



“The effect of green hotel practices on green customer citizenship behavior: Exploring the roles of customer trust and identification”

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THE EFFECT OF GREEN HOTEL PRACTICES ON GREEN CUSTOMER CITIZENSHIP BEHAVIOR: EXPLORING THE ROLES OF CUSTOMER TRUST AND IDENTIFICATION

Abstract

The hospitality industry has shown a growing commitment to adopting strategic green practices that aim to reduce environmental footprints while fostering brand loyalty. This paper uses the Stimulus-Organism-Response (SOR) model for explaining the roles of customer trust and identification in the relationship between green hotel practices and green customer citizenship behavior. Survey data were collected from 247 domestic customers at ASEAN green-certified hotels in Northern Vietnam. The partial least squares-structural equation modelling (PLS-SEM) technique was utilized to assess the study framework and the hypothesized relationship. The findings indicate that positive perceptions of green practices significantly and directly affect customer green citizenship behavior ($\beta = 0.374$). Besides, green hotel practices also influence customer trust ($\beta = 0.694$) and identification with green hotels ($\beta = 0.725$). The results revealed the effects of customer trust ($\beta = 0.154$) and identification with green hotels ($\beta = 0.405$) on customer green citizenship behavior. Moreover, customer trust and identification with green hotels play a vital role as intermediaries in explaining how sustainable practices influence green customer citizenship behavior. The findings provide further theoretical clarity of customers' sustainable behavior in the hospitality industry. The practical implications were recommended for developing strategies to foster green citizenship behavior among green hotel customers.

Keywords

green hotel practices, green hotels, green trust, green customer citizenship behavior

JEL Classification

M31, Z32, Z33

INTRODUCTION

In recent years, growing concerns about the environment and climate change have prompted various business sectors to adopt sustainability-oriented initiatives. Enterprises in the hospitality industry, which significantly contribute to carbon emissions and rely on extensive natural resources, have faced increasing scrutiny from both regulatory bodies and consumers (Chua et al., 2024). Consequently, the global hospitality industry has proposed a range of initiatives promoting sustainability according to the concept of green hotel (Wang, 2022). In response, many accommodation establishments have begun to integrate green initiatives, including energy efficiency, water saving, and waste reduction into their operations as part of their broader commitment to environmental sustainability (Sun et al., 2022). Accommodation establishments, which are major consumers of energy and environmental resources, are actively implementing green initiatives (Berbeka et al., 2024). Hotels are increasingly interested in implementing green practices to enhance their brand image, gain competitive advantages,



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and operational efficiency (Quan et al., 2023; Stylos & Vassiliadis, 2015; Kularatne et al., 2019). Hotels across the globe are participating in voluntary certification programs for green initiatives, particularly in countries where these programs offer clear criteria for evaluating and certifying eco-friendly hotels. These efforts not only showcase corporate social responsibility but have also attracted the attention of many customers who advocate for green hotels, thereby influencing demand for sustainable hospitality options (Yadav et al., 2019).

Green hotels focus on environmentally friendly practices and take measures throughout their supply chains to reduce their environmental impact (Astawa et al., 2021). Environmental sustainability initiatives in the hospitality sector include energy and water management, waste treatment, and carrying out environmentally friendly activities (Khatter et al., 2019). For sustainable tourism development to be effective, it needs a holistic approach, where customer behavior is a key element of the green movement in lodging (Trang et al., 2019). Examples of green customer citizenship behaviors comprise recycling, the selection of eco-friendly products, and favoring hotels that practice responsible environmental management (Abdou et al., 2022; Waris et al., 2024). Green hotels can encourage customer citizenship behavior by attracting environmentally conscious guests and fostering word-of-mouth promotion for their sustainable practices, ultimately enhancing their green reputation (Deng & Yang, 2022; Waris et al., 2022).

