

Navigating Conservation Access: Unraveling Ignorant Tourist Behavior and Typologies in Komodo National Park

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Abstract

Several studies have explained that easy access increases the number of tourist visits to conservation areas. Additionally, numerous tourists have been observed exhibiting ignorant behavior and causing environmental damage. However, exploration of studies suggesting the connection between accessibility and tourists' negligent behavior is still limited. This research aims to prove the influence of easy access on tourist behavior by exploring tourist typologies. Therefore, the perception of accessibility is included as one of the indicators that form the typology. The study was conducted in Komodo National Park, one of the most popular destinations in Indonesia, which has experienced high accessibility development. The research method employed tourism policy and factor-cluster analysis to examine the tourist typology. Accessibility constructs and hedonic tourist motivation were used as the variables in the analysis. The total respondents were 534, and the data were analyzed using a non-hierarchical K-means cluster analysis. The result showed that three aspects were considered when managing accessibility in the protected areas. The aspects included destination, individual, and conservation accessibilities in the national park. Further, four tourist typologies were found in this research. Two new typologies, hedonistic adventure tourists and high-risk hedonistic tourists, indicated ignorant behavior. Two others, such as real ecotourists and nature-relaxing tourists, presented general nature-based tourist characteristics in the existing literature. The managerial implications of this research include providing practical insights for planners and destination managers to improve conservation awareness among remarkably ignorant tourists.

Keywords: tourism accessibility, tourist typology, hedonistic motives, tourism in the protected area

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Introduction

Many studies reveal that developing protected areas with easy access could harm the environment, especially wild ecosystems. (Manning et al., 2017; Tverijonaite et al., 2018). Furthermore, sensitive ecosystems are also another challenge. Rahmafritria & Misran (2018) stated that developing natural tourism in protected areas requires a comprehensive understanding of the broad context to achieve sustainability. Sæþórsdóttir & Hall (2020) further suggested that careful accessibility planning is needed to avoid the negative impact.

The impact of granting tourists access has led to some challenges regarding the planning and managing of protected areas. According to Butzmann and Job (2017), Hall and Boyd (2005), Mellon and Bramwell (2016) This impact is facilitated by the increasing trend of natural tourism, which offers cheap and easy access. Therefore, it triggers high visits by minimizing the distance and travel time and is often perceived as a geographical barrier. (Hall & Boyd, 2005).

Tverijonaite et al. (2018) stated that the better the access to natural areas, the more attractive it is to urbanists (individuals who prefer traveling inconvenience), and vice versa. Therefore, its development tends to increase intensive

area utilization, thus attracting a particular type of tourist. Furthermore, Tverijonaite et al. (2018) researched protected areas and tried to link accessibility with tourist behavior. The results showed that ease of access significantly affects tourist perception, preference, and motivation. Research on tourist typology has mentioned that ease of access attracts the psychocentric (Plog, 1974) or urbanists (Hendee et al., 1968), who prefer highly comfortable destinations with adequate facilities. It also widens the segmentation range, comprising those seeking natural and non-natural atmospheres (Tverijonaite et al., 2018). Interestingly, if tourist typology is described as a classification based on their personality and behavior (Hvenegaard, 2002), then theoretically, it is influenced by the ease of access (Rahmafritria et al., 2020; 2022).

Previous tourist typology studies in protected areas have mentioned that those who visit such destinations have been identified as perceiving nature as an object of attraction, strengthening their views of the environment as a social community (Vespestad & Lindberg, 2011). Even Butzmann and Job (2017) and Sæþórsdóttir (2010) stated that some tourists visit protected areas for their hedonistic purposes; they do not focus on natural proximity and instead pay more

attention to their personal goals (self-centric). Moreover, Vespestad and Lindberg (2011) also mention that some visitors only appreciate the scenic beauty of protected areas to gain recognition from their social environment.

Although researchers have identified various typologies of tourists in protected areas, none have constructed a typology involving accessibility variables. Nevertheless, a typology incorporating accessibility as one of its parameters can explain the impact of ease of access on the emergence of neglectful tourist types that protected area managers should be vigilant about (Jamin et al., 2020). Pratt and Tolkach (2022) explain that one of the reasons for the emergence of stupid behavior in tourists is a high level of hedonistic motivation. This hedonistic motivation is influenced by the existence of exclusive facilities that are both convenient and expensive, supporting their existence in the social environment. With a high level of hedonistic motivation, an individual tends to exhibit omnipotent, omniscient, and egocentric behavior. Therefore, through a typology that involves accessibility factors and hedonistic motives, policies regarding enhanced accessibility and luxury facilities can be evaluated to maintain the sustainability of the protected area.

