

# Developing The Brand of Batam City as A Sustainable (Green) Tourism Destination through Social Media

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**Abstract.** Various studies have scientifically documented sustainable tourism development in several developing countries. Meanwhile, when social media influences tourist perceptions and their visiting decisions, tourism promoters have widely used social media to form their destination brands by producing promotional materials and distributing them on social media. However, there needs to be more scientific research reporting on the formation of city brands as green destinations through social media. This article collected visual content produced and uploaded by local tourism authorities. Furthermore, Barthes's and Rose's semiotics were applied to analyze the content to identify the formation of Batam city brands as one of the green destinations in Indonesia. The findings of the article's research indicated that several themes (marine tourism, agro-and ecotourism, community-based tourism, and sport tourism) are exploited by local tourism authorities to form green destination brands for Batam City. Various signs implying metonymic and synecdochical signs were distributed to highlight the themes, such as beaches, plantation areas, grasslands, and mangrove forests. Based on the study's findings, various theoretical and practical implications were discussed, and recommendations for future research were suggested.

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## 1 Introduction

Green tourism is a form of sustainable tourism [1] deliberately developed to support sustainable development. Meanwhile, sustainable development is a development approach that considers all impacts arising from various social and economic activities [2].

Indonesia is one of the countries in the world that has adopted the principles of sustainable development into its development policies, especially in terms of environmental protection management (see UU Number 32/2009). At the same time, Indonesia is committed to making tourism one of the efforts to realize sustainability. This commitment is clearly and firmly reflected in Article 2, paragraph (4) of Government Regulation No. 50 of 2011 concerning the National Tourism Development Master Plan 2010-2025.

Green tourism development, a key element in realizing sustainable development, is guided by a comprehensive approach. This approach carefully considers the interplay between three factors: social and economic balance, the needs of tourists, and resource conservation[3]. This comprehensive approach underpins the formulation of green tourism standards and certification, serving as a beacon for sustainability in the tourism industry [4].

Many studies have successfully documented various scientific evidence showing that social media is a significant instrument in forming tourist destination brands [5–7]. In addition, the use of social media also influences changes in a product's brand equity and destination image [8]. Therefore, social media is positioned as an instrument for brand formation in Kumamoto Province, Japan [9].

Then, since social media, including internet networks and websites, are instruments in online brand formation [10], the government and other stakeholders adopt those digital media to their project of city brand development [11–13].

However, amidst this empirical evidence, media studies, especially social media, have yet to be considered a field contributing to sustainable tourism studies [14]. Likewise, social media, branding, and sustainable tourism still need to be filled with fewer articles than other subjects [15]. This reality reflects the limited scientific evidence that explains how social media relates to green tourism, especially in the context of the Batam destination.

When social media is utilized to brand various destinations, as highlighted in the previous section, this article is a scientific study aimed at understanding how Instagram plays a role in forming Batam's brand as a green tourism destination. Specifically, this study highlights the visual content produced and uploaded by the Batam Tourism Authority on the authority's official Instagram account about forming the city's brand as a green destination. This study focuses on visual content by considering the importance of this visual content in the formation of the image of a tourist destination in various contexts [16–20]. Specifically, this study analyzes the visual content uploaded on Instagram to understand how Batam's brand as a green destination is projected.

Tourism authorities utilize various social media platforms for tourism marketing purposes, including the formation of destination images [21], but Instagram is a vital marketing tool for tourism marketing agents [22]. Therefore, Instagram is one of the social media platforms that provides features that make it easy for users to upload photos and share them with their followers. At the same time, the image itself is essential in tourism marketing because it creates and communicates an image [23].

At the same time, the Batam tourism authority utilizes Instagram to market its destinations. Therefore, this study selected the official Instagram account of the Batam Tourism Authority as a data source to analyze various visual content that they produce and share to identify the formation of the Batam brand as a green destination.