The research on eco-friendly hotel initiatives and their influences on customer behaviors is of great value in supporting hotel managers to take advantage of their green strategic decisions in order that sustainability and competitive advantage can be guaranteed (Dang-Van et al., 2023). It is essential to analyze the impacts of initiatives in green hotels on customer citizenship behavior, as the reputational integrity concerning sustainability has become an intangible asset for firms seeking to differentiate their market positioning (Wang & Juo, 2024). The effectiveness of hotels' green practices depends not only on their implementation but also on customer reactions to these efforts. This aspect underscores the importance of customer-green hotels identification, which measures the degree to which guests associate a lodging facility with environmentally conscious practices (Balaji et al., 2019). Furthermore, customer trust, which is viewed as a consumer's willingness to trust a brand based on that brand's integrity and competence, is also likely to be influenced by perceived green practices. Given the skepticism surrounding green hotels (Balaji et al., 2019), the research on customer trust is really important. For these reasons, green hotel identity and customer trust is likely to contribute meaningfully to understanding the process of converting green hotel initiatives into green customer citizenship behavior.

The scholars have extensively examined the relationship between green practices and behaviors among customers in the hospitality industry. Nevertheless, there has been limited research exploring the influence of these activities on green customer citizenship behavior. In developing markets like Vietnam, the research on green practices, customer trust, green hotel identification, and green customer citizenship behavior has not been fully explored. How perceptions of green practices influence green customer citizenship behavior remains a research gap that needs to be clarified.

1. LITERATURE REVIEW

This research draws on the theoretical foundation of the "Stimulus-Organism-Response" model (Mehrabian & Russell, 1974). This model has been widely discussed in research for over a decade, serving as an intuitive yet powerful framework for understanding human behavior (Kim et al., 2021). According to this model, specific environmental cues (stimulus) have a direct impact on an indi-

vidual's cognition and affective states (organism), which in turn cause that individual's behavior (responses) (Kim & Lennon, 2013). The model has been applied effectively to explain customer behaviors in the hospitality sector (Souki et al., 2024; Tan, 2023). In this study, customer perceptions of green hotel practices serve as environmental stimuli that elicit internal responses characterized by trust and identification with green hotels. These ultimate responses trigger external behavioral ac-

tions, leading to green customer citizenship behavior as an outcome stemming from these internal psychological states.

Green hotels, or eco-friendly hotels, have been receiving increased attention from hotel managers (Verma & Chandra, 2016). For accommodation providers, the adoption of green practices has brought various benefits, including improved operational efficiency, enhanced financial returns, and a competitive edge (Jones et al., 2014; Barakagira & Paapa, 2024; González-Viralta et al., 2023). Green practices are seen as a value-added business strategy that benefits hospitality operations that engage in environmental protection initiatives (Kim et al., 2017). The core purpose of these initiatives is to reduce ecological pollution through various solutions (Myung et al., 2012). Green hotels focus on the beautiful natural environment and adopt environmentally friendly practices, particularly regarding materials, water, and energy utilization, with a view to minimizing their pollution footprint (Sadiq et al., 2022). From these understandings, the researchers see that the definition of green practices is very diverse and involves many different approaches (Abdou et al., 2020). However, green hotels all work towards a less harmful environment, have committed to implementing many ecologically sound activities, including water saving, energy conservation, and waste reduction and management (Manaktola & Jauhari, 2007; Berezan et al., 2013).

Customer citizenship behavior is derived from the concept of organizational citizenship behavior (Yi et al., 2013). It can be defined as voluntary actions taken by customers that help foster a positive relationship with a company. While customers' participation refers to the expected actions expected from customers, citizenship behavior goes beyond such expected behaviors (Choi & Lotz, 2016). The service industry is believed to benefit from viewing customers as members of the organization (Mohammad Shafiee & Tabaeian, 2021), and service providers often consider customers as their part-time employees (Groth, 2005). Customer citizenship behavior creates value for the organization (Kim & Choi, 2016), and these behaviors are characterized as voluntary, helpful, positive, and constructive, benefiting both the firm and other custom-

ers (Bove et al., 2009). By applying the concept of customer citizenship behavior in a green context, Deng and Yang (2022) defined green customer citizenship behavior as voluntary and discretionary activities that are not required of customers but contribute to supporting the company's environmental initiatives. Kalyar et al. (2021) highlighted the critical role of customers' voluntary pro-environmental behaviors in the tourism sector, as it is closely connected to environmental sustainability. Encouraging green customer citizenship behavior can bring multiple benefits to companies (Waris et al., 2024).