The explanation above depicts the importance of exploring the impact of tourism accessibility policies on protected areas. Thus, this research aimed to analyze tourist typology in the protected area by using the perception of accessibility as one of its parameters. The argument raised in this research is that the discovery of neglectful tourists in protected areas is a consequence of the increasing ease of access, which further reinforces the hedonistic motivation of tourists. The accessibility infrastructure developed around the protected area aligns well with the preferences of tourists who visit protected areas to enhance their existence, even if it means disregarding environmental interests. This research can be beneficial in formulating policies for tourism planning in protected areas and providing the basis for drafting the visitor management concept and establishing a program to educate tourists. Hence, the protected area manager can use the results to anticipate the negative impacts on the sustainability of the natural ecosystems.

Methods

This research aims to demonstrate the impact of easy access on tourist behavior by analyzing tourist typologies in conservation areas. To achieve this, the perception of accessibility will be used as one of the indicators, resulting in typologies based on accessibility perceptions. The research was conducted in Komodo National Park (KNP). KNP was chosen as the research location because the Indonesian government designated it as a priority tourist destination. Consequently, infrastructure development funds for access are maximized to increase the number of tourists. The industry is developing premium tourist programs providing luxurious and exclusive facilities. Additionally, since 2008, various tourist accidents and environmental damage have been encountered in KNP due to neglectful tourist behavior.

The popularity of KNP has increased since it was declared a World Heritage Site by UNESCO in 1991. This unique park is represented by an endangered animal,

Varanus komodoensis (komodo dragon), a significant tourist attraction endemic to Komodo Island, Indonesia (Kodir et al., 2019). As a protected area, KNP is managed by an agency under the Ministry of Environment and Forestry of the Republic of Indonesia. This sector focuses on preserving nature's biodiversity and maintaining sustainable ecosystems. Since the tourism sector grew in response to the unique attractions at KNP, the government focused on developing ease of access to increase the number of tourists.

The survey was conducted from March 2019 to November 2020, during which data was collected through online questionnaires distributed to tourists who visited the park from 2017 to 2020. An online survey was chosen because of the COVID-19 pandemic, in which the KNP is closed and forbidden for visitors. The period of 2017-2020 was chosen because the number of KNP visitors was at its peak. An explanation of the research objectives and questionnaire distribution is provided to obtain respondents' approval, as well as a question regarding willingness to fill out the questionnaire. Only willing respondents will proceed to complete the questionnaire.

The sampling technique adopted for this research is convenience sampling, a non-probability sampling method. Convenience sampling involves researchers distributing surveys to respondents who are readily available and easily accessible. The rationale for using convenience sampling is supported by previous studies, specifically by Chikuta and Kabote (2018) and Cole et al. (2019), who also advocated for the convenience sampling method in traveler surveys. This indicates that convenience sampling is a suitable alternative in situations where it is challenging to employ other sampling techniques due to limitations in data availability and changing tourist populations.

However, to reduce the bias of using convenience sampling, the sample collection process was conducted through visitor data from various sources, namely 5,478 tourists from 4 travel agents, 280 tourists from 4 tour guides, and 2,290 tourists from social media platforms such as Instagram, Facebook, and Tripadvisor. Thus, the total population data obtained was 8,048 tourists. Subsequently, questionnaires were distributed to the 8,048 tourists via email, social media, and telephone contacts, and only 546 respondents. The detailed number of contacts and response rates can be observed in Table 1.

The research sample was determined based on the Gamma exponential method (GEM), and it constitutes a total of 534 respondents, with a significant level of 0.05 and a statistical power of 80% (Gurland & Tripathi, 1971). According to Kock and Hadaya (2018), GEM is the proper approach to minimize sampling bias because the result is close to the Monte Carlo approach. From the 546 respondents, a random selection of 634 respondents was made and subsequently used in the data analysis.

Next, the characteristic data of the respondents obtained were compared with the results of an exit survey conducted by the East Nusa Tenggara local government in 2018 on 1,835 tourists departing through the airport. The results indicate that the composition of respondents based on gender, age, and occupation is relatively similar between this research and the exit survey (Table 2).

Table 1 Sample distribution and response rate of the survey

No	Travel agent	Number of tourists	Response rate		Percentage of response rate
			International	National	
1	Indahnesia	123	2	27	23.57%
2	Flores Komodo Tour	4,902	8	12	0.04%
3	D’Komodo Tour	453	1	8	1.98%
Total		5,478	11	47	
No	Social media	Number of tourists	Response rate		Percentage of response rate
			International	National	
1	Instagram	2,250	286	103	17.29%
2	Tripadvisor	16	-	-	-
3	Facebook	24	-	4	16.67%
Total		2,290	286	107	
No	Tour guide	Number of tourists	Response rate		Percentage of response rate
			International	National	
1	A Nando	52	4	21	48.08%
2	B Bahari	43	-	14	32.56%
3	C Ardi	162	-	49	30.25%
4	D Irdan	23	-	7	30.43%
Total		280	4	91	
			301	245	

Table 2 Respondent characteristic and the result of exit survey by local government