## 2. Literature Review

### 2.1 The Role of Sustainable (Green) Tourism in Sustainable Development

Sustainable is an adjective formed from the verb "sustain". According to the Cambridge Dictionary, the verb is "to cause or allow something to continue for some time" or "to keep alive.". So, simply put, the concept of "sustainable tourism" implies a meaning of tourism that focuses on sustainability. Furthermore, sustainable tourism emphasizes the importance of maintaining a balance in the relationship between the environment, economy, and society in tourism development. This balance is required to ensure sustainability in serving tourism and local communities [24].

To maintain this balance, sustainable tourism focuses its attention on several aspects, namely the needs of visitors (tourists), tourism industry activities, environmental conditions, and the interests of local communities, which can be applied in the form of tourism activities at each type of tourist destination [25].

Another definition states that sustainable tourism is the application of sustainable development to the tourism sector – namely, tourism development that meets the needs of the present without compromising the ability of future generations to meet their own needs [26]. Sustainable development is a development approach that focuses on the impacts of economic/social and social activities [2].

Especially in Indonesia, sustainable development is formally defined as a conscious and planned effort that combines environmental, social, and economic aspects into a development strategy to ensure the integrity of the environment as well as the safety, capability, welfare, and quality of life of the present and future generations (see Article 1 paragraph (3) of Law No. 32 of 2009 concerning Environmental Protection and Management).

Specifically, in the context of tourism development, Indonesia is one of several countries emphasizing the importance of sustainability in tourism development. This is as reflected in the vision of national tourism development as stated in Article 2 paragraph (4) of Government Regulation No. 50 of 2011 concerning the National Tourism Development Master Plan 2010-2025, as follows:

"Terwujudnya Indonesia sebagai negara tujuan pariwisata berkelas dunia, berdaya saing, berkelanjutan, mampu mendorong pembangunan daerah dan kesejahteraan rakyat (The realization of Indonesia as a world-class, competitive, sustainable tourism destination, capable of encouraging regional development and people's welfare)".

The vision implies several critical elements of the concept of sustainable tourism, namely "sustainable", "regional development" that has tourist destinations, and "people's welfare". Furthermore, to realize this vision, the government has issued guidelines for stakeholders to implement sustainable tourism destination development (see Regulation of the Minister of Tourism and Creative Economy No. 9 of 2021).

Green tourism, sustainable tourism, and sustainable development are interrelated concepts. Green tourism is a form of sustainable tourism that is environmentally friendly [1] by emphasizing the importance of the needs of the environment, residents, businesses, and visitors, now and in the future [3].

Green tourism and sustainable tourism are components that enhance or support sustainable regional development [27]. Therefore, green tourism integrates various dimensions of sustainable development, including environmental responsibility, nature-based destinations, and community involvement [28].

In line with this, in developing green tourism, it is recommended to adopt a comprehensive approach to sustainable development that considers the relationship between three factors (natural, social, and economic) that are directed to meet the needs of tourists

and resource conservation [3]. A comprehensive development approach that considers those three factors must be applied to formulate green tourism standards and certification as a reference for realizing sustainability in the tourism industry [4].

On the other hand, the development of green tourism is related to the growing trend of pro-environmental behavior among tourists. Here, brand image becomes essential because it is a determining factor for pro-environmental behavior [29].

Furthermore, when a destination is perceived as an image of a natural area, it will be considered valuable and worth visiting by tourists with a pro-environmental attitude [30]. Therefore, forming a nature-based destination brand image is essential for tourism agencies to attract tourists with pro-environmental attitudes and behaviors.

## **2.2 Social Media and Destination Branding**

Many studies have successfully documented scientific evidence showing that social media is a significant instrument in forming tourist destination brands. For example, users form the Stockholm city brand through Twitter by associating the city with several attributes, such as concerts, music, weekend entertainment, summer, and "Stockholm syndrome" [5].

Likewise, the London city brand is formed by Instagram users by associating the city with several themes, including Historical buildings and heritage; Cultural events; Natural landscapes; Fashion, Tourism facilities, and infrastructure; Concerts, parties, Beautiful views, Local cuisine and dining/culinary; Recreation and sports; and Local people and residents [6]. It is in line with other studies indicating that the intensity of communication by tourists on social media influences brand awareness, brand image, customer value, brand quality, and loyalty to Valencia, Spain [7].

