

"Sustainability in the Cup: Analyzing Green Marketing Practices and Consumer Perceptions among Cafés in Northern Mindanao"

A Master's Thesis Proposal
Presented to the
Graduate Faculty of the Department of Environmental Science
School of Interdisciplinary Studies
Mindanao State University – Iligan Institute of Technology
Iligan City

In Partial Fulfillment
of the Requirements for the Degree of
Master of Science in Environmental Science

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June 21, 2026

INTRODUCTION

Background of the Study

Coffee shops have evolved over time, offering patrons a more sophisticated and comfortable environment that extends beyond the simple consumption of coffee (Oldenburg, 1999). In recent years, many cafés have also incorporated sustainability initiatives into their operations, contributing to environmental conservation while enhancing customer experience (Ottman, 2017). For instance, some coffee shops use biodegradable cups, reusable containers, and waste reduction programs as part of their environmental commitments (Peattie & Crane, 2005). These practices encourage customers to become more aware of their environmental impact and support more sustainable consumption behaviors (Joshi & Rahman, 2015). Furthermore, cafés increasingly function as spaces that promote environmental awareness and responsible consumer choices through visible sustainability initiatives and educational campaigns (Chen & Chang, 2013).

The green coffee market in the Philippines is estimated to be worth USD 1.3 billion based on a five-year historical review. The major drivers of this growth are the expanding café culture in urban areas, the rise of e-commerce platforms for coffee sales, increasing consumer awareness of health benefits, and growing demand for specialty coffee (Rebecca, 2026). The market is highly valued because of significant growth in domestic consumption and export potential, reflecting the increasing importance of sustainability and premium coffee products in the Philippine coffee industry (Rebecca, 2026).

As environmental challenges such as climate change, waste generation, and resource depletion continue to intensify, sustainability has become a strategic priority for businesses across industries (United Nations, 2023). This growing concern places pressure on companies to adopt responsible practices that minimize environmental impacts while maintaining operational efficiency and profitability (Peattie & Crane, 2005). Coffee shops are recognized as important social spaces where people meet, relax, and interact, making them influential venues for

promoting sustainable consumption behaviors (Oldenburg, 1999). Coffee shops that successfully embrace environmentally responsible practices and satisfy customer expectations are more likely to attract environmentally conscious consumers and strengthen customer loyalty (Ottman, 2017). Consumers are increasingly concerned about environmental issues and prefer products and services that demonstrate genuine environmental responsibility (Joshi & Rahman, 2015). As a result, businesses have adopted eco-friendly marketing strategies, particularly green marketing mix practices, to address environmental concerns and respond to changing consumer preferences (Polonsky, 1994; Leonidou et al., 2013). However, the implementation of a comprehensive green marketing mix among coffee shops in Western Misamis Oriental remains limited and underexplored, highlighting the need for further research on sustainable business practices within the local café industry.

The rising popularity of green marketing has resulted in even small and microenterprises claiming to be eco-friendly to attract environmentally conscious customers (Peattie & Crane, 2005). Coffee shops are critical for local economic development and job creation in developing countries such as the Philippines, particularly within the growing service and hospitality sectors (United Nations Development Program [UNDP], 2022). Many of these businesses are beginning to incorporate environmental messages into their marketing strategies to appeal to consumers who value sustainability (Ottman, 2017). Some microenterprises may engage in greenwashing either inadvertently or intentionally due to a lack of regulatory oversight, competitive pressures, knowledge gaps, and limited resources (Delmas & Burbano, 2011). These practices may influence how consumers interpret environmental claims and affect their purchasing decisions by creating confusion and skepticism regarding environmental information (Chen & Chang, 2013).

In Northern Mindanao, where microenterprises operate in sectors such as retail, food production, handicrafts, and ecotourism, environmental marketing is becoming increasingly visible as sustainability gains importance among consumers and businesses. Despite the growing emphasis on sustainability, limited research has examined how greenwashing manifests among microenterprises and how consumers perceive these claims within the regional context. This research gap highlights the need to investigate the alignment between environmental marketing claims and actual sustainability practices to encourage transparency, strengthen credibility, and

build consumer trust among microenterprise owners (Lyon & Montgomery, 2015; Delmas & Burbano, 2011).

Statement of the Problem

Green marketing has become a key strategy for businesses aiming to meet increasing consumer demand for environmentally responsible products and services. The coffee shop industry has increasingly used claims related to sustainability to signal commitments to environmentally friendly sourcing, waste reduction, energy conservation, and other environmental initiatives. These marketing activities affect consumer perceptions, purchase decisions, and overall satisfaction. However, the effectiveness and credibility of such claims depend on how far actual operational practices support them.

Cafés have become an important part of the expanding food service sector in Northern Mindanao, a trend that mirrors changing consumer preferences and growing awareness of environmental issues. Many cafés market sustainability in their brand, advertising, product, and customer activity. However, how these environmental claims match up with actual sustainability practices is largely unexplored. Past research has looked at things that influence how likely small businesses are to adopt sustainability, such as their financial capacity, how committed their managers are, and how aware consumers are. However, there is little research on the consistency between environmental marketing messages and operational implementation in the café industry.

As consumer interest in sustainability grows, it becomes increasingly important to understand how the environmental claims marketed relate to actual business practices. Such consistency between communication and implementation can reinforce consumer trust and help them make informed purchasing decisions, while inconsistencies may influence perceptions of credibility and authenticity. While sustainability marketing is becoming more prevalent among cafes in Northern Mindanao, there is a lack of empirical evidence on how environmental claims are communicated, how sustainability practices are implemented, and how consumers perceive the connection between the two.

Hence, this study aims to determine the sustainable green marketing practices of cafés in Northern Mindanao by assessing the environmental marketing claims, operational sustainability practices, and consumer perceptions. More specifically, it aims to assess the level of consistency between the environmental claims made by the cafés and their actual sustainability practices, identify factors influencing the adoption of green marketing initiatives, and determine how consumers evaluate the authenticity and credibility of the cafés' environmental commitments. The findings of this study are expected to contribute to the development of more transparent, effective, and evidence-based sustainability marketing strategies within the café industry.

As a result, the goal of this study is to describe eco-friendly practices and consumer perceptions, as well as the implications for competitiveness among coffee shops in Western Misamis Oriental. The results of this research will form the basis of an action plan to improve sustainable practices while maintaining authenticity and market advantage. This study combines field surveys with active community engagement among consumers and microenterprises to generate management recommendations for business activities that are both scientifically sound and widely accepted by consumers.

Objectives of the Study

The main objective of this study is to explore the sustainable green practices of coffee businesses in Northern Mindanao. With that, the study specifically aims to:

1. to identify the sustainable green practices adopted by coffee businesses in Northern Mindanao in terms of green marketing, product sourcing, and waste disposal;
2. determine key factors influencing adoption of sustainability initiatives employed by coffee businesses;
3. to analyze the level of awareness of sustainable green practices and eco-friendly product offerings among coffee businesses as perceived by customers;
4. evaluate the Degree of Claim-Practice Alignment in Sustainable Green Marketing; and

5. provide findings for an evidence-based approach that maps the perceived sustainability alignment among microenterprises to aid in developing a framework for the sustainable green practices of coffee businesses in Northern Mindanao.