Gender	National tourists	International tourists	Total	(%)	Exit survey (%)
Male	129	127	256	47.9	44
Female	113	165	278	52.1	56
Total			534	100	100
Age	National tourists	International tourists	Total	(%)	Exit survey (%)
A (<18 yo)	1		1	0.2	-
B (18–25 yo)	75	51	126	23.6	21
C (>25–35 yo)	123	151	274	51.3	45
D (>35–45 yo)	31	62	93	17.4	21
E (>45–55 yo)	12	20	32	6	10
F (>55–65 yo)		8	8	1.5	2
G (>65 yo)					1
Total			534	100	100
Occupation	National tourists	International tourists	Total	(%)	Exit survey (%)
Students	32	21	53	9.9	13
Employee	111	108	219	41.0	41
Bussiness	54	105	159	29.7	26
Not working	14	3	17	3.2	3
Others	31	55	86	16.1	17
Total			534	100	100

Specifically, the stages involved in recruiting respondents through social media are as follows: First, the researcher used social media platforms like Instagram and Facebook to identify potential respondents. Second, hashtag and keyword searches were used to locate relevant posts, and specific words related to KNP, such as #pulaukomodo, #KNP, and Komodo luxury, were utilized. Third, the researchers directly messaged the potential respondents to invite them to participate in the survey.

Framework for developing tourist typology This research aims to analyze the impact of easy access on tourist behavior, demonstrated by the typology of ignorant tourists in conservation areas. To achieve this, accessibility will be one

of the indicators used in forming the typology (Figure 1). It proves that tourist typology in protected areas is formed using particular variables such as perception of destination, individual, internal accessibilities, and extrinsic motivation (Marwa & Rahmafritria, 2018). Meanwhile, the accessibility dimension is illustrated using subjective and objective approaches because both descriptions explain ignorant behavior. (Lättman et al., 2018; Rahmafritria et al., 2020). Perceptions related to the ease of access to some destinations are described as the choice of tourism products in protected areas (Casscetta et al., 2002). Furthermore, tourist preferences indicate the extent to which they are willing to prioritize nature and environmental interests compared to the comfort of their tour. Perception of self-affordability or

individual accessibility shows the chance of accident risk compared to capacity (Tverijonaite et al., 2018). A high risk of accidents tends to occur due to ignorant behavior, such as when tourists engage in activities that harm themselves. Furthermore, the perception of accessibility and tourists' knowledge of protected areas indicate limitations in carrying out tourism activities (Hall & Boyd, 2005). If they consider these activities limited, there is a low potential to damage the environment.

The cluster testing used six indicators: perceptions of ease of access, preference for tourism products, perception of affordability, adventure tourism skill, perception of the obstacles, knowledge of conservation, and pride motivation (Table 3).

Next, to test the validity of the data, a correlation test using Pearson product-moment was conducted. The results showed that all statement items had validity coefficients greater than the critical *r*-value of 0.3, indicating that these items are suitable for use as measurement tools in the study and can be utilized for further analysis. Meanwhile, a reliability test was also conducted using Alpha-Cronbach. The results indicated that all statement items in the questionnaire had positive values greater than 0.7, meaning that the data is suitable for further statistical analysis.

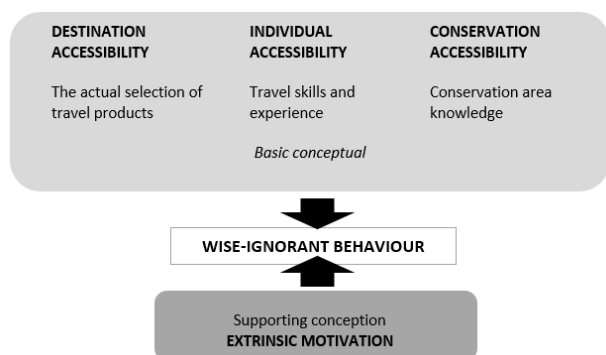


Figure 1 Conceptual framework to build a typology of ignorant tourists through perceptions of accessibility.

Method of analysis The typology was developed using a non-hierarchical method with K-mean clusters to obtain either high or low internal and external homogeneity or similarities between members or clusters. A non-hierarchical K-means data analysis method is employed because it can effectively group data points into clusters based on their similarities in each variable used for classification, particularly in classifying ignorant tourists. By using this method, different types of tourists visiting KNP and the diverse characteristics of these tourist groups can be identified.

Moreover, a non-hierarchical K-means cluster analysis was employed rather than the hierarchical one for several reasons, including 1) the capability to handle large quantities of observational data and multiple variables, 2) facilitation of data reduction and analysis, and 3) applicability to different data scales, including ordinal, interval, and ratio.

On the other hand, the hierarchical k-means cluster method is less suitable for this research due to its grouping based on the researchers' observations on the dendrogram. The hierarchical cluster method can be challenging for large samples, as it involves creating a hierarchical tree-like structure (dendrogram) representing the clustering process. This can become computationally intensive and challenging to interpret with many data points (Talukua et al., 2017).