Green trust is the willingness to rely on a product/service or brand based on beliefs or expectations derived from its reputation, benevolence and ability to achieve environmental performance (Chen, 2010). Trust towards green hotels is defined as the willingness of potential customers to rely on green hotels based on the beliefs and expectations derived from the hotel's reputation, benevolence and ability to achieve environmental performance (Jamal, 2021). In the hospitality industry, trust is considered a prerequisite for building up a relationship between customers and companies (Balaji et al., 2019). From a green marketing perspective, the overall green image has a positive impact on customers' trust towards green hotels and contributes to enhancing customer loyalty (Martínez, 2015).

Building a strong relationship between customers and companies is necessary for successful relationship marketing strategies (Berry, 1995). Bhattacharya and Sen (2003) first proposed customer-company identification to understand the relationship between customers and companies. The process by which consumers identify themselves with a company is termed consumer-company identification (Bhattacharya & Sen, 2003). Glaveli (2021) indicated the role of customers' strong sense of connection and closeness to a particular company. In the relationship between eco-friendly hotels and customers, identification is the process by which each customer identifies with the hotel that has environmentally friendly characteristics. By empathizing with green hotels, customers perceive their roles as responsible and environmentally conscious citizens (Balaji et al., 2019).

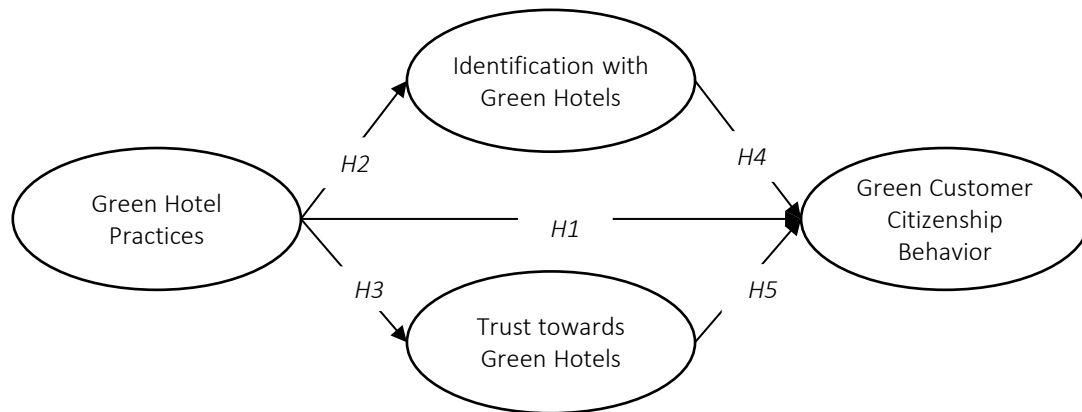


Figure 1. The proposed model

In addition to considering profit and stakeholder interests, green hotels promote environmentally conscious practices that align with customer expectations for eco-responsibility. Nowadays, customers increasingly value green practices and are attentive to the details surrounding accommodation providers' environmental certifications (Velaoras et al., 2025). Environmental corporate social responsibility has been demonstrated to positively influence customer citizenship behavior (Fatma et al., 2022). The researchers have confirmed that green practices positively influence customer citizenship behavior in different research contexts (Abdou et al., 2022; Waris et al., 2024; Yousaf et al., 2021). Besides, the green attributes of an organization affect green trust (Deng & Yang, 2022). Environmentally friendly hotel initiatives positively affect customer-company identification as shown in the study by Martínez and Del Bosque (2013). When studying green hotel acceptance, Balaji et al. (2019) pointed out that perceptions of green hotel attributes simultaneously affect trust and identification with eco-friendly hotels.

Citizenship behavior denotes the actions taken by a community towards their company (Yi et al., 2013). It was found that customer identification is positively related to customer citizenship behavior, particularly within the tourism industry (Waris et al., 2024). Customer identification with green hotels promotes customer citizenship behavior by establishing psychological relationships (Shanti & Joshi, 2022). The relationship between customer-company identification and citizenship behavior has been emphasized in recent studies (Hur et al., 2020; Fatma et al., 2022). Furthermore, trust reflects customers' reliable impressions of a brand,

which can strengthen the relationship between customers and the company (Ruparelia et al., 2010). In the hospitality context, when consumers possess green trust, they are expected to exhibit positive behavior towards the green practices implemented by the hotel. Deng and Yang (2022) found the effect of green trust on citizenship behavior among restaurant consumers.