Significance of the Study

Sustainability has become an essential issue for businesses in recent years, as environmental problems like climate change, waste production, and resource depletion are growing more severe. These challenges have added pressure on organizations across industries to adopt responsible practices that reduce environmental impacts while maintaining operational efficiency and profitability. This research supports the global call for sustainable urban development under the United Nations Sustainable Development Goal 11, as it fosters a greener and more resilient urban future and envisages inclusive, safe, resilient, and environmentally responsible cities (United Nations, 2023). Stakeholders, including consumers, governments, and investors, now expect businesses to show environmental responsibility in their core operations.

Finally, this study is in line with the global demand for sustainable urban development set forth in United Nations Sustainable Development Goal 11, a call for inclusive, safe, resilient, and environmentally responsible cities. This study explores how coffee businesses in Northern Mindanao integrate green management into their business practices, such as waste reduction, resource conservation, and local environmental contributions, to offer grounded insights into how small businesses can support more sustainable cities and communities. This adds to local evidence to guide municipal policies, business support programs, and community engagement efforts toward a greener, more resilient urban future.

Scope and Limitation

This study looks at sustainable green practices in coffee businesses, focusing on key areas like green marketing, sustainable sourcing, and waste disposal. It seeks to gain a better understanding of the adoption and perception of these practices in the context of the emerging café culture and dynamic environmental movement of Northern Mindanao. The motivation for this study arises from the expanding coffee industry in the different cities and their strong commitment to sustainability, providing an appropriate setting to investigate how local

businesses respond to environmental challenges. This study aims to examine consumer perceptions, drivers, and greenwashing practices of a subset of coffee shops in Western Misamis Oriental. In particular, it looks at the kinds of green marketing mix used by these companies, what drives or influences them, and how customers view and react to the environmental claims these companies make. Additionally, the study aims to ascertain how consumer perceptions and green practices are related in terms of operation.

The results of this study are limited by the accuracy and veracity of the participants' responses. The research is not for small, medium, or large enterprises but for microenterprises. The research does not actually measure the environmental performance of the businesses through scientific testing or auditing. Furthermore, the results may not be generalized to all industries or geographic locations outside the selected food and beverage microenterprises in Western Misamis Oriental.

Conceptual Framework

The conceptual framework of the study illustrates the relationship among the contextual background, sustainable green marketing practices, drivers of sustainability, consumer perceptions, the evaluation of greenwashing, and the development of evidence-based recommendations for cafés in Northern Mindanao.

The framework starts with the contextual background, including the regulatory and policy environment, market trends and industry dynamics, cultural and social values, environmental challenges, and characteristics of cafés in the region. These elements establish the base for how cafés take on and implement sustainable practices. In such circumstances, cafés engage in green marketing practices that contribute to sustainability, including the use of environmentally friendly products and packaging, responsible sourcing and distribution, waste management and resource conservation, and promoting environmental responsibility through marketing activities.

Various internal and external drivers, including owner values, profitability goals, consumer demand, competitive pressure, government regulations, and the availability of financial resources, knowledge, and technology, influence the adoption of these practices. These

practices and drivers collectively influence consumer perceptions by shaping customers' views regarding the authenticity of environmental claims, the environmental impact of café operations, trust in sustainability initiatives, perceived value, **purchase intentions**, and willingness to support environmentally responsible businesses.

To assess the authenticity of these sustainability initiatives, the framework uses the **Seven Sins of Greenwashing** as an analytical lens to assess practices against indicators of hidden trade-offs, lack of proof, vagueness, false labels, irrelevance, lesser of two evils, and outright false claims. The integration of these components generates comprehensive findings that reveal the relationships among sustainable practices, their underlying drivers, and consumer perceptions while identifying potential greenwashing behaviors.

Ultimately, these findings provide the foundation for developing evidence-based recommendations and a practical framework that can strengthen transparency, accountability, and authentic green marketing strategies, enabling cafés in Northern Mindanao to enhance consumer trust and contribute more effectively to environmental sustainability.

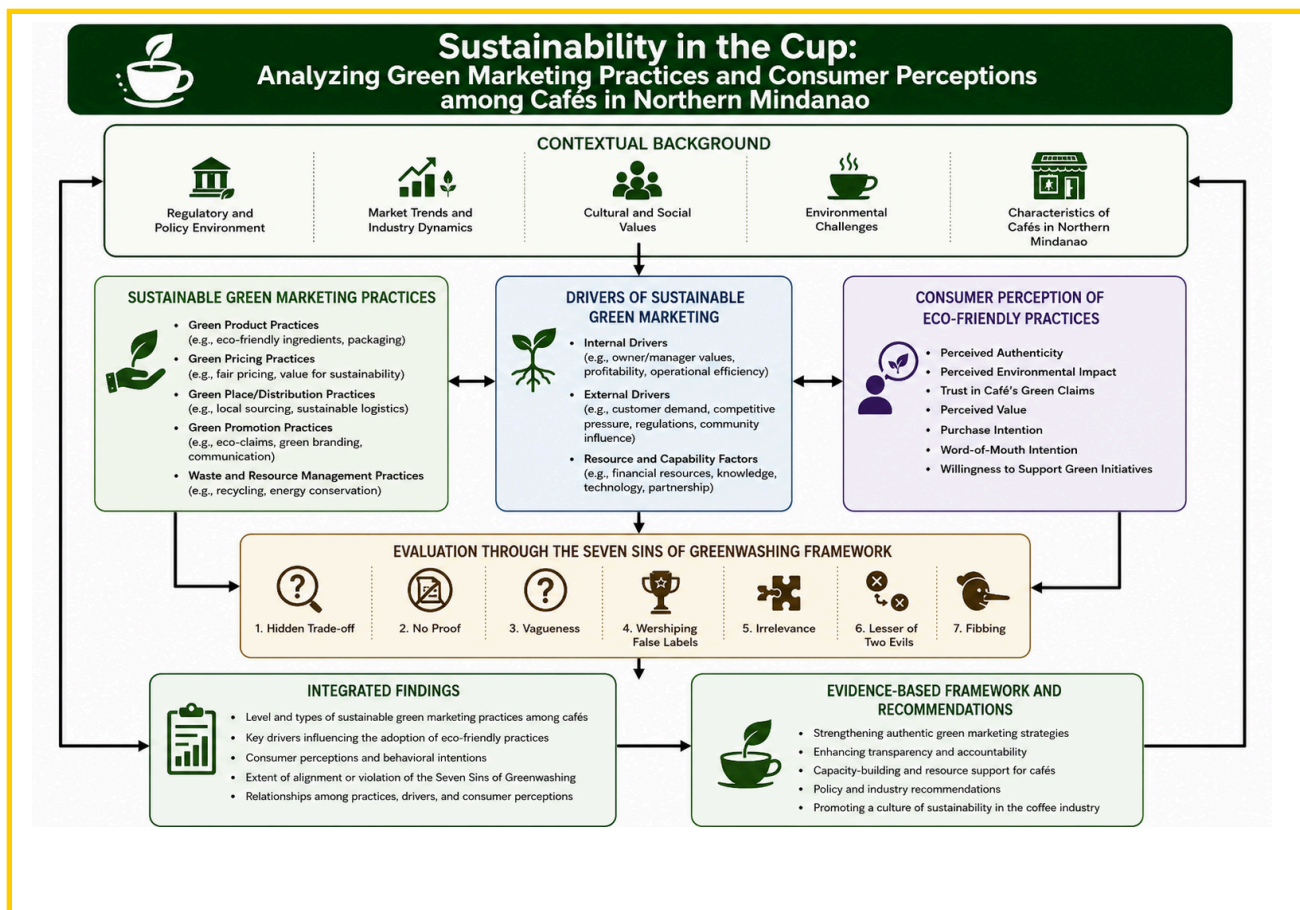


Figure 1. Conceptual Framework of the study showing green marketing practices, drivers, and consumer perception of eco-friendly practices among cafes in Northern Mindanao, which will result in the outcome of policy and planning recommendations to ensure truthful and sustainable environmental claims