Results and Discussion

Tourism management in KNP Previous studies carried out in West Manggarai Regency focused on two regional attributes. The first is KNP, a protected area located northeast of Labuan Bajo, regarded as the main attraction for nature tourism. The second is Labuan Bajo, the capital city of West Manggarai Regency, due to its numerous public infrastructures, such as airports, seaports, hotels, restaurants, and other facilities (Figure 2).

These two focus areas require adequate management coordination. In the first location, as the main tourist attraction, the authorities of KNP apply a conservative management model due to its function in ecosystem protection. Meanwhile, the agency prioritizes comfort in the second location, Labuan Bajo. Those two approaches must be coordinated to implement both those locations' vision and

Table 3 Indicators of variables in developing typology at KNP

Variables	Sub variables	Indicators	Question in questionnaire
Tourism accessibility (Lättman et al., 2018)	Perception of ease of access	Kind of transportation mode	While in KNP, I preferred a transportation mode that eases my access to the object.
	The actual selection of tourism products	Kind of accommodation	While at KNP, I chose a comfortable star hotel for accommodation.
Individual accessibility (Cascetta et al., 2002)	Perception of affordability	Level of physical landscape affordability	Nature activities in KNP are easy to get through
	Adventure tourism skills and experience	Level of skill and experience conducting nature tourism activities	I have the proper skills and many experiences to do nature activities at KNP
Conservation accessibility (Hall & Boyd, 2005)	Perception of obstacles to travel in protected areas	Level of perception of the barriers to tourism activities	The natural landscape in KNP complicates tourist activities
	Knowledge of protected areas	Level of understanding of protected areas	I have enough knowledge regarding protected area
Extrinsic motivation (Mehmetoglu, 2007)	Tourism motivation for pride	Level of desire to travel to get appreciation from others	I travel to KNP to get appreciation from friends and relatives.



Figure 2 Map of tourism management in West Manggarai Regency, East Nusa Tenggara (Rahmafritria et al., 2022).

mission statements. The ecotourism model that promotes KNP requires tourists to understand and know nature. Even the display of detrimental behavior in protected areas tends to threaten the ecosystem's primary function. The management pattern and model must be synchronized with the local and national government's marketing concepts and tourism services. The development of modern infrastructure, such as hotels and malls, starkly contrasts with the ecotourism model designed at KNP. Instant ease, comfort, and luxury are different from the vision of this region, which prioritizes the naturalness of wildlife.

According to Deci and Ryan (1985), external factors, in the form of material ease and reduced intrinsic motivation, trigger an individual's closeness with nature, which serves as a form of entertainment to strengthen one's pride (Vespestad & Lindberg, 2011).

The tour packages offered by agents also present the all-exclusive modern tourism models. Tourists should use ships for daily and overnight trips to enjoy various attractions. Furthermore, an exclusive package with modern facilities, where tourists spend three days and two nights, has been developed. The ships are equipped with private air-conditioned rooms, bathrooms with hot water available, and a dining room with a hotel restaurant-style menu that is *Instagramable*. This form of hedonistic tourism is interesting because of the unique traveling experience on a ship while enjoying natural phenomena, such as sea views and beautiful islands. The tour package developed, followed by this concept, differs from the ecotourism model, which is based on a natural atmosphere, local context, and adaptation process with natural elements. This package proves there is

no adequate coordination between the tourism sector stakeholders in Labuan Bajo and KNP to realize a sustainable area.

Relating to the research problems, infrastructure construction within the study area shows that the government and the industries also developed a hedonistic management model. Concerning accessibility, this triggered the tourists' hedonistic preferences, which many parties fear (Rahmafritria et al., 2022).

Tourist preference and motivation in visiting KNP A survey was carried out to understand tourists' preferences regarding their choices of activities. In addition, questions are directed at elements that describe their personalities, classified as psychocentric or allocentric typology based on the concept proposed by Plog (1974). The data collected proves that domestic tourists are categorized as psychocentric, and they are characterized by their choice of organized tours (78.32%), staying at five-star hotels (59.29%), the mass tourism model (38.5%), and 4-wheeled transportation modes (55.75%). Meanwhile, the foreigners are relatively more allocentric; they prefer to organize their tours (58.12%), select homestays (43.83%), travel with small groups (59.74%), and enjoy walking (39.94%) rather than renting a motorized vehicle. However, foreign (80.84%) and domestic (72.57%) tourists are described as individuals who usually travel long distances and are adventurous.

Interestingly, foreign tourists (83.77%) tend to encounter more challenges than domestic ones (50.88%), and the dominance of the youths also supports it. Meanwhile,

foreign tourists prefer medium ships or speed boats when traveling by sea, both on open and private trips. On the contrary, the domestic ones prefer medium and bigger-size vessels.

Furthermore, a survey was conducted to ascertain the tourists' actual conditions, especially those related to their physical state, adventurous tourism skills, and traveling experiences. This complete data was compiled to compile the typology and ascertain the similarities between the perceptions of individual accessibility and their actual conditions. When the results show a difference, this indicates that there is very likely a risk during the trip.