In addition to influencing brand formation in a developing city, Metropolitan Lima, Peru, social media can also change the destination image and brand equity [8]. Therefore, in a study of the brand formation of Kumamoto prefecture (one of the provinces in Japan), social media and other elements (government support, emotional attachment strength, anthropomorphism, efficient public transportation and tourism services, and mascot branding) are placed as instruments for the formation of the province [9].

In line with that study, social media, internet networks, and websites are the main factors in the formation of the online brand of the city of Chengdu, China [10]. Therefore, several studies also show that the government and other stakeholders have utilized social media to form a city brand. For example, the governments of the three cities of Cape Town (South Africa), Philadelphia (Pennsylvania, USA), and Myrtle Beach (South Carolina, USA) brand their respective cities using Twitter. However, the three local governments still need to make maximum use of social media for city branding purposes [11].

The Xian City tourism authority has also produced hundreds of videos to promote the city's brand as a modern metropolis and a historic city, where TikTok is used to distribute video content [12]. Meanwhile, another social media platform (Facebook) was used to form the Rio de Janeiro city brand, which highlights two main themes (nature and culture) [13].

## **3. Method**

### **3.1 Data Sources and Data Analysis**

This study seeks to understand how the Batam Tourism Authority produces visual content to build the city's brand as a green destination. For this reason, all photos uploaded by April 4, 2024, on the official Instagram account of the tourism authority will be collected.

On the other hand, content uploaded after the deadline (April 4, 2024) is not selected as data. This data collection time limit is essential, considering that producing and uploading

content to the account continues. In addition, after April 4, the research team will continue the next research stage, namely data analysis.

At this stage (data collection), the researcher took screenshots of all visual content on the Instagram account, and then each screenshot was given a call number and collected in 1 folder.

This study applied visual semiotic analysis techniques to analyze all the collected data. In principle, semioticians believe life has various signs connected through a sign system to produce meaning [31]. In communication practice, the signs produced by the communicator appear in 2 forms, namely verbal and visual [32].

This study focuses on analyzing visual signs produced by the Batam Tourism Authority to understand the formation of the Batam brand as a green destination because the tourism authority needs more content in text form. Even most of the content is produced and uploaded without being accompanied by photo captions.

Meanwhile, the concept of signs in semiotics is a system consisting of several layers of meaning (denotation, connotation, and myth) [33]. Denotation is the first layer, a sign that describes humans or objects, while connotation refers to ideas or values represented through signs and communicated to text viewers [34]. Myths refer to ways of thinking about people, products, places, or ideas arranged to send specific messages to readers or viewers of the text [35].

Meanwhile, connotative signs, in particular, consist of 2 categories: metonymic (a sign that is related to something else, which then represents that something else) and synecdochic (a sign that represents the whole, or the whole that represents a part) [36].

The three layers of signs (denotation, connotation, and myth) developed by Barthes [33] and the two categories of connotative signs (synecdochic and metonymic signs) formulated by Rose [36] have been applied in various studies dealing with the issue of forming the destination image of Seoul, the capital of the Republic of Korea [37,38], including visual representation in the context of Japanese and Taiwanese tourism [39]. That visual semiotic analysis was applied to understand the various meanings within the green tourism framework behind the visual content produced by the Batam city tourism authorities.

### **3.2 The Procedure of The Data Analysis**

In this study, the visual and verbal semiotic analysis will be carried out in several stages, such as:

1. Level 1 interpretation. This analysis technique is applied to reveal denotative meanings conveyed through the selected visual signs. At this stage, the meaning to be identified is the literal meaning or meaning that stands alone literally, since it is not associated with the culture or ideology of the local community. This method is applied through three stages: preparation, organization, and reporting [40].
2. Level 2:
  - Interpretation (connotation). Data interpretation at this level is a theoretical interpretation. At this level, each visual sign appearing dominantly, as identified through the first stage, is connected to the theoretical background and culture of the local community.
  - Categorization of connotative signs (metonymic and synecdochical (Rose, 2001) is applied as a theoretical framework to analyze high-level meanings regarding the formation of green destination brands in the context of Batam through the distribution of identified signs.