REVIEW OF RELATED LITERATURE

The literature reviewed highlights the 8 green marketing mix, factors that Influence Businesses in Green Practices, Consumer Level of Awareness of eco-friendly practices, the Seven Sins of Greenwashing Framework, and theoretical foundation.

Green Marketing

Green marketing refers to the planning, development, pricing, promotion, and distribution of products and services in ways that minimize negative environmental impacts while satisfying consumer needs (Polonsky, 1994). In the coffee industry, green marketing has become an important strategy as cafés increasingly adopt sustainable practices to appeal to environmentally conscious customers and differentiate themselves from competitors (Peattie & Crane, 2005). Many coffee businesses now emphasize responsible sourcing, biodegradable packaging, waste reduction, and energy-efficient operations as part of their branding efforts. These initiatives not only contribute to environmental conservation but also strengthen customer loyalty and corporate reputation (Kotler et al., 2019). However, the growing popularity of sustainability claims has also increased the risk of greenwashing, making it essential to examine whether these environmental commitments are genuine or merely marketing tactics designed to influence consumer perceptions (Delmas & Burbano, 2011).

Green Product

Green products in the coffee industry refer to goods that are produced, sourced, and packaged with minimal environmental impact throughout their life cycle (Ottman, 2017). Cafés demonstrate green product strategies by offering organic coffee beans, ethically sourced ingredients, reusable or compostable cups, and locally produced food items that reduce

transportation emissions (Chen & Chang, 2013). Consumers increasingly prefer products that align with sustainability values because they associate them with better environmental stewardship and social responsibility (Joshi & Rahman, 2015). As a result, investing in environmentally friendly products can improve a café's competitive advantage while promoting responsible consumption (Peattie & Crane, 2005). Nevertheless, businesses must ensure that these claims are supported by credible evidence to maintain consumer trust and avoid accusations of misleading marketing or greenwashing (Delmas & Burbano, 2011).

Green Price

Green pricing refers to pricing strategies that reflect the environmental value of products and services while considering the costs associated with sustainable production (Ottman, 2017). Coffee businesses often charge premium prices for organic coffee, fair trade products, or beverages served in environmentally friendly packaging because these practices involve higher operational expenses (D'Souza et al., 2006). Research suggests that environmentally conscious consumers are generally willing to pay more for products that contribute to sustainability when they perceive genuine environmental benefits (Joshi & Rahman, 2015). However, cafés must balance affordability with profitability to ensure that green pricing remains accessible while accurately communicating the value behind the additional cost (Peattie & Crane, 2005). Transparent pricing communication is also important in building consumer trust and reducing skepticism toward environmental claims (Chen & Chang, 2013).

Green Place

Green Place focuses on distribution and operational practices that reduce environmental impacts throughout the supply chain (Peattie & Charter, 2003). For coffee businesses, this may involve sourcing beans from local or sustainable farms, minimizing transportation distances, selecting energy-efficient store locations, and implementing environmentally responsible logistics (Ottman, 2017). Many cafés also design their physical locations to encourage walking, cycling, or public transportation access while reducing their carbon footprint (Kotler et al.,

2019). By integrating sustainability into distribution and location decisions, coffee businesses can strengthen their environmental image and contribute to broader sustainability goals while improving operational efficiency (Polonsky, 1994). Effective green distribution practices can also enhance consumer perceptions of a firm's commitment to environmental responsibility and sustainable development (Chen & Chang, 2013).

Green Promotion

Green promotion involves communicating environmental initiatives and sustainability commitments through advertising, branding, social media, and public relations activities (Peattie & Crane, 2005). Cafés frequently highlight eco-friendly packaging, ethical sourcing, recycling programs, and carbon reduction efforts to attract environmentally conscious consumers (Ottman, 2017). Effective green promotion can increase awareness and encourage responsible purchasing behavior among consumers (Joshi & Rahman, 2015). However, exaggerated or unsupported environmental claims may create skepticism and reduce consumer confidence in sustainability messages (Chen & Chang, 2013). When promotional messages fail to represent actual business practices accurately, consumers may perceive them as greenwashing, ultimately damaging brand credibility and trust (Delmas & Burbano, 2011).

Green People

Green people refer to employees, managers, and stakeholders who actively participate in implementing and promoting sustainable practices within an organization (Peattie & Charter, 2003). In cafés, staff members play a significant role in educating customers about recycling initiatives, encouraging reusable cup programs, minimizing waste, and supporting environmentally responsible operations (Ottman, 2017). Employee commitment to sustainability strengthens the authenticity of green marketing efforts because customers often evaluate environmental responsibility through direct interactions with personnel (Chen & Chang, 2013). Furthermore, environmentally responsible employee behavior can positively influence consumer perceptions and support the successful implementation of sustainability strategies (Leonidou et al., 2013). A workplace culture that prioritizes environmental awareness can therefore enhance

organizational performance and reinforce consumer confidence in sustainability initiatives (Polonsky, 1994).

Green Process

A green process emphasizes environmentally responsible operational procedures that reduce waste, conserve resources, and improve efficiency throughout business activities (Peattie & Charter, 2003). Coffee shops commonly implement green processes through energy-efficient equipment, water conservation measures, composting coffee grounds, recycling materials, and reducing single-use plastics (Ottman, 2017). Sustainable operational practices not only lower environmental impacts but also reduce long-term operating costs and improve resource management (Leonidou et al., 2013). Consumers increasingly value businesses that integrate sustainability into their daily operations because these visible efforts demonstrate a genuine commitment beyond promotional messaging (Joshi & Rahman, 2015). Furthermore, transparent and consistent implementation of green processes can strengthen consumer trust and reduce perceptions of greenwashing (Chen & Chang, 2013).

Green Physical Evidence

Green physical evidence refers to the tangible environmental features that customers observe within a café, including sustainable architecture, eco-friendly furniture, recycling stations, biodegradable packaging, indoor plants, and energy-efficient lighting (Peattie & Charter, 2003). These physical elements reinforce the credibility of sustainability claims by providing visible proof of environmental commitment (Chen & Chang, 2013). A well-designed green environment enhances customer experience and positively influences perceptions of authenticity and corporate responsibility (Kotler et al., 2019). Because consumers often judge businesses based on observable cues, physical evidence serves as an important component of green marketing strategies in the coffee industry (Ottman, 2017). Furthermore, visible sustainability practices can strengthen consumer trust and support favorable attitudes toward environmentally responsible businesses (Joshi & Rahman, 2015).