This study seeks to investigate how green practices influence green customer citizenship behavior. In this research, the authors determined the significance of green hotel customer identification, trust in green hotels and examined their part in the relationship between green hotel practices and citizen behavior among customers (see Figure 1). Accordingly, the following hypotheses are proposed:

- H1: Green hotel practices have a positive and direct effect on Green Customer Citizenship Behavior.*
- H2: Green hotel practices have a positive and direct effect on Identification with Green Hotels.*
- H3: Green hotel practices have a positive and direct effect on Trust towards Green Hotels.*
- H4: Identification with green hotels has a positive and direct effect on Green Customer Citizenship Behavior.*
- H5: Trust towards green hotels has a positive direct effect on Green Customer Citizenship Behavior.*

2. METHODOLOGY

This study was conducted at ASEAN-certified green hotels in Northern Vietnam, where there are a total of eleven hotels. From this list, the authors contacted and obtained approval to conduct the survey at five hotels. These green hotels are diverse in terms of size, representing many different types, from urban hotels, coastal resorts to mountain resorts. Besides, the green hotel certification periods were scattered over the past ten years. This is suitable for the research objective of green practice perception and diversity in customer behaviors. The data of this research were collected using a structured questionnaire that was distributed directly and through a convenience sampling method. The final sample consisted of 247 respondents.

Of these respondents, 146 customers were female 59.1%, while the percentage of male respondents was 40.9%. With respect to marital status, 92 customers were married (37.2%), 141 were single (57.1%), and 14 respondents selected other options (5.7%). Regarding age distribution, 83 respondents (33.6%) were under 30 years old, 115 respondents (46.6%) were between 30 and 45 years old, and 49 respondents (19.8%) were aged 46 and above. In relation to education level, the majority held a university degree, representing 164 respondents (66.4%). As for monthly income, 41 respondents (16.6%) reported earning less than VND 10 million, 138 respondents (55.9%) earned between VND 10 and 20 million, and 68 respondents (27.5%) earned over VND 20 million.

The authors utilized scales that were adapted from previous studies. The construct of green hotel practices was measured based on the scale proposed by Merli et al. (2019). Eight original items were modified from this scale, and two additional items were added to better reflect the context of our study, in which hotels certified under the ASEAN Green Hotel Standard are focused. The added items address noise control and air quality management, specifically: “The hotel controls noise from its operations” and “The hotel identifies smoking and non-smoking areas”. To measure trust towards green hotels, this study adapted a scale from Chen (2010), which includes four observed items. The scale for identification with green hotels was based on an instrument proposed by Yang et al. (2017) and revised by Balaji et al. (2019) for fitting the green hotel context. Lastly,

green customer citizenship behavior was adapted from the study by Deng and Yang (2022).

Primary data were analyzed via SmartPLS 4.0 to ensure construct reliability and validity, model fit and testing hypothesized relationships as well. PLS-SEM approach was adopted in this study.

3. RESULTS AND DISCUSSION

All 23 items have values of the factor loadings (FL) greater than 0.7 and the average variance extracted (AVE) is greater than 0.5 (with the values from 0.629 to 0.834). Regarding the reliability of the constructs, Cronbach’s alpha (CA) values are higher than 0.7 (from 0.885 to 0.934). Composite reliability (rho_a) exceeded 0.7 for all constructs (from 0.892 to 0.937). This result verified the convergence of four constructs (Hair et al., 2017).

Table 1. Results of measurement model assessment

Constructs	Items	FL	VIF	CA	rho_a	AVE
Green Customer Citizenship Behavior (CCB)	CCB1	0.750	1.655	0.934	0.937	0.629
	CCB2	0.833	2.942			
	CCB3	0.870	3.613			
	CCB4	0.767	1.808			
	CCB5	0.816	2.305			
	CCB6	0.882	3.296			
Green Hotel Practices (GHP)	GHP1	0.771	2.402	0.902	0.903	0.674
	GHP2	0.832	3.310			
	GHP3	0.772	2.658			
	GHP4	0.837	3.571			
	GHP5	0.769	2.366			
	GHP6	0.777	3.154			
	GHP7	0.787	3.103			
	GHP8	0.781	2.665			
	GHP9	0.766	2.392			
	GHP10	0.836	3.156			
Identification with Green Hotels (IDENT)	IDENT1	0.881	2.794	0.885	0.892	0.745
	IDENT2	0.906	3.234			
	IDENT3	0.850	2.011			
	IDENT4	0.811	1.968			
Trust towards Green Hotels (TRUST)	TRUST1	0.905	2.653	0.901	0.901	0.834
	TRUST2	0.922	2.988			
	TRUST3	0.913	2.862			

The authors used the Fornell-Larcker test and the HTMT criterion results to check discriminant validity. The square root of the AVE (from 0.793 to 0.913) is greater than the corresponding correlation values (Fornell & Larcker, 1981) (Table 2). Moreover, from Table 3, all constructs own the

HTMT values which are below the threshold value of 0.9 (Hair et al., 2016), so the discriminant validity of measurement scales is acceptable.