The two semiotic analysis approaches are arranged into a data analysis procedure. The two stages of semiotic analysis used in this study are illustrated in Table (1).

**Table 1.** Semiotic analysis procedure

Stage of the data analysis	Description of the data analysis process
level 1	The interpretation of each element of the denotative sign is analogous to reality and then interpreted literally.
Level 2	<ul style="list-style-type: none"><li>• Interpretation of each element that was interpreted in the previous stage theoretically/culturally.</li><li>• Identifying synecdoche elements representing green tourism in the context of Batam tourism</li><li>• Interpreting various figurative elements (metonyms) representing green tourism</li></ul>
Synthesis	<ul style="list-style-type: none"><li>• Review key elements of green tourism representation</li><li>• Describe visual and verbal themes</li><li>• Describe implications and provide recommendations</li></ul>

4 Results

4.1 Data Analysis Level 1

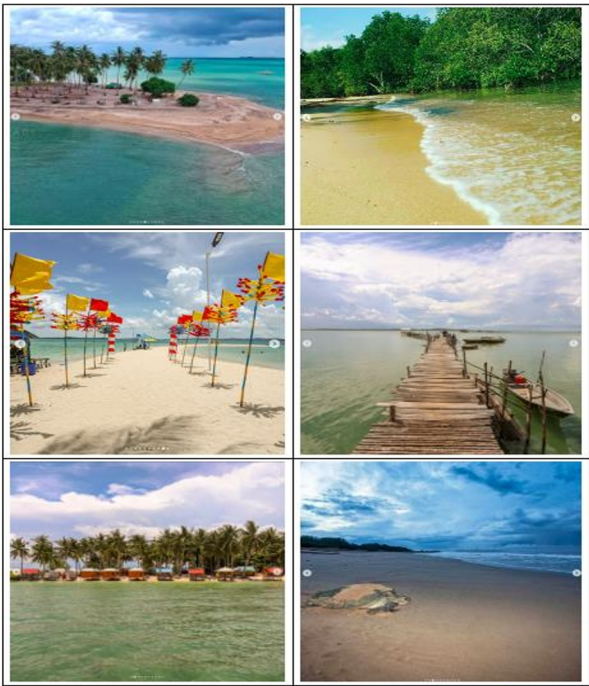
All visual signs distributed in the selected data are interpreted denotatively at this level. Therefore, the product of the interpretation process at this level is denotative signs. For instance, a green leaf in promotional material for garden tourism can be a denotative sign representing nature and tranquility. Then, the identified denotative signs are interpreted as signs describing something. In line with this, the meaning of denotative signs is described based on the vision carried out on an object that is given attention [36]  
The study found several natural themes found in the promotional materials of Batam destinations. Here they are as follows:

- 1. Marine tourism
- 2. Agro- and ecotourism
- 3. Community-based tourism
- 4. Sports tourism (offering a lively view through a golf course).

Furthermore, this study also found various visual signs distributed in each of these themes. At this analysis stage, the overall interpretation of these signs will be presented denotatively through several tables.

4.1.1 Marine Tourism

The theme presents several signs: the image of the beach, coconut trees, beach sand, huts made of wood, and turtles walking on the sand. These signs clearly describe something whose meaning is given using human vision (see figure). Hence, at this level, the meaning of each sign will be the same, or there will be no significant difference. The following is the sign's overall meaning based on general human vision.



**Fig. 1.** Some examples of visual data highlighting the marine tourism theme

**Table 2.** List of Denotative Signs on the Theme of Marine Tourism

No	The Object seen	Meanings of the denotative signs
1	Beach	a point or a specific area that meets the land and sea
2	Coconut tree	one type of plant with a distinctive shape and fruit as a characteristic of the tree, for example, a tall tree with a thorny trunk and green and elongated leaves
3	Wooden Hut	A place that is deliberately made for shelter, enjoying the scenery in a particular area with an exciting view
4	Turtle	One of the organisms living in the waters
5	Sand	Refined grains of stone spread out on the edge of the beach

4.1.2 Agro and Ecotourism

The next theme is agro- and ecotourism. Through that theme, local DMOs exploit several visual signs in producing promotional materials for this city's tourist destinations, namely guava fruit, plantations, green leaves, and rice fields (rice fields). The meaning of each denotative sign is presented in Table 3.