Factors that Influence Businesses in Green Practices

Several factors influence coffee businesses to adopt sustainable practices, including regulatory requirements, market competition, consumer demand, financial considerations, organizational values, and resource availability (Leonidou et al., 2013). Government policies and environmental regulations encourage compliance with sustainability standards, while increasing competition motivates cafés to differentiate themselves through eco-friendly initiatives (Delmas & Burbano, 2011). Consumer preferences also play a critical role because environmentally conscious customers often support businesses that demonstrate responsible practices (Joshi & Rahman, 2015). Additionally, owner commitment, employee engagement, technological capability, and access to financial resources determine the extent to which sustainability can be successfully implemented (Yadav & Pathak, 2017). These combined factors shape the strategic decisions that influence green marketing adoption among cafés and other service-oriented businesses (Peattie & Crane, 2005).

Consumer Level of Awareness of Eco-Friendly Practices

Consumer awareness of eco-friendly practices significantly affects purchasing decisions and perceptions of coffee businesses (Joshi & Rahman, 2015). Customers who possess greater environmental knowledge are more likely to recognize sustainable initiatives, evaluate the credibility of green claims, and reward businesses that demonstrate authentic environmental responsibility (Chen & Chang, 2013). Conversely, low awareness may increase susceptibility to misleading marketing messages or reduce appreciation for legitimate sustainability efforts (Delmas & Burbano, 2011). In the café industry, visible initiatives such as reusable cup programs, ethical sourcing information, and waste reduction campaigns can improve consumer understanding and strengthen trust (Ottman, 2017). Higher awareness therefore contributes to more informed purchasing behavior and encourages businesses to maintain transparent environmental practices (Yadav & Pathak, 2017).

Seven Sins of Greenwashing Framework

The practice of **deceiving customers** about a company's environmental policies or the advantages of a product or service for the environment is known as greenwashing (Delmas & Burbano, 2011). It happens when businesses convey environmentally friendly messages without taking meaningful environmental action in response (Lyon & Montgomery, 2015). In the end, this strategy deceives stakeholders and customers by causing a discrepancy between what businesses say and what they do (Delmas & Burbano, 2011). The Seven Sins of Greenwashing Framework provides a systematic approach for identifying misleading environmental claims by categorizing deceptive marketing practices into hidden trade-off, no proof, vagueness, worshipping false labels, irrelevance, lesser of two evils, and fibbing (TerraChoice, 2010). Within the coffee industry, cafés may unintentionally or deliberately exaggerate their sustainability efforts by emphasizing one environmentally friendly attribute while concealing broader environmental impacts or by making claims that cannot be verified (Chen & Chang, 2013). Applying this framework allows researchers to evaluate whether green marketing practices genuinely reflect sustainable operations or merely create an illusion of environmental responsibility (TerraChoice, 2010). As consumers become increasingly aware of sustainability issues, the framework offers valuable guidance for promoting transparency and accountability in green marketing (Lyon & Montgomery, 2015).

Theoretical Foundation

The theoretical basis of this research is the Stakeholder Theory, Signaling Theory, and the Theory of Planned Behavior to explain the relationships between sustainable marketing practices, business motivations, and consumer perceptions. According to Stakeholder Theory, organizations are expected to adopt responsible environmental practices that create shared value and address the expectations of customers, employees, suppliers, regulators, and communities (Freeman, 1984). In the context of cafés, sustainability initiatives can be viewed as responses to the demands of various stakeholder groups seeking environmental accountability (Freeman et al.,

2010). On the other hand, Signaling Theory explains how businesses communicate sustainability through certifications, eco-labels, and promotional messages that influence consumer trust and purchasing decisions by reducing information asymmetry (Spence, 1973; Connelly et al., 2011). The Theory of Planned Behavior further suggests that attitudes, subjective norms, and perceived behavioral control shape consumers' intentions to engage in environmentally responsible purchasing behavior (Ajzen, 1991). These theories, in combination, provide a comprehensive framework for understanding how sustainable practices influence organizational behavior and consumer responses within the café industry (Yadav & Pathak, 2017).

Synthesis of Literature

The review of the literature shows that sustainable green marketing has become a necessary approach for coffee businesses to address increasing environmental concerns and changing consumer expectations (Peattie & Crane, 2005; Ottman, 2017). Green products, pricing policies, distribution systems, promotional activities, employee participation, operational processes, and physical evidence all contribute to authentic sustainability initiatives, which can help create competitive advantage and strengthen customer trust (Leonidou et al., 2013). However, previous research also points out that deceptive environmental claims remain a threat to consumer confidence and that the Seven Sins of Greenwashing Framework is particularly useful for assessing the credibility of environmental marketing practices (TerraChoice, 2010; Delmas & Burbano, 2011). Although numerous studies have examined various aspects of green marketing and consumer behavior, there is limited research that holistically addresses the determinants of sustainable practices, the truthfulness of environmental claims, and consumer perceptions within cafés in Northern Mindanao. This gap highlights the need for localized investigations that consider the unique characteristics of the regional coffee industry. Therefore, the present study is justified by the need to generate evidence-based insights that can promote transparency, encourage authentic sustainability efforts, and foster responsible green marketing

practices among cafés in Northern Mindanao (Chen & Chang, 2013; Lyon & Montgomery, 2015).

Greenwashing in Food and Beverage Enterprises

The food and beverage sector is particularly vulnerable to greenwashing because environmental attributes often influence consumer purchasing decisions (Delmas & Burbano, 2011). Claims related to organic ingredients, sustainable sourcing, recyclable packaging, and reduced carbon footprints are frequently used in marketing campaigns to attract environmentally conscious consumers (Ottman, 2017). However, several studies have found inconsistencies between promotional claims and actual environmental practices, creating skepticism among consumers and undermining trust in environmental marketing (Chen & Chang, 2013; Lyon & Montgomery, 2015).

Microenterprises face unique challenges in implementing sustainability initiatives. Limited financial resources, lack of technical expertise, and inadequate access to environmental certifications may encourage reliance on marketing claims rather than substantive environmental improvements (Leonidou et al., 2013). Small businesses often encounter barriers in adopting comprehensive sustainability measures due to operational and financial constraints (Revell, Stokes, & Chen, 2010). Consequently, examining greenwashing practices within food and beverage microenterprises is essential for understanding how sustainability messages influence consumer behavior at the local level and for promoting greater transparency and accountability in environmental communication (Delmas & Burbano, 2011; Chen & Chang, 2013).

METHODOLOGY

Study Area

This study will be conducted in the Western District of Misamis Oriental Province, Northern Mindanao, Philippines. Misamis Oriental is situated in the northeastern part of Mindanao and serves as one of the major economic and commercial provinces in Region X. The province is composed of municipalities and cities with growing numbers of microenterprises (MSMEs), particularly in the food and beverage sector. The study focuses on selected food and beverage microenterprises, specifically coffee shops operating within the western municipalities and cities of the province, where increasing consumer awareness of environmental sustainability has encouraged businesses to adopt environmental marketing strategies.