The conditions prove foreign tourists possess adequate adventurous tourism skills because most are good swimmers and divers (60.39%). Furthermore, based on open-ended questions, most visit the destination to participate in diving activities because they possess certificates from recognized professional associations. Meanwhile, 30.09% of domestic tourists are pretty proficient in swimming. However, 35.84% are unable to dive. The percentage of those unable to swim is also more remarkable than the number of foreigners (8.41%).

Tourist typology in KNP As mentioned earlier, the explanation shows that the accessibility policy leads to a general tourism development model that is not specific to protected areas. Evidence that the ease of access provided to ignorant tourists harms such areas is reported in the tourism typology as follows:

The first phase of the analysis produces the initial cluster centers, which shows the need to engage in the ten iteration stages. Table 4 shows that the minimum distance between cluster centers from the iteration results is 4.766. Furthermore, the final results of this process are shown in Table 5, where the characteristics of each cluster are interpreted.

Cluster 1 is a group of tourists who prefer all-natural and environmentally friendly tourism products, including accommodation and transportation facilities, prefer privacy when traveling, and engage in certain activities. Compared to other groups, they have a low destination accessibility value because of the difficulty of obtaining environmentally friendly tourism facilities around the destination. These groups of tourists have the highest perception of accessibility. They understand that tourism in protected areas needs to be regulated and limited to not damage the natural ecosystem.

Cluster 1 also has a low extrinsic value, indicating they are not motivated to travel for social rewards and recognition. Based on these characteristics, they are categorized as real ecotourists, with 160 respondents (29.9%). They are described as the wisest group of tourists because they seek tourism activities that benefit nature and the local communities.

Cluster 2 is characterized by highly skilled and experienced visitors in nature tourism. The result indicates that they are a group of tourists that often engage in adventurous tourism. Furthermore, they have the highest perception of individual accessibility, meaning they can physically and psychologically participate in all-natural tourism activities. However, they also travel for extrinsic purposes, meaning they travel because they are motivated to be recognized and receive social rewards for traveling to unique and popular destinations. Cluster 2 is characterized by tourists with the most adventurous tourism skills despite having the extrinsic motivation to travel to be recognized and receive social rewards. Therefore, it is categorized as hedonistic adventure tourism, with 151 respondents (28.3%). They have a high potential to engage in risky activities because they are admirably adventurous, and their hedonistic motivation is also high. Therefore, they can exhibit ignorant behavior when traveling. (Pratt & Tolkach, 2022).

Cluster 3 is a group of tourists with the highest preference for hedonistic tourism products, meaning that they prefer easy-to-use infrastructure, like the crowd, and available tour packages. They have the lowest skills and experience in nature tourism. However, their extrinsic motivation to receive social rewards and recognition is also the highest compared to other groups. Furthermore, they have a relatively high perception of individual accessibility, indicating that they try to engage in nature tourism activities even though they do not possess adequate skills, thereby exposing them to the risk of harming themselves when traveling. The urge to pursue highly hedonistic activities due to extrinsic motivation is a factor that causes them to exhibit ignorant behavior towards themselves and the environment. This unaware behavior is also characterized by their low perception of conservation accessibility compared to other groups, indicating that they freely engage in tourism activities. These groups of tourists consist of 103 respondents (19.3%) and are categorized as high-risk hedonistic tourists. They are exposed to accidents because of their self-indulgent actions and are included in the self-harm category (self-loss).

Cluster 4 is a tourist group with the lowest accessibility value compared to the other categories. They have a modest perception of destination, individual, and conservation accessibility. They presume KNP is a tourist destination that is quite difficult to reach. Regardless of whether they have the lowest perception of conservation accessibility compared to other groups, meaning that tourism activities are carried out freely, the value of their extrinsic motivation is relatively low. This low motivation implies that social rewards and recognition do not drive them. This group of tourists makes natural destinations a fun recreational facility for relaxation

Table 4 Data iteration process

Iteration	Change in Cluster Centres			
	1	2	3	4
1	2.755	2.084	2.241	2.521
2	.238	.233	.458	.130
3	.094	.138	.187	.217
4	.077	.073	.051	.157
5	.089	.032	.051	.117
6	.034	.057	.050	.072
7	.027	.061	.016	.098
8	.052	.043	.053	.112
9	.024	.025	.035	.067
10	.031	.000	.000	.044

Table 5 Cluster process final results

	Cluster				F-value	Sig. level
	1	2	3	4		
Extrinsic Motivation	1.90	4.44	4.64	2.57	586.913	.000
Product Choice (objective)	1.93	3.24	3.89	3.42	176.762	.000
Skills (objective)	3.59	3.61	2.00	3.16	159.097	.000
Conservation accessibility (subjective)	4.28	3.94	3.47	3.47	34.273	.000
Destination accessibility (subjective)	3.93	4.27	4.07	3.96	9.054	.000
Individual accessibility (subjective)	4.03	4.14	3.82	3.80	7.726	.000
Type of typology	Real ecotourist	Adventure hedonistic	High risk hedonistic	Relaxing nature tourist		
Number of respondents	160	151	103	120		
Percentage of total respondents	(29.9%)	(28.3%)	(19.3%)	(22.5%)		

and refreshment needs. They avoid extremely adventurous activities and prefer safe, comfortable, and easy activities because they know their limitations. Cluster 4 is presumed to be a relaxing nature tourist type, with 120 respondents (22.5%). This group perceives nature as a means of relaxation, focusing on intrinsic motivation.

