is able to touch the emotional space of ecotourism visitors when they are presented with the real and amazing environmental visuals. This can arouse the imagination of the visitors if the natural landscape in the front of them becomes damaged and the threats that arise to the extinction of biodiversity and the sustainability of human life.

The foregoing can foster a love for a good environment, a sense of care, a sense of worry about environmental damage which is represented as environmental awareness. The natural landscape with all its attributes can also change the behavior of ecotourism visitors into individuals who do not do things that can damage the environment, referred to as green behavior. Thus a hypothesis can be drawn as follows:

Hypothesis 1: Natural Landscape has a significant effect on Environmental Awareness;

Hypothesis 2: Natural Landscape has a significant effect on Green Behavior.

Environmental knowledge provides an in-depth understanding of the benefits and impacts of environmental damage, both short-term and long-term impacts. Knowledge about the benefits of a clean and healthy environment, or vice versa, knowledge about the impacts caused by environmental damage is important in driving awareness, shaping or even changing the behavior of individuals to be in favor of the environment, for example knowledge about the importance of the ozone layer for life, knowledge about the impact of greenhouse gas (GHG) emissions on global warming, knowledge about biodiversity that helps balance the environment, knowledge about the photosynthesis process that transforms CO_2 in the air into carbon stores into vegetation and produces O_2 into the atmosphere.

Individuals who have environmental knowledge are proven to be more concerned about environmental problems, on the contrary, it is impossible for one individual to become aware and concerned about environmental problems if he or she does not know anything about the environment (Zhang, et al, 2021). Thus, environmental knowledge can be directly influenced by environmental awareness. In addition, environmental knowledge is also seen as a cognitive foundation that affects green behavior. These are supported by the studies of Temizkana (2022), Trisnawati and Muafi (2022), Fawehinmi, et al (2020), and Zhang, et al (2021). Thus the following hypothesis can be drawn:

Hypothesis 3: Environmental Knowledge has a significant effect on Environmental Awareness.

Hypothesis 4: Environmental Knowledge has a significant effect on Green Behavior.

In practice, Green Behavior is individual consumption patterns that involve cognitive, emotional, and motivational processes (Wardhana, 2022). Therefore, awareness to maintain and preserve the environment is a very important factor in shaping or changing individual behavior. This is being a concern for many parties such as environmental activists, academicians, environmental researchers, school teachers, and the general public. For example, Venghaus (2022), the increasing awareness of climate change in Germany has triggered debates around climate change both among the population and political, as well as taking anticipatory actions. Several studies that support the influence of Green Behavior on Environmental Awareness include Wardhana (2022), Venghaus (2022), and Ahmad, et al (2021). Thus the following hypothesis can be drawn:

Hypothesis 5: Environmental Awareness has a significant effect on Green Behavior.

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

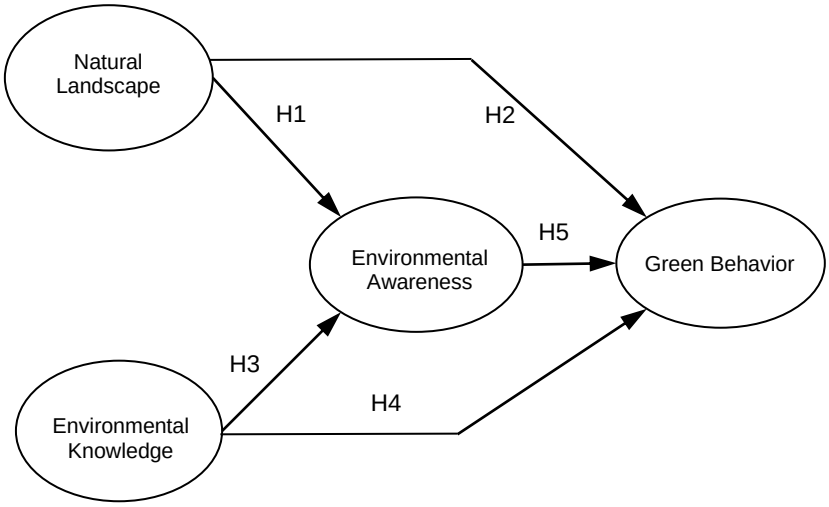

Figure 1 – Conceptual Model

METHODS OF RESEARCH

The model testing in this study was conducted on visitors to Nateh Ecotourism in Hulu Sungai Tengah and Loksado Ecotourism in Hulu Sungai Selatan in South Kalimantan, Indonesia on 121 respondents consisting of various age levels. Data collection was carried out for 2 (two) months from July 2022 to August 2022 by asking respondents to fill out a questionnaire.