**Table 3.** List of Denotative Signs on the Theme of Agro and Ecotourism

No	The Object seen	Meanings of the denotative signs
1	Guava Fruit	Part of a guava tree originating from a flower and then develops into a fruit
2	Plantation	A piece of land that is intentionally planted with certain trees

3	Leaf	A part of a plant growing in strands on the branches of a tree that functions to breathe and process nutrients for the tree
4	Rice filed	A piece of land that is intentionally irrigated for a specific purpose and then planted with rice plants



**Fig. 2.** Several data with various themes presenting a green atmosphere

4.1.3 Community-based tourism

Community-based tourism is another theme that appears in the data. This study found several signs in the theme: mangrove trees, mangrove forests, wooden huts, sand, and beaches. Each denotative meaning of these visual signs is presented in Table 4.

**Table 4.** List of Denotative Signs on the Community-Based Tourism Theme

No	The Object seen	Meanings of the denotative signs
1	Mangrove tree	A type of plant usually growing on the coast
2	Mangrove forest	A large area covered with mangrove trees
3	Wooden hut	A small building for temporary housing with a specific purpose
4	Sand	Smooth gravel rocks
5	Beach	A geographical entity that occupies the border between land and sea

4.1.4 Sports Tourism

Sports tourism is one of the themes highlighted by the local tourism authority. For this theme, several visual signs are presented in the data: grass, Grassland, coastline, trees (areas filled with trees), and beach. In Table 5, the overall meaning of these visual signs is presented.



**Table 5.** List of Denotative Signs on the Theme of Sports Tourism

No	The Object seen	Meanings of the denotative signs
1	Grass	Small plants of the type of weeds, trim stems and narrow and elongated leaves
2	Grassland	Sizeable flat land or fields filled with grass
3	Coastal area	Flat sandy land occupying the coastal area
4	Plantation	Part of a land or area filled with plants or trees
5	Beach	A geographical entity that occupies the border between land and sea



**Fig. 3.** Green atmosphere is presented through several data featuring the theme of sports tourism.

4.2 Data Analysis Stage 2

At this stage, all signs are interpreted using the visual semiotic framework developed by Barthes (1964) and Rose (2001). As described in the data analysis stage 1, several themes were found in the promotional materials for Batam city destinations, especially for nature-based destinations, including marine tourism, agro- and ecotourism, community-based tourism, and sport tourism.

However, behind the diversity of these themes, several signs are distributed in several of these themes, as follows: beaches, several categories of areas that provide green views because they are filled with trees, such as plantation areas, rice fields, and mangrove forests, including grasslands, which are fields for golf games. This section explicitly analyzes these signs' meanings based on the metonymic and synecdoche approaches.

4.2.1 Beach

In tourism studies, explicitly using the image approach, the beach is positioned as one of the natural attributes important in increasing a tourist destination's attractiveness [41].

Therefore, many DMOs include this attribute in their tourism promotion content [19,20]. Viewed within the framework of tourism marketing, the emergence of beach attributes in the data is intended to influence tourists' consumption decisions.

On the other hand, Batam is a city occupying an archipelago area with 329 islands and a coastline of 1,261 km. These geographical characteristics offer attractive marine tourism for tourists. In line with this, several beaches in this city are always the focus of attention of international tourism sites (Tripadvisor), including Bale-bale Beach, Nogsa Beach, Melayu Beach, Viovio Beach, Nongsa Point Marina and Resort.

Based on Batam's theoretical description and geographical reality, the emergence of signs that visualize the beach image can be seen as metonymic signs. In this context, the appearance of the beach attribute represents Batam City's attractive destination from the aspect of its marine tourism. With these signs, the character of the city of Batam as an archipelagic area is strengthened through beach destinations, island destinations, and other tourist attractions based on marine tourism.