The Western District of Misamis Oriental consists of the municipalities of Opol, El Salvador City, Alubijid, Laguindingan, Gitagum, Libertad, Initao, Naawan, Manticao, and Lugait. These areas were selected because of the high number of food and beverage microenterprises, such as restaurants, cafes, bakeries, food stalls, and beverage outlets, that are present in these areas. These enterprises provide a suitable setting in which to examine green marketing practices, the factors that drive such practices, and how consumers perceive environmental claims made by businesses.

The study area is of strategic significance because of its increasing economic activities, growing tourism industry, and increasing demand for eco-friendly goods and services. Knowledge of green marketing practices activities in these local businesses will provide useful information for policymakers, business owners, consumers, and regulatory agencies that want to encourage transparency, sustainability, and responsible environmental marketing in the province.

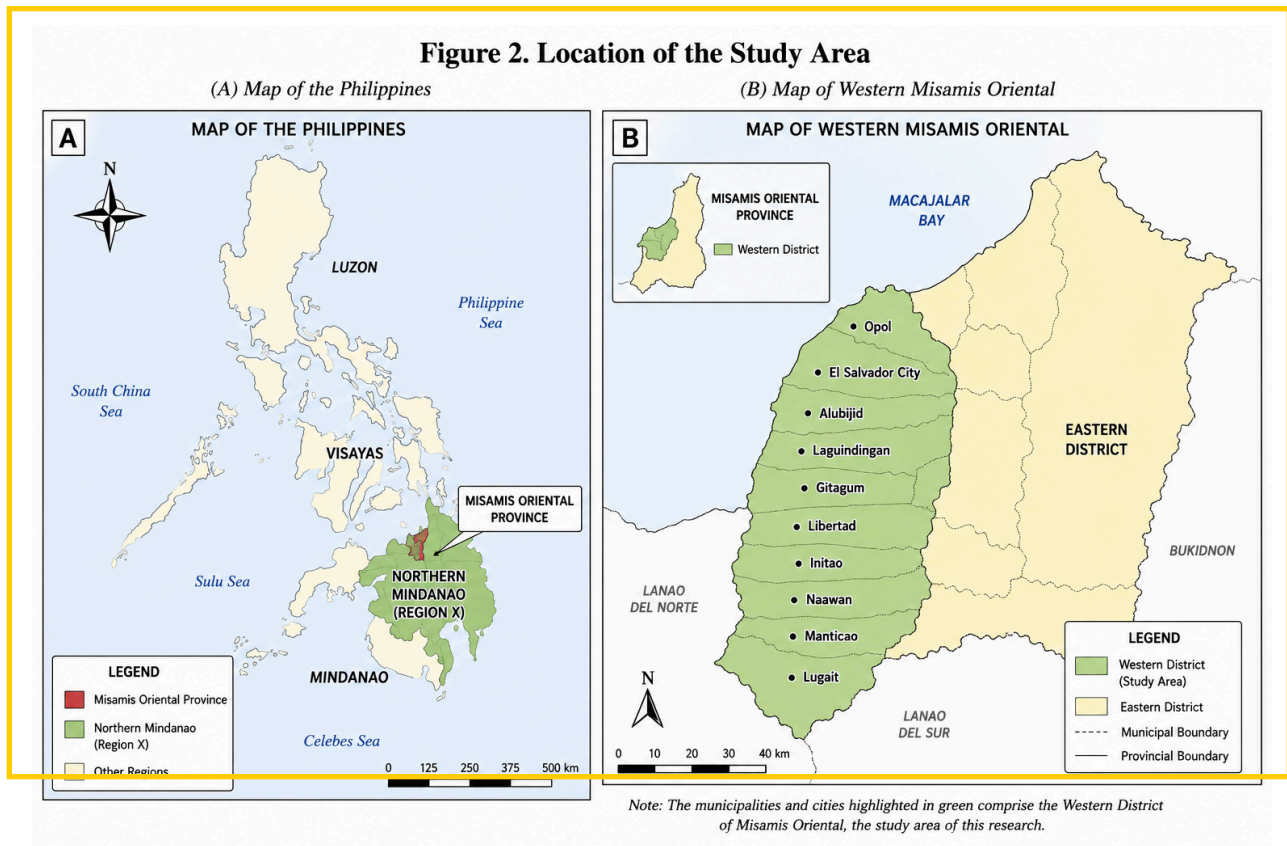


Figure 2. Study area: (A) Map of the Philippines, (B) Map of Western Misamis Oriental

Research Design

This study utilized a mixed-methods research design that combined both quantitative and qualitative approaches. The mixed-methods approach provided a more comprehensive perspective by integrating diverse forms of data, thereby allowing for deeper insights into complex phenomena (Dovetail, 2023; Harvard Catalyst, 2022). Qualitative research offered an in-depth understanding of participants' behaviors, motivations, and decision-making processes, while quantitative research enabled the systematic collection and analysis of numerical data to identify patterns, examine relationships, and quantify key variables (Loyola Marymount University, n.d.; Voxco, 2024).

This study will use a quantitative descriptive-correlational research design to examine sustainable green marketing drivers, practices, and consumer perceptions of eco-friendly

practices in cafés in Northern Mindanao. A descriptive approach is appropriate because it allows researchers to systematically describe and evaluate the current green marketing initiatives and sustainability practices used by cafés. Meanwhile, the correlational component will investigate the links between sustainable green marketing drivers, green marketing practices, and consumer perceptions. The study will use this design to generate empirical evidence on how sustainability-related marketing strategies influence consumer attitudes and perceptions of environmentally responsible cafés. The quantitative approach enables the collection of measurable data that can be statistically analyzed to address research objectives and test the relationships between variables.

Research Locale

The study will be carried out in selected cafés throughout Northern Mindanao, particularly in areas with a growing café culture and rising consumer awareness of environmental sustainability. Northern Mindanao is an ideal location for this research because of the rapid expansion of food and beverage establishments and the growing adoption of environmentally friendly business practices. The region's diverse consumer base allows researchers to investigate how customers perceive café sustainability initiatives. Selected cafés will publicly promote eco-friendly practices such as biodegradable packaging, waste reduction programs, reusable containers, ethical coffee sourcing, energy conservation measures, and other environmentally responsible marketing strategies.

Research Respondents

The respondents to this study will be café customers who have recently visited selected cafés in Northern Mindanao. These respondents are considered credible sources of information because they have direct experience with and observation of café sustainability practices and green marketing efforts. To ensure that participants can provide informed responses, the study will only include customers over the age of 18 who purchased products from the selected cafés during the data collection period. The respondents will provide useful information about their perceptions, awareness, and evaluations of eco-friendly practices and green marketing claims made by cafés.

This study focuses on coffee shops in Western Misamis Oriental, a growing urban center in the Northern Mindanao Region known for its vibrant coffee scene. The study's respondents included 50 coffee shop owners or managers and 50 customers. Only coffee shops that have been open for at least three years are included to ensure that respondents have sufficient experience and knowledge of sustainable business practices.