Constructing tourist typology serves to classify behavioral characteristics, which is nothing new. Different tourist attractions (Hvenegaard, 2002), geographical conditions (Hendee et al., 1968), and individuals (Plog, 1974) tend to be clustered in certain groups, thus resulting in a typology. However, the results obtained are not static with information technology, transportation, and communication development. Therefore, this classification creates opportunities that need further exploration, particularly in planning, marketing, and managing tourist destinations.

Findings from empirical studies show four types of tourists in protected areas. That variety indicates that the various characteristics of the accessibility dimension combined with different levels of hedonistic motivation may lead to different negligent behaviors in the destinations. Therefore, this case study strengthens the notion that this attribute is represented by accessibility.

Interestingly, compared with previous studies, two new tourist typologies were designed based on the potential for ignorant behavior. The first type is the "High-risk hedonistic tourist," which was theoretically described to emerge due to the dominance of hedonism and the gap between the perception of individual accessibility and their physical and psychological conditions. Tourists in this category make irrational decisions to satisfy their hedonistic needs by, for instance, taking selfies on cliffs, snorkeling in the high current to get the best photos, and taking pictures with wild animals (Arnani, 2019; Lovit, 2016). They are highly exposed to accidents because they do not possess the adequate skills and knowledge to interact with wildlife. To some extent, previous research only explained the phenomenon of exhibiting harmful and detrimental behaviors (McKercher, 2015; Pratt & Tolkach, 2022). However, these have not been classified based on the level of ignorance. Several accidents have been recorded at KNP; as illustrations, some tourists were bitten by Komodo because they went too close to take pictures. According to the

interviewed managers, this irrational act occurred because some failed to move in groups and went hiking without being accompanied by forest police or authorized officers.

The second new typology is "hedonistic adventure tourist," an activity commonly carried out in natural destinations, and it exposes one to numerous challenges and risks (Walle, 1997). Previous research reported that some accidents lead to death as a result of stupid behavior (Kane & Tucker, 2004; Shaheer & Carr, 2022). These studies have analyzed the risks associated with these activities to some extent. However, no one has linked it to hedonistic motivation or accessibility conception. This research reveals that the "adventure hedonistic tourist" type is clustered by the characteristic of being highly adventurous with a high level of expertise and the perception of individual accessibility, irrespective of their high hedonistic motivation. It simply means they engage in these activities to show they are capable (Shaheer & Carr, 2022). According to Cipolla (1987), this is referred to as omnipotence (feeling strong and superior), omniscience (feeling like the smartest), and invulnerability (feeling not at risk). They tend to engage in specific actions that either harm them or others. The disappearance of divers in several dive spots due to not using standard diving equipment is an example of "hedonistic tourist adventure."

Meanwhile, the other two typologies have been examined by previous research. The first is the "real ecotourist" typology that was analyzed by Butzmann and Job (2017), Sæþórsdóttir (2010), and Vespstad and Lindberg (2011). This ideal tourist group visits natural places, especially protected areas (Sæþórsdóttir, 2010). Generally, the "real ecotourist" type engages in activities that benefit nature, and the people's culture tries to gain new insights and knowledge by traveling. They are also motivated to contribute to the sustainability of nature. However, this research stated that the "real ecotourist type" is identified by the predominance of low hedonistic motivation and the poor perception of destination accessibility due to the difficulty of obtaining preferred environmentally friendly services and products.

Finally, the character of the "nature relaxing tourist" type enjoys visiting wildlife because it is believed to serve as a medium for relaxation and fun. Hedonistic motivation, poor individuals, and conservation accessibility drive this

characteristic. It indicates that irrespective of the challenges and risks encountered, they want to have fun enjoying nature. Vespestad and Lindberg (2011) stated that it is perceived as "nature as entertainment" for tourists who regard it as a recreation. Furthermore, Hvenegaard (2002) also referred to it as the "Generalist," while Mehmetoglu (2007) identified the group as "Pleasure activity-oriented." Practically, this group of tourists does not have a particular affinity with nature and does not seek new insights and skills from these activities. Instead, they usually focus on relaxing and eliminating fatigue during travel. In addition, they have characteristics similar to that of a "nature-relaxing tourist."