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.

Natural Landscape is an exogenous variable measured using 4 indicators developed from Bogovac, et al (2021) and Niedermeier, et al (2019) and used as questionnaire items as follows:

- I see a wide variety of the land cover (e.g. forest land, agricultural crops, shrubby vegetation, grassland, meadow, etc);
- I see a wide variety of relief forms (e.g., hills, valleys, caves, highlands, river, lake, waterfall, cliffs, etc);
- I see the existence of supporting anthropogenic elements (e.g. toilets, road access, stalls, shelters, place markers, directions, monumental objects, shuttle cars, etc);

- I feel that the quality of natural water on the landscape is good (e.g. color, smell, drinkable level, etc).

Environmental Knowledge is an exogenous variable measured using 4 indicators and used as a questionnaire item as follows:

- I understand the benefits of the environment for human life;
- I know that not throwing garbage in the wrong place keeps the environment healthy (it does not make the source of diseases);
- I understand the long run impacts of the environment damages for human life;
- I know that petroleum-fueled vehicle fumes cause environmental damage (e.g. unhealthy air or air pollution, global warming, damaging the ozone layer, etc.).

Environmental Awareness is an intervening variable measured using 4 indicators and used as a questionnaire item as follows:

- I feel proud if I have a clean environment around where I live;
- I feel that the green environment has provided health benefits;
- I feel the need for maintaining a healthy environment;
- I believe that forest fires will cause environmental damages.

Green Behavior is an endogenous variable measured using 4 indicators and used as a questionnaire item as follows:

- I don't throw garbage in the places that are not for it;
- I utilize eco-friendly goods in every need;
- I take care of the greenery in the living environment;
- I always save energy usage such as electricity light, air conditioner, heater, etc.

RESULTS AND DISCUSSION

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. 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
Natural Landscape		
X11	I see a wide variety of the land cover (e.g. forest land, agricultural crops, shrubby vegetation, grassland, meadow, etc).	0.8295
X12	I see a wide variety of relief forms (e.g. hills, valleys, caves, highlands, river, lake, waterfall, cliffs, etc).	0.8606
X13	I see the existence of supporting anthropogenic elements (e.g. toilets, road access, stalls, shelters, place markers, directions, monumental objects, shuttle cars, lodges, etc)	0.7911
X14	I feel that the quality of natural water on the landscape is good (e.g. color, smell, drinkable level, etc).	0.8164
Environment Knowledge		
X21	I understand the benefits of the environment for human life.	0.9323
X22	I know that not throwing garbage in the wrong place keeps the environment healthy (it does not make the source of diseases).	0.9910
X23	I understand the long run impacts of the environment damages for human life.	0.9001
X24	I know that petroleum-fueled vehicle fumes cause environmental damage (e.g. unhealthy air or air pollution, global warming, damaging the ozone layer, etc.)	0.8566
Environment Awareness		
Y11	I feel proud if I have a clean environment around where I live.	0.9330
Y12	I feel that the green environment has provided health benefits.	0.7912
Y13	I feel the need for maintaining a healthy environment.	0.8526
Y14	I believe that forest fires will cause environmental damages.	0.8756
Green Behavior		
Y21	I don't throw garbage in the places that are not for it.	0.8470
Y22	I utilize eco-friendly goods in every need.	0.8642
Y23	I take care of the greenery in the living environment.	0.8884
Y24	I always save energy usage such as electricity light, air conditioner, heater, etc.	0.8816