Sampling Technique

Purposive sampling is used to select participants, with a total of 100 respondents deemed adequate for data saturation. The inclusion criteria are as follows: (1) the coffee shop must be located in Western Misamis Oriental; (2) the coffee shop must have been open for at least three years; (3) the owner, manager, and customers must agree to participate in the study; and (4) the coffee shop must engage in at least one sustainability or environmentally responsible practice. These criteria ensure a thorough and reliable understanding of sustainability implementation at the various operational levels of local coffee businesses.

This study will also use opportunistic sampling, a non-probability sampling method in which respondents are chosen based on their availability and willingness to participate during data collection. Using this method, researchers will visit specific cafés and invite customers who are present during the survey period to participate in the study. Individuals who meet the inclusion criteria and voluntarily agree to participate will be considered as respondents.

Opportunistic sampling is appropriate for this study because it allows researchers to efficiently collect data from café customers who have firsthand knowledge of the establishment's products, services, and sustainability initiatives. This method is especially useful in public commercial settings where customer attendance fluctuates and obtaining a complete sampling frame is impractical. Although opportunistic sampling may limit the generalizability of findings, it does provide practical access to respondents with the relevant knowledge and experiences required to evaluate green marketing practices and consumer perceptions.

Research Instrument

The primary data collection tool will be a structured survey questionnaire developed based on existing literature on green marketing, sustainable business practices, consumer behavior, and environmental marketing. The questionnaire will have **four sections**. The first section will collect demographic data such as age, gender, education level, and frequency of café visits. The second section will look at the sustainable green marketing drivers that affect cafés, such as regulatory compliance, competitive advantage, consumer demand, corporate social responsibility, and environmental commitment. The third section will assess cafés' green marketing practices, focusing on **green products, green pricing**, green locations, and green promotion strategies. The fourth section will assess consumer perceptions of the credibility, effectiveness, and authenticity of environmentally friendly practices promoted by cafés.

A five-point Likert scale will be used to measure respondents' level of agreement with each statement, where 1 represents Strongly Disagree, and 5 represents Strongly Agree. Prior to data collection, the questionnaire will undergo **expert validation and pilot testing** to ensure its validity, reliability, clarity, and relevance to the objectives of the study.

Data Collection Procedure

Prior to data collection, the researchers will obtain the necessary approvals and permissions from café owners or managers at participating establishments. Once permission has been granted, the researchers will **personally visit selected** cafés and approach customers who meet the inclusion criteria. The study's purpose will be explained, and informed consent will be obtained prior to administering the questionnaire.

Respondents will be assured that their participation is entirely voluntary and that all information provided will be kept strictly confidential. Depending on respondent preferences and logistical considerations, survey questionnaires can be administered in either printed or digital format. Prior to data encoding and analysis, completed questionnaires will be checked for completeness.

Statistical Treatment of Data

The data collected shall be organized, coded, tabulated, and analyzed by means of suitable statistical tools. Frequency counts, percentages, means, and standard deviations will be used to describe the demographic profile of the respondents and the extent of sustainable green marketing drivers, practices, and consumer perceptions in cafes in Northern Mindanao.

If the data satisfy the assumptions of normality, the **Pearson product-moment** correlation coefficient will be utilized to determine the relationship between sustainable green marketing drivers, green marketing practices, and consumer perceptions. If the assumptions are not met, then a non-parametric alternative will be used, which is Spearman's Rank Correlation. Further, **multiple regression analysis can be performed** to find out the extent of significant impacts of sustainable green marketing drivers and practices on consumer perceptions. All statistical analyses will be performed at a significance level of 0.05.

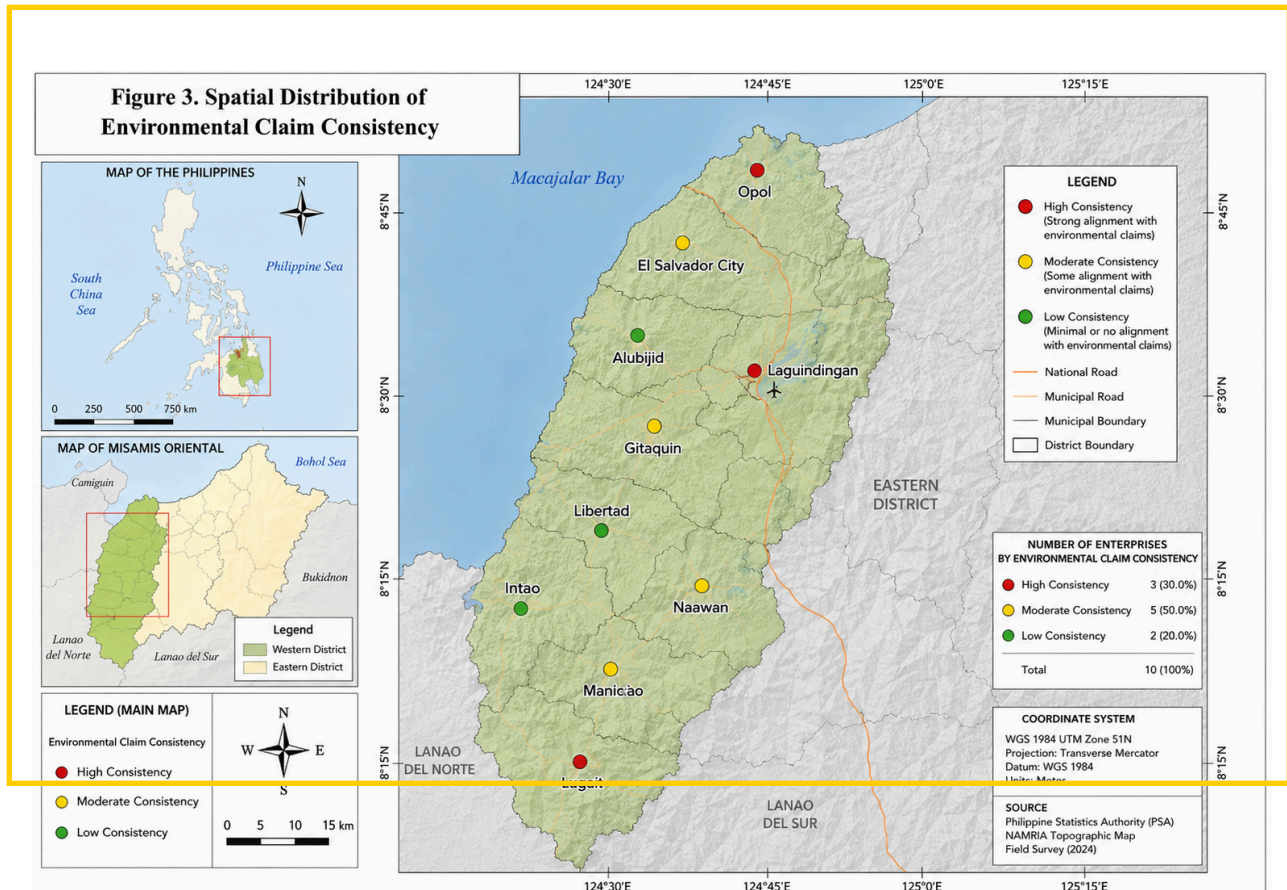
Ethical Considerations

The researcher will adhere to ethical principles during the course of the study. Participation in the study will be voluntary, and respondents will be free to withdraw from the study at any point without penalty. Participants will be asked for informed consent before participation. Respondents will be informed about the study's objectives, procedures, benefits, and any potential risks.