Table 2. Results of the Fornell-Larcker test

Construct	1	2	3	4
1. Green Hotel Practices	0.793	–	–	–
2. Green Customer Citizenship Behavior	0.775	0.821	–	–
3. Identification with Green Hotels	0.725	0.781	0.863	–
4. Trust towards Green Hotels	0.694	0.687	0.676	0.913

Table 3. Results of the HTMT criterion

Construct	1	2	3	4
1. Green Hotel Practices	–	–	–	–
2. Green Customer Citizenship Behavior	0.835	–	–	–
3. Identification with Green Hotels	0.782	0.869	–	–
4. Trust towards Green Hotels	0.752	0.757	0.756	–

The coefficient of determination (R^2) value of CCB was 0.712 so it is clear that GHP, IDENT, and TRUST explained 71.2% of the variance of CCB. At the same time, the R^2 values of IDENT and TRUST were 0.526 and 0.481 (Table 4). This result proves that the coefficient determination confirmed values which were above 0.3 (Hair & Alamer, 2022). The coefficients of cross-validated redundancy (Q^2) of the variables IDENT, TRUST and CCB are 0.523, 0.477 and 0.596, respectively. The effectiveness of the predictability is assessed as high.

Table 4. Results of measuring the model fit and consistency

Construct	Q-square	R-square
Identification with Green Hotels	0.523	0.526
Trust towards Green Hotels	0.477	0.481
Green Customer Citizenship Behavior	0.596	0.712

Table 5. Results of testing direct effects

Hypotheses	Estimate	t-statistics	p-value	f ²	Decision
H1: GHP → CCB	0.374	5.811	0.000	0.194	Supported
H2: GHP → IDENT	0.725	20.087	0.000	1.109	Supported
H3: GHP → TRUST	0.694	15.044	0.000	0.928	Supported
H4: IDENT → CCB	0.405	6.778	0.000	0.238	Supported
H5: TRUST → CCB	0.154	2.584	0.010	0.037	Supported

Table 6. Results of testing mediating effects

Paths	Original sample	Sample mean	Standard deviation	t-statistics	p-value
GHP → IDENT → CCB	0.294	0.294	0.045	6.472	0.000
GHP → TRUST → CCB	0.107	0.105	0.041	2.627	0.009

Path coefficients in the proposed model were evaluated at the significance level of 0.05 via a bootstrap analysis with 5,000 samples. It can be shown from the analysis results that all five hypotheses are supported (Table 5). As expected, *H1* is accepted, indicating the effects of GHP on CCB ($\beta_1 = 0.373$; p-value = 0.000; $f^2 = 0.194$). This result is the same as the study of Abdou et al. (2022) in the context of green hotels in Egypt. Both *H2* and *H3* are equally assisted, highlighting the influence of GHP on IDENT ($\beta_2 = 0.725$; p-value = 0.000; $f^2 = 1.109$) and TRUST ($\beta_3 = 0.694$; p-value = 0.000; $f^2 = 0.928$). Hypotheses *H4* and *H5* indicate that IDENT ($\beta_4 = 0.405$; p-value = 0.000; $f^2 = 0.238$) and TRUST ($\beta_5 = 0.154$; p-value = 0.010; $f^2 = 0.037$) have the significant effects on CCB. Besides exploring direct relationships in the research model, this study also clarified the indirect effects. Table 6 shows that IDENT and TRUST were found as partial mediators in the impact of GHP on CCB.