**) Outer loading < 0.6, invalid indicator.*

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, and X14 have the highest value on the Natural Landscape (NL) variable, which are 0.829, 0.861, 0.791, 0.816 compared to the values of Environmental Knowledge (EK), Environmental Awareness (EA) and Green Behavior (GB). The cross-loading values X21, X22, X23, X24 have the highest value on the Environmental Knowledge (EK) variable, which are 0.932, 0.991, 0.900, 0.857 compared to the Natural Landscape (NL), Environmental Awareness (EA) and Green Behavior values, respectively (GB). The cross-loading value of Y11, Y12, Y13, and Y14 has the highest value on the Environmental Awareness (EA) variable, which is 0.933, 0.791, 0.853, 0.876 compared to the values of Natural Landscape (NL), Environmental Knowledge (EK) and Green Behavior (GB). The cross-loading values Y21, Y22, Y23, and Y24 have the highest value on the Green Behavior (GB) variable, which are 0.847, 0.864, 0.888, 0.882 compared to the Natural Landscape (NL), Environmental Knowledge (EK) and Environmental Awareness values (EA). Overall, the complete discriminant validity test results can be seen in table 2.

Table 2 – Discriminant Validity: Cross-Loading

Indicator	VARIABLE			
	EA (Y1)	EK (X2)	GB (Y2)	NL (X1)
X11	0.419	0.417	0.424	0.829
X12	0.456	0.521	0.528	0.861
X13	0.390	0.470	0.443	0.791
X14	0.476	0.333	0.447	0.816
X21	0.546	0.932	0.743	0.520
X22	0.614	0.991	0.752	0.517
X23	0.570	0.900	0.674	0.413
X24	0.495	0.857	0.599	0.499
Y11	0.933	0.497	0.534	0.484
Y12	0.791	0.566	0.526	0.429
Y13	0.853	0.372	0.429	0.477
Y14	0.876	0.615	0.637	0.447
Y21	0.483	0.672	0.847	0.521
Y22	0.581	0.580	0.864	0.554
Y23	0.615	0.696	0.888	0.501
Y24	0.493	0.672	0.882	0.373

Reliability test is needed to test the internal consistency of a construct being measured. In this study, used 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: Environmental Awareness 0.8865 and 0.9219, Environmental Knowledge 0.9397 and 0.9573, Green Behavior 0.8933 and 0.9259, Natural Landscape 0.8431 and 0.8948. Thus, it can be concluded that the constructs of Environmental Awareness, Environmental Knowledge, Green Behavior and Natural Landscape have Cronbach's alpha and Composite Reliability 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	Environmental Awareness	0.8865	0.9219
2	Environmental Knowledge	0.9397	0.9573
3	Green Behavior	0.8933	0.9259
4	Natural Landscape	0.8431	0.8948

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 variables (namely Natural Landscape and Environmental Knowledge), intervening variable (namely Environmental Awareness), and endogenous variable (namely Green 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.

Table 4 – R-Square and Average Variance Extracted (AVE)

No	Variable	R Square	AVE
1	Environmental Awareness	0.4280	0.7475
2	Environmental Knowledge	-	0.8488
3	Green Behavior	0.6310	0.7577
4	Natural Landscape	-	0.6803
	Average	0.5295	0.7586

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

$$GoF = \sqrt{\overline{AVE} \; x \; \overline{R^2}} \qquad GoF = \sqrt{0.7586 \text{ x } 0.5295}$$

$$GoF = 0.6338$$

Note: *GoF* = 0.10 (small), *GoF* = 0.25 (medium), *GoF* = 0.36 (high)

Q-square Predictive Relevance:

$$Q^2 = 1 – (1–R_1^2)\ (1–R_2^2)...(1–R_p^2);\ Q^2 = 0.789$$

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.

Table 5 – Path Coefficients, T-Statistics, P-Values

Hypotheses		Path Coefficients	t-Statistics	P-values
H1	Natural Landscape -> Env. Awareness	0.291	3.929	0.000
H2	Natural Landscape -> Green Behavior	0.163	1.847	0.065
H3	Env. Knowledge -> Env. Awareness	0.452	5.033	0.000
H4	Env. Knowledge -> Green Behavior	0.539	6.523	0.000
H5	Env. Awareness -> Green Behavior	0.213	2.477	0.014

*Note: α = 5%, **significant at 0.05.*

From the results of the hypothesis test above, it is known that there is one hypothesis that has P-values > 0.05, namely H2, the effect of Natural Landscape on Green Behavior, amounting to 0.065, while the other four hypotheses have P-values <0.05, namely H1, H3, H4 and H5.