Confidentiality and anonymity will be maintained to the utmost. There will be no sharing of personally identifiable information, and all data collected will be used solely for academic and research purposes. The data will be stored securely, and only the researchers will have access to the data. The study will adhere to applicable data privacy laws and institutional research ethics policies to ensure the protection and welfare of all participants.

"Spatial Distribution of Environmental Claim Consistency"

(Expected Outcome, but the data below is just an example, not the real information)



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APPENDIX 1

(A) Informed Consent Form of Consumer

MINDANAO STATE UNIVERSITY - ILIGAN INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ENVIRONMENTAL SCIENCE
SCHOOL OF INTERDISCIPLINARY STUDIES



I am Michael Lance B. Vergara, a Master of Environmental Science student from Mindanao State University – Iligan Institute of Technology, and I am currently conducting a research study entitled: **"Sustainability in the Cup: Analyzing Green Marketing Practices and Consumer Perceptions among Cafés in Northern Mindanao"**

This study aims to explore the sustainable green practices of coffee businesses in Northern Mindanao, to identify the sustainable green practices adopted by coffee businesses in Northern Mindanao in terms of green marketing, product sourcing, and waste disposal; determine key factors influencing adoption of sustainability initiatives employed by coffee businesses; to analyze the level of awareness of sustainable green practices and eco-friendly product offerings among coffee businesses as perceived by customers; evaluate the Degree of Claim-Practice Alignment in Sustainable Green Marketing; and provide findings for an evidence-based approach that maps the perceived sustainability alignment among microenterprises to aid in developing a framework for the sustainable green practices of coffee businesses in Northern Mindanao.

Your participation in this study is entirely voluntary. If you agree to participate, you will be asked to answer a short questionnaire and/or take part in an interview regarding your experiences, observations, and views about frogs and land-use practices in your area. The activity will take approximately 15–30 minutes of your time.

Please be assured that:

- Your responses will be kept confidential and anonymous.

- Your name and personal information will not appear in any report, publication, or presentation.
- You may choose not to answer any questions you are uncomfortable with.
- You are free to withdraw from the study at any time without any penalty or consequence.

There are no known risks associated with participating in this study, and no monetary compensation will be provided. However, your participation will contribute to scientific knowledge and support efforts to protect biodiversity and manage invasive species in your community.

If you have any questions or concerns regarding the study, you can contact me via the following details :

- Phone number: 09627569937
- Email address: michaellance.vergara@g.msuiit.edu.ph

By signing below, you indicate that you have read and understood the information provided, and that you voluntarily agree to participate in this study.

Thank you very much for your time and cooperation.

Data Privacy Statement

The researcher recognizes her responsibilities under Republic Act No. 10173, also known as the Data Privacy Act of 2012, with respect to the data it collects, records, organizes, updates, uses, consolidates, or destroys from the registered respondents. Rest assured that all the information to be gathered from this study will be strictly for academic purposes only.

RESPONDENT'S CONSENT

With my approval to collect my data from this study, I now affirm that I have read and understood the instructions.

Instructions: Kindly go through the following statements and tick the correct options if you agree:

- () I am completely aware of the nature and purpose of this research activity.
- () I voluntarily agree to engage in this research/study.
- () I give my approval for researchers to record the related actions.

() I give my permission for the researcher to record the activities (video, audio, and photographs).

() If I have any questions regarding the study or my participation in it, I can freely discuss them with the researcher.

Signature or Thumbprint of Respondent: _____

(B) Informed Consent Form of Key Informant

MINDANAO STATE UNIVERSITY - IILIGAN INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ENVIRONMENTAL SCIENCE
SCHOOL OF INTERDISCIPLINARY STUDIES



I am Michael Lance B. Vergara, a Master of Environmental Science student from Mindanao State University – Iligan Institute of Technology. I am currently conducting a research study entitled: **"Sustainability in the Cup: Analyzing Green Marketing Practices and Consumer Perceptions among Cafés in Northern Mindanao"**

The purpose of this study is to explore the sustainable green practices of coffee businesses in Northern Mindanao, determine key factors influencing adoption of sustainability initiatives, analyze the level of awareness of sustainable green practices, evaluate the Degree of Claim-Practice Alignment in Sustainable Green Marketing and to develop a framework.

We request your participation as a **key informant** because of your knowledge, experience, and involvement in the food and beverage sector, environmental management, consumer protection, business regulation, or related fields.

Your involvement requires answering interview questions that will take around 10-15 minutes. Participation is entirely voluntary. You may decline to answer any question or withdraw from the interview at any time without penalty.

You provide data that will be used for academic purposes only and may be used to develop recommendations to facilitate truthful environmental marketing and sustainable business practices.

Please be aware that:

- Your responses will be kept confidential and anonymous.
- Your name and personal information will not appear in any report, publication, or presentation.
- You may choose not to answer any questions you are uncomfortable with.
- You are free to withdraw from the study at any time without any penalty or consequence.

There are **no known risks** associated with participating in this study, and no monetary compensation will be provided. However, your participation will contribute to body of knowledge about green practices and sustainable cities.

If you have any questions or concerns about the study, you may contact me through the following details:

- Phone number: 09627569937
- Email address: michaellance.vergara@g.msuiit.edu.ph

By signing below, you indicate that you have read and understood the information provided, and that you voluntarily agree to participate in this study.

Thank you very much for your time and cooperation.

Data Privacy Statement

The researcher is aware of her responsibilities under Republic Act No. 10173, otherwise known as the Data Privacy Act of 2012, in relation to the data collected, recorded, organized, updated, used, consolidated, or destroyed from the registered respondents. Rest assured that all the information to be gathered from this study will be strictly for academic purposes only.

RESPONDENT'S CONSENT

I have read and understood the information provided for the study titled "**Sustainability in the Cup: Analyzing Green Marketing Practices and Consumer Perceptions among Cafés in Northern Mindanao**"

I understand the purpose of the study, the nature of my participation, and my rights as a participant.

I agree to take part in this interview voluntarily and that the researchers may use the information I provide for academic research purposes.

I understand that my answers will be kept confidential and that my participation is voluntary.

- ☐ **I agree to participate in the interview.**
- ☐ **I agree to the audio recording of this interview.**
- ☐ **I do not agree to the audio recording of this interview.**

Signature or Thumbprint of Respondent: _____

APPENDIX 2

Key Informant Interview Questionnaire

[SCRIBD]

Search

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0 ratings • 14 views • 3 pages

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Green Practices Survey Questionnaire

This document is a survey conducted by a student to gather data on green performance management, recruitment, and climate change awareness within organizations. It includes demographic quest... [Full description](#)

Uploaded by [anamkhadim780](#) on Oct 15, 2025

AI-enhanced title and description

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Ask AI

1

3

Dear Respondent:

I am student at I am conducting a study to For the validity of results, we request you to respond to the questions frankly and honestly. Please respond to each of the following items. There is no right or wrong answers of these questions.