Then, that character is also strengthened through other signs, such as turtles, since turtles are one of the animals that live in the sea. At the same time, signs visualizing that animal bring a moral message intended to raise environmental awareness among tourists, considering that the turtle itself is classified as an animal on the verge of extinction, thus requiring a commitment from all parties to protect it.

#### **4.2.2 Plantation areas**

Referring to empirical evidence, natural attributes that offer green views are attractive for forming a tourist destination image. Some tourism literature has documented how powerful these attributes are in the formation of destination images in several cities in the world, for example, London and Florence [6], Hong Kong, Japan, and South Korea [42] Resort Alpine Sallbach-Hinterglemm Austria [43]

Especially in the context of forming the Batam destination image to strengthen the concept of green tourism, the local tourism authority exploits several existing natural destinations to produce promotional materials for the city's tourism (see Figure 2), including plantation destinations, mangrove forest destinations, rice field area destinations, and others. However, a striking element among the highlighted destinations is green.

In this context, the signs are metonymic, representing a future destination built on sustainability principles or environmentally conscious. It is because the concept of green is a color symbolized by leaves. The leaves are understood as a concern for the sustainability of nature.

#### **4.2.3 Grassland**

Social and sports facilities are essential in building an attractive industrial city for local and foreign workers. In line with this, the local government and tourism industry players have committed to prioritizing providing golf sports facilities. The availability of several golf courses in the city demonstrates this commitment. According to Tripadvisor, currently, the city of Batam has provided ten golf courses, including the Sukajadi Golf Course, Palm Springs Golf and Resort, Tamarin Santa Golf Club, Batam Hills Golf Resorts, Indah Puri Golf Resorts, and others.

The local tourism authority exploits these golf courses to produce promotional materials for this city's tourist destinations (see Figure 3). However, of all the promotional materials, especially with the theme of "sports tourism", a sign gets the main spotlight: the following green grasslands and lush trees. Even though the promotional materials are themed around golf courses, interestingly, these two signs are the ones that get the most significant portion of the spotlight in the picture. In content analysis, messages can be analyzed to

identify their meaning by paying attention to several aspects, including the subject and the dominant color in the data [44]. The images clearly from the subject aspect show a field with green, fertile, and lush grass and trees to present a natural coolness and freshness.

Furthermore, green is the dominant color, which is impressive through the visualization of grass and trees. At the same time, in the context of tourism, grass and trees are two attributes commonly used in third-world countries to form the image of nature-based destinations [45]. Thus, referring to the theoretical framework, the signs that carry the green atmosphere in the image indicate anecdote signs. Because these signs reflect part of the concept of a green destination, especially in this context, the city's green destination is represented by a relaxed, fresh, fertile, and lush atmosphere depicted through the grass and trees in the golf course area.

## 5 Discussion

The main findings of this study are in line with previous studies that have presented scientific evidence showing the relationship between social media and the formation of city and tourist destination brands [5–13].

Furthermore, some studies indicated that environmental issues, including sustainability, continuously voiced by various parties are believed to have increased awareness, concern, and sensitivity of tourists and positively influence the attitudes and behavior of tourists. For example, there is a tendency for an attitude of responsibility towards the environment among tourists when visiting and the belief that their decision to visit a green tourist destination will benefit themselves, others, and the environment [46].

In line with those studies, tourists have a positive attitude or tend to stay in green hotels because they believe that choosing a green hotel contributes to saving the environment and maintaining its sustainability [47]. Then, in the green hotel consumption context, there is a significant relationship between an individual's belief that he or she can help save the environment and his or her intention to choose a hotel that engages in and encourages green behavior [48].

Especially in the context of nature-based destinations, various luxury attributes offered by hotel management tend to be ignored by tourists or are not a top priority, as environmental awareness formed within the tourists' minds has led them to consume green hotels [49].

Regardless of the relationship between the beliefs, attitudes, and behavior of tourists in the context of consuming green destinations, image is an element that functions as a driver for tourists to engage in pro-environmental behavior [29,30,49].