The research findings highlight the crucial role and effectiveness of green practices in the hotel industry. As expected, green hotel practices have a positive and direct influence on green customer citizenship behavior. The analysis further reveals that the implementation of green hotel practices positively affects trust towards green hotels, which is consistent with previous studies (Balaji et al., 2019; Wiastuti et al., 2022). Moreover, the study confirms the significant impact of green practices on identification with green hotels, reinforcing the findings of Vu et al. (2022) and Balaji et al. (2019). Overall, these results strengthen the argument regarding the vital role of green hotel practices in enhancing the green image in customers' minds (Waris et al., 2024).

This finding demonstrates that green trust and identification with green hotels are two important elements determining customers' green citizenship behavior, highlighting that having a relationship with and trusting a green brand will create positive green citizenship behavior of customers. Evidence of the impact of trust with green hotels on customers' green citizenship behavior has also been shown in the study of Deng and Yang (2022). When customers trust a green hotel more, they will be more willing to support the hotel. The results also indicate that identification with green hotels has a positive effect on green customer citizenship behavior, supported by the study of Fatma et al. (2019). This implies that customers who feel an emotional attachment to green hotels tend to engage in green citizenship behaviors, such as supporting the hotels' environmental practices or encouraging others to stay at these hotels. Moreover, the findings reveal that identification with green hotels exerts a stronger impact on green customer citizenship

behavior than customers' trust. This finding is attributed to the strong sense of social bonding and community values in Vietnam. The identification with green hotels will allow customers to engage in community-sharing behaviors and support the hotel's environmental protection activities. Identification with green hotels will create stronger sustainable behaviors, while trust can be shaken by negative information.

This study found the mediating roles of green trust and customer identification in the relationship between green hotel practices and green customer citizenship behavior. When hotels demonstrate the effectiveness of their initiatives, customers' trust and identification with green hotels would be enhanced, which leads to positive citizenship behavior. This result is consistent with the study of Waris et al. (2024), which argued that green hotel practices can strengthen customers' green trust and commitment to the business, thereby promoting their green citizenship behavior.

CONCLUSIONS

This study aims to investigate the roles of customer trust and identification in the link between green hotel practices and green customer citizenship behavior. This study empirically verifies the positive influence of eco-friendly hotel initiatives on green citizenship behaviors among customers within the context of Vietnam. The research findings indicate that the more positive a hotel's green practices are perceived by customers, the stronger their customer citizenship behavior. Additionally, both customer trust and green hotel identification have been identified as mediators in this relationship, highlighting the psychological mechanisms through which green practices impact customer behaviors. Understanding this relationship not only contributes theoretically to the sustainable hospitality industry but also brings important practical value to hotel managers in developing strategies to promote green citizenship behavior among customers.

Theoretically, the study advances the SOR model by explaining green customer citizenship behavior. By incorporating trust and identification as endogenous affective-cognitive responses, this study provides a framework to understand consumer responses to environmental stimuli in the hospitality setting. The empirical validity of the model, as indicated by R^2 values of 71.2%, demonstrates the contribution of stimuli in explaining green customer citizenship behavior.

From a management perspective, the outcomes highlight the importance of green practices that are aligned, consistent, and credible. These practices, including energy efficiency, waste reduction, waste reduction, can significantly contribute to building customer trust and positive opinions. Hotel managers should enhance their communication strategies to effectively inform guests about their environmental initiatives and third-party certifications. This is vital for establishing a strong green reputation and fostering long-term customer loyalty. Besides, strengthening customers' trust and identification with environmentally friendly hotels is extremely important. It not only directly affects green customer citizenship behavior but also contributes to enhancing the impact of green practices on their behavior.

This study still has several constraints besides its contributions. The data collected were solely from domestic sources, and the sample size was relatively small. Future research could focus on more diverse samples, including international customers of green hotels. The research on green customer citizenship behavior should additionally explore the impact of other variables such as green marketing strategy and green hotels' environmental performance. These issues need to be clarified in future studies on the topic of customer citizenship behavior in the hospitality industry.

AUTHOR CONTRIBUTIONS

Conceptualization: Van Hao Hoang, Dinh Dung Vu.

Data curation: Van Hao Hoang,

Formal analysis: Van Hao Hoang.

Investigation: Van Hao Hoang, Dinh Dung Vu.

Methodology: Van Hao Hoang, Dinh Dung Vu.

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Supervision: Van Hao Hoang,

Visualization: Dinh Dung Vu.

Writing - original draft: Van Hao Hoang, Dinh Dung Vu.

Writing - review & editing: Van Hao Hoang, Dinh Dung Vu.

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