Thus it can be concluded that the test results that support the hypothesis in this study:

- H1: Natural Landscape has a significant effect on Environmental Awareness;
- H3: Environmental Knowledge has a significant effect on Environmental Awareness;
- H4: Environmental Knowledge has a significant effect on Green Behavior;
- H5: Environmental Awareness has a significant effect on Green Behavior.

While the test results that do not support the hypothesis built in this study are:

- H2: Natural Landscape has no significant effect on Green Behavior.

This study indicates that the natural landscape has no significant effect on green behavior. Meanwhile, natural landscape has a significant effect on environmental awareness, then environmental awareness has a significant effect on green behavior. This means that the natural landscape consisting of various types of land cover, natural relief (e.g. valleys, rivers, mountains, etc.), supporting anthropogenic elements, and the availability and quality of natural water are not able to affect green behavior directly. Therefore, an intervening variable is needed, in this case environmental awareness. A beautiful and quality landscape with its various attributes does not necessarily change one's behavior in favor of the environment, but through increasing environmental awareness. Thus the natural landscape is effectively able to encourage better environmental awareness which in turn will increase behavior that is oriented towards environmental improvement or green behavior.

Environmental knowledge has a significant effect on both environmental awareness and green behavior. Knowledge about the benefits of the environment on human life such as improving physical and mental health, as well as knowledge about the negative impacts caused by environmental damage affects the emotional aspect in the form of environmental awareness and behavioral aspects in the form of green behavior. Apart from that, environmental knowledge also encourages strengthening the influence of environmental awareness on green behavior.

CONCLUSION

This study provides an overview of the importance of preserving the natural landscape and disseminating knowledge about the environment to the public, especially to ecotourism visitors. In general, the natural landscape and environmental knowledge effectively encourage individuals to become environmentally aware and behave in an environmentally friendly manner.

In terms of natural landscapes, the selection of location that is used as ecotourism site and places for other environmental services such as rafting (river rapids ride), education forest, natural baths, campgrounds, adventure tourism, caravan house cars, and others are a very important part in creating environmental awareness for visitors and ultimately encourage them to become individuals who have environmentally friendly behavior.

There are four natural landscape components that can be taken into consideration in selecting locations for ecotourism and environmental services, namely:

- Land cover, including the quantity and quality of land cover, such as the quantity and quality of forest vegetation, wetland vegetation, grasslands and flowering beds (meadows), agricultural land, and others;
- Variety of relief forms, namely the diversity of reliefs found in the landscape, such as mountains, valleys, caves, waterfalls, canyons, bays, ravines, natural rocks (travertine), highlands, rivers, lakes, and others;
- Water elements, namely the availability and quality of water sourced from land cover vegetation or from the highlands above it, which can be in the form of water flowing through rivers or not flowing water accommodated in lakes;
- Supporting anthropogenic elements, namely the development of infrastructure that supports environmental services such as toilets, access roads, stalls, shelters, place marks, directions, monumental objects, shuttle cars, and others.

This study also proves that disseminating environmental knowledge to visitors is the effective way to encourage individuals to become environmentally conscious, as well as to behave in an environmentally friendly manner. Some efforts that can be done in disseminating knowledge about the environment to visitors include: providing tour guides who can provide knowledge about the importance of the environment, providing some announcement boards to explain ecotourism and the importance of the environment in each monumental object in the ecotourism area, providing videos showing environmental benefits and the impact of environmental damage on human life, providing online visitors' guides that can be accessed via mobile phones or other electronic devices when the visitors are in the

ecotourism area, designing digital touch points such as websites TikTok, YouTube and others by inserting environmental education aspects.

By providing a qualified natural landscape, equipped with various supporting facilities, and conditioning the ecotourism as the source of environmental knowledge, ecotourism visitors will not only enjoy the beautiful natural landscape and get health benefits, but they will also increase environmental awareness and environmentally friendly behavior such as not throw trash anywhere, always use environmentally friendly items, keep the environment green, always save energy use such as saving on electricity light, air conditioner, heater, and others.

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