Specifically, a destination portrayed as a nature-based destination significantly influences tourists' attitudes and behavior, especially in deciding to consume green destinations [49]. Batam is one of the preferred destinations in the Riau Islands province. As mentioned in the previous chapter, this destination is projected as one of the green destinations. In line with this, various themes that lead to green destinations have been highlighted by the local DMO in enriching promotional materials for tourist destinations in the city.

This study has presented scientific evidence showing these efforts. Several themes have been exploited: marine tourism, agro and ecotourism, community-based tourism, and sport tourism. The following finding of this study also indicates that various visual signs are distributed into these tourism promotion themes. Some prominently visible signs in the data include beaches, plantation areas, grasslands, and mangrove forests.

These signs imply metonymic signs and anecdotal signs produced and distributed to strengthen the brand of Batam City destination as a green destination. In line with this, as described in the previous paragraph, the formation of this green destination brand is a strategy to target tourists who have pro-environmental attitudes and behaviors. Tourists with these

characteristics tend to consume green destinations as a form of concern for the sustainability of the destinations they visit.

### **5.1 Practical Implications**

In addition to providing academic contributions, the results of this study also addressed several important brand development issues.

In general, the results of this study indicate that local tourism authorities should seek other natural attributes to strengthen Batam's brand as a green destination. Indeed, the results of the data analysis of this study show that various natural attributes have been distributed into various highlighted themes, such as beach, plantation, and Grassland. There are still many other natural attributes that have yet to be exploited. However, various natural attributes need to be utilized to strengthen the green destination brand, including island destinations, city parks, coral reefs, zoos, and others.

The study results show that local tourism authorities emphasize nature as a strategy to strengthen the concept of green destinations, but more is needed. It is by considering two things. First, developing green destinations should cover several aspects, including environmental responsibility, nature-based destinations, and community involvement [28].

Second, tourists with a strong pro-environmental attitude tend to look for locations that offer various sustainable practices. Kedua, wisatawan dengan sikap pro-lingkungan yang kuat cenderung mencari lokasi yang menawarkan pelbagai praktik berkelanjutan [30].

Therefore, based on the findings of this study and to strengthen Batam's brand as a green destination, the production of this tourism promotional material should cover some other dimensions of the green destination concept. For example, from the environmental responsibility dimension and to attract tourists with a robust pro-environmental attitude, various themes of turtle conservation activities and cleaning the beach from plastic waste should be exploited prominently. Likewise, the theme of local communities and cultural practices is still uncovered when producing promotional content. In fact, this is important as a strategy to represent community involvement (another theme in developing green destinations).

### **5.2 Limitations and Future Research Directions**

Although the results of this study yield some interesting insights, some limitations should be considered for future research. First, the current study deals with the issue of green destination brand formation by collecting data from only one official Instagram account of the Batam Tourism Authority. The authority shares its destination promotional materials through various digital platforms, including social media such as websites, YouTube, Facebook, and TikTok. Future research should consider the diversity of digital media platforms when determining data sources.

Second, Batam's destination promotional materials are produced in various forms, such as videos, images, and texts. In particular, the materials uploaded on Instagram and Facebook are produced in 3 forms simultaneously (images, text, and videos). The study successfully identified the formation of a green destination brand by analyzing visual content alone. Hence, to produce a deeper understanding of the formation of this green destination brand, future research is advised to collect and analyze the various forms of tourism promotional materials shared through digital media.

Third, besides the government, there are other elements that play a role in developing the destination image, such as Word of Mouth (WOM), User Generated Content (UGC), Traditional Media, and New Media [41]. A holistic approach must be applied in future research to gain a deeper understanding. An approach that pays attention to various elements

in identifying brand formation. Thus, future research can identify the congruence or difference between green destination brands created by various elements.

## 6 Conclusion

The purpose of this study is to understand the formation of Batam's brand as a green destination by the local tourism authority. The results of this study indicate that the local authority exploits various themes to strengthen the city's green destination brand, such as marine tourism, agro and ecotourism, community-based tourism, and sports tourism.

However, several attributes are visually distributed into these themes, such as beaches, plantations, and grasslands. Those attributes imply metonymic signs and anecdotal signs produced and distributed to strengthen the brand of Batam City destination as a green destination.

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