The discovery of two types of neglectful tourists, adventure hedonistic and high-risk hedonistic, due to easy access and luxury facilities in KNP suggests that managers of protected areas need appropriate guidelines for developing natural tourism infrastructure. Accessibility to conservation tourism involves elements of both barriers and facilitators, and it should not always be streamlined. Access should act as a filter to prevent neglectful tourists from easily entering protected areas. Additionally, conservation areas should educate visiting tourists through interpretation programs, infrastructure design, and informational signage. Therefore, the impact of particular development and managerial decisions on the sustainability of protected areas needs to be considered.

Conclusion

Improper management and planning of accessibility have negative impacts on protected areas, while specific tourist behavior driven by hedonistic motivations further degrades environmental quality. Human actions are essential in shaping regional development, especially considering tourism supply and market demand. This study uniquely highlights the importance of accessibility and hedonistic motivation in influencing tourist behavior. The findings show that poor accessibility management and hedonic tourism infrastructure development accelerate detrimental changes to protected areas. Accessibility's role as a mediator in tourism policy is critical, highlighting the need for careful consideration in planning to ensure that market preferences and conservation efforts are balanced. The government plays a substantial role in this process, as they are responsible for creating policies that align with the function of protected areas while responding to market preferences. In addition, the limitations of this research include limited data collection due to the pandemic, so the authors could not share the on-site questionnaire and do the observation. Furthermore, the use of new variables in determining typology requires validation through similar research in other protected areas. Another thing is that convenience sampling has its limitations, mainly in generalizability, as the sample may not fully represent the entire population of tourists.

References

- Arnani, M. (2019). 6 kasus selfie berujung maut di Indonesia. *Kompas*. <https://www.kompas.com/tren/read/2019/10/28/152608565/6-kasus-selfie-berujung-maut-di-indonesia?page=all>
- Butzmann, E., & Job, H. (2017). Developing a typology of sustainable protected area tourism products. *Journal of Sustainable Tourism*, 25(12), 1736–1755. <https://doi.org/10.1080/09669582.2016.1206110>
- Cassetta, E., Russo, F., Viola, F. A., & Vitetta, A. (2002). A model of route perception in urban road networks. *Transportation research part B. Methodological*, 36(7), 577–592. [https://doi.org/10.1016/S0191-2615\(00\)00041-2](https://doi.org/10.1016/S0191-2615(00)00041-2)
- Chikuta, O., & Kabote, F. (2018). Disability and tourism in Southern Africa: A policy analysis. In T. Chakaita (Ed.), *The routledge handbook of disability in Southern Africa* (pp. 265–277). Routledge.
- Cipolla, C. M. (1987). *The basic laws of human stupidity*. New York: Knopf Doubleday Publishing Group.
- Cole, S., Zhang, Y., Wang, W., & Hu, C. M. (2019). The influence of accessibility and motivation on leisure travel participation of people with disabilities. *Journal of Travel & Tourism Marketing*, 36(1), 119–130. <https://doi.org/10.1080/10548408.2018.1496218>
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109–134. [https://doi.org/10.1016/0092-6566\(85\)90023-6](https://doi.org/10.1016/0092-6566(85)90023-6)
- Gurland, J., & Tripathi, R. C. (1971). A simple approximation for unbiased estimation of the standard deviation. *American Statistician*, 25(4), 30–32. <https://doi.org/10.1080/00031305.1971.10477279>
- Hall, C. M., & Boyd, S. W. (Eds.). (2005). Nature-based tourism in peripheral areas: Development or disaster? In *Nature-based tourism in peripheral areas: Development or disaster?*. Bristol: Channel View Publications.
- Hendee, J. C., Catton, W. R., Marlow, L. D., & Brockman, C. F. (1968). Wilderness users in the Pacific Northwest –Their characteristics, values and management Preferences. Research Paper PNW-61. Portland: USDA Forest Service. Pacific Northwest Forest & Range Experiment Station.
- Hvenegaard, G. T. (2002). Using tourist typologies for ecotourism research. *Journal of Ecotourism*, 1(1), 7–18. <https://doi.org/10.1080/14724040208668109>
- Jamin, A., Rahmafritia, F., & Nurazizah, G. R. (2020). Rebuilding health tourism destination image after Covid-19: The case of Malaysia and Indonesia. *2020 IEEE 8th R10 Humanitarian Technology Conference* (pp. 1–6). IEEE. <https://doi.org/10.1109/R10-HTC49770.2020.9357057>
- Kane, M. J., & Tucker, H. (2004). Adventure tourism: The freedom to play with reality. *Tourist Studies*, 4(3), 217–234. <https://doi.org/10.1177/1468797604057323>
- Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and

- gamma-exponential methods. *Information Systems Journal*, 28(1), 227–261. <https://doi.org/10.1111/isj.12131>
- Kodir, A., Tanjung, A., Ahmad, R., & Simanjuntak, T. B. (2019). Tourism governance in Komodo National Park, Indonesia: Blessing or curse? *Geo Journal of Tourism and Geosites*, 27(4), 1401–1417. <https://doi.org/10.30892/gtg.27424-443>
- Lättman, K., Olsson, L. E., & Friman, M. (2018). A new approach to accessibility—Examining perceived accessibility in contrast to objectively measured accessibility in daily travel. *Research in Transportation Economics*, 69, 501–511. <https://doi.org/10.1016/j.retrec.2018.06.002>
- Lovit, B. (2016). Death by selfie: 11 disturbing stories of social media pics gone wrong. *Rollingstone*. <https://www.rollingstone.com/culture/culture-lists/death-by-selfie-11-disturbing-stories-of-social-media-pics-gone-wrong-15091/>
- Manning, R. E., Anderson, L. E., & Pettengill, P. (2017). *Managing outdoor recreation: Case studies in the national parks*. CABI.
- Marwa, S., & Rahmafritria, F. (2018). A factor analysis of visitors' motivation in visiting the geology museum of Bandung. *IOP Conference Series: Earth and Environmental Science*, 145, 012084. <https://doi.org/10.1088/1755-1315/145/1/012084>
- McKercher, B. (2015). Tourism: The quest for the selfish. In T. V Singh (Ed.), *Challenges in tourism research* (pp. 87–96). Bristol: Channel View.
- Mehmetoglu, M. (2007). Typologising nature-based tourists by activity: Theoretical and practical implications. *Tourism Management*, 28(3), 651–660. <https://doi.org/10.1016/j.tourman.2006.02.006>
- Mellon, V., & Bramwell, B. (2016). Protected area policies and sustainable tourism: Influences, relationships and co-evolution. *Journal of Sustainable Tourism*, 24(10), 1369–1386. <https://doi.org/10.1080/09669582.2015.1125909>
- Plog, S. C. (1974). Why destination areas rise and fall in popularity. *Cornell Hotel and Restaurant Administration Quarterly*, 14(4), 55–58. <https://doi.org/10.1177/001088047401400409>
- Pratt, S., & Tolkach, D. (2022). Stupidity in tourism. *Tourism Recreation Research*, 47(1), 3–16. <https://doi.org/10.1080/02508281.2020.1828555>
- Rahmafritria, F., & Misran. (2018). Disaster risk and travel decision of Middle Eastern tourists to natural destination in Indonesia. *IOP Conference Series: Earth and Environmental Sciences*, 179, 012006. <https://doi.org/10.1088/1755-1315/179/1/012006>
- Rahmafritria, F., Dirgahayani, P., Putro, H. P. H., Rosyidie, A., & Hudalah, D. (2022). Tourism accessibility in protected islands: The case of the Komodo National Park, Indonesia. *Tourism Review, ahead-of-print*. <https://doi.org/10.1108/TR-03-2022-0110>
- Rahmafritria, F., Sukmayadi, V., & Purboyo, H. (2020). The real and actual tourism accessibility in protected areas. *IOP Conference Series: Earth and Environmental Science*, 501, 012047. <https://doi.org/10.1088/1755-1315/501/1/012047>
- Sæþórsdóttir, A. D. (2010). Planning nature tourism in Iceland based on tourist attitudes. *Tourism Geographies*, 12(1), 25–52. <https://doi.org/10.1080/14616680903493639>
- Sæþórsdóttir, A. D., & Hall, C. M. (2020). Visitor satisfaction in the wilderness in times of over-tourism: A longitudinal study. *Journal of Sustainable Tourism*, 29(1), 123–141. <https://doi.org/10.1080/09669582.2020.1817050>
- Shaheer, I., & Carr, N. (2022). Social representations of tourists' deviant behaviors: An analysis of Reddit comments. *International Journal of Tourism Research*, 24(5), 689–700. <https://doi.org/10.1002/jtr.2531>
- Talakua, M. W., Leleury, Z. A., & Taluta, A. W. (2017). Analisis cluster dengan menggunakan metode K-means untuk pengelompokan kabupaten/kota di Provinsi Maluku berdasarkan indikator indeks pembangunan manusia tahun 2014. *Barekeng: Jurnal Ilmu Matematika dan Terapan*, 11(2), 119–128. <https://doi.org/10.30598/barekengvol11iss2pp119-128>
- Tverijonaite, E., Ólafsdóttir, R., & Thorsteinsson, T. (2018). Accessibility of protected areas and visitor behaviour: A case study from Iceland. *Journal of Outdoor Recreation and Tourism*, 24, 1–10. <https://doi.org/10.1016/j.jort.2018.09.001>
- Vespestad, M. K., & Lindberg, F. (2011). Understanding nature-based tourist experiences: An ontological analysis. *Current Issues in Tourism*, 14(6), 563–580. <https://doi.org/10.1080/13683500.2010.513730>
- Walle, A. H. (1997). Pursuing risk or insight. *Annals of Tourism Research*, 24(2), 265–282. [https://doi.org/10.1016/S0160-7383\(97\)80001-1](https://doi.org/10.1016/S0160-7383(97)80001-1)