Cordially

Part - 1: Please Mark only one option in the following questions.

a) You are?	1. Male	2. Female		
b) Your age is	1. 18 to 28 years	2. 29 to 40 years	3. 41 to 55 years	4. More than 55 years
c) Education Level	1. Matric	2. Intermediate	3. Bachelor	4. Master 5. PhD
d) Tenure	1. Years with current Organization			
e) Job Level	1. Non Manager	2. Manager		
f) Department				
g) Employment Type	1. Full Time	2. Part-Time	3. Contract	
h) Work Location	1. On-site	3. Hybrid	3. Remote	

Retrieved from <https://www.scribd.com/document/951816077/Questionnaire-112>

APPENDIX 3

Consumer Interview Questionnaire

A.)

0 ratings • 58 views • 3 pages

Survey on Edible Straws at Zus Coffee

The document is a survey questionnaire aimed at gathering insights on the effectiveness of edible straws in promoting sustainable practices at Zus Coffee. It includes questions about the amb...

[Full description](#)

Uploaded by [yoshino danofrata](#) on Nov 20, 2025

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STI

SURVEY QUESTIONNAIRE

STI College Caloocan
STI Academic Center Caloocan
109 Samson Road corner Caimito Road Caloocan City 1400

Greetings of Peace!

In partial fulfillment of the requirements for the degree Bachelor of Science in Hospitality Management, the researchers would like to conduct a survey regarding a research study entitled: **The Effectiveness of Edible Straw to Promote Sustainable Practice in Zus Coffee.**

The researchers would like to ask your insights/opinions and highly appreciate your time in answering the following questions. Rest assured that all information collected in this survey will be kept in strict confidentiality. The data and information gathered from this survey will only be used for the aforementioned study.

Thank you for sparing your valuable time to complete this survey questionnaire. God Bless!

Sincerely yours,
Researchers

PART: PROFILE OF THE RESPONDENTS

Instructions: Please choose your response on the corresponding boxes that provide agreement relative to your profile.

NAME (Optional): _____

AGE

☐ 16 – 25 years old
☐ 26 – 35 years old
☐ 36 – 45 years old
☐ 46 – 55 years old
☐ 56 years old and above

Frequency of Visiting the Coffee Shop

☐ Once a Week
☐ Twice a Week
☐ Three times a Week
☐ More than three times a week

2.4	Facilities	(SA) 4	(A) 3	(D) 2	(SD) 1
2.4.1	The ambience and seating arrangement in Zus Coffee motivate me to stay longer.				
2.4.2	The coffee shop provides comfortable facilities such as Wi-Fi, lighting, and layout.				
2.4.3	Cleanliness and maintenance of facilities influence my visit.				
3.	How have consumers responded to the acceptance of edible straws in terms of?				
3.1	Social Influence				
3.1.1	I am encouraged to use edible straws because others support them.				
3.1.2	My peers' opinions affect my acceptance of edible straws.				
3.1.3	Social media campaigns raise my awareness of edible straws.				
3.2	Perceived Hygiene and Safety				
3.2.1	I feel safe using edible straws during my visit.				
3.2.2	Edible straws maintain hygiene standards in food service.				
3.2.3	I trust Zus Coffee's assurance of cleanliness and safety of edible straws.				
3.3	Environmental Awareness				

Retrieved from <https://www.scribd.com/document/951816077/Questionnaire-112>

B.)

Indicators

The coffee shop I visit uses recyclable or biodegradable packaging

The coffee shop implements visible waste reduction practices.

Eco-friendly practices make me feel more satisfied with the services of a coffee shop.

I prefer coffee shops that promote sustainability in their daily operations.

Incentives such as discounts for reusable cups encourage me to support eco-friendly coffee shops.

Indicators

More competitive than non-eco-friendly shops

I am more likely to choose shops with visible eco-practices

Eco-friendly practices improve reputation and brand image

I am more loyal to sustainable coffee shops

Eco-friendly practices attract more customers

Indicators

I am aware of eco-friendly practices in coffee shops

Environmental benefits outweigh higher prices

Lack of eco-efforts discourages me from patronizing

Eco-friendly practices reduce environmental harm

I choose shops that clearly promote sustainability

Retrieved from <https://www.ijfmr.com/papers/2025/6/62854.pdf>

RESEARCH ACTIVITIES	2026				2027							
	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Proposal Defense												
Field Sampling and Data Gathering												
Data Encoding and Organization												
Data Analysis and Interpretation												
Manuscript Writing												
Manuscript Review and Editing												
Journal Submission												
Conference Presentation												
Final Defense												
Revision												
Submission of Manuscript												

AI CHECKER AND PLAGIARISM CHECKER (GRAMMARLY)

Vergara_Proposal | File | Edit | View | Insert | Format | Tools | Gemini | Extensions | Help

100% | Normal text | Times ... | 12 | B | I | U | A | | |

"Sustainability in the Cup: Analyzing Green Marketing Practices and Consumer Perceptions among Cafes in Northern Mindanao"

A Master's Thesis Proposal
Presented to the
Graduate Faculty of the Department of Environmental Science
School of Interdisciplinary Studies
Mindanao State University – Iligan Institute of Technology
Iligan City

In Partial Fulfillment
of the Requirements for the Degree of
Master of Science in Environmental Science

Plagiarism and AI text check | 1 of 42

- This text matches · UNSIGNEDP...
- This section resembles AI text
- This section resembles AI text
- This text matches **Marketing in...**

Detected Reference
Lascu, D. N., Manrai, L., & Manrai, A. (1993). Marketing in Romania: The challenges of the transition from. European Journal of Marketing, 27(11), 102.

9% of your text matches 81 external sources
Matches were found on the web or in academic databases

8% of your text has patterns that resemble AI text
Get patterns to activate Windows. These patterns may show AI text or occur in your writing

PLAGIARISM CHECKER

Coffee shops have changed over time, offering patrons a more sophisticated and cozy atmosphere. For instance, they utilize biodegradable plastic cups to serve

6,828 words ▾

T v B I U v A v | ≡ v |   u  Ask AI

Spot text that resembles AI writing.

Comprehensive proposal review

Michael Lance B. Vergara | Sustainability in the Cup | Review date: 30 September 2026

How to use this file: yellow highlights identify passages needing revision. Open a highlight in a PDF reader to see its comment. Image-based issues have a yellow outline. R01-R71 below reproduce every comment so the suggestions remain readable even when a viewer does not show annotation pop-ups. Page references refer to the original PDF pages 1-35, which have no visible printed page numbers.

Overall assessment - reviewer judgment

Substantial revision is needed before data collection. The central proposal is an environmental claim-evidence and consumer-perception study, but the current objectives, sampling, instruments and analysis do not form one consistent protocol. Resolve the design and measurement decisions before polishing grammar. This is an academic review, not institutional ethics approval, an environmental audit or a plagiarism certification.

Eight revisions to complete first

1. Restrict and name the study area consistently; the operational scope is western Misamis Oriental, not region-wide recruitment (pp.1, 7, 17, 19-20).
2. Choose one research design and explain the role of interviews and the integration of evidence (pp.18-22, 28-33).
3. Define environmental claims, evidence sources, and claim-practice alignment without equating lack of proof with proven falsehood (pp.5, 7-8, 21-22).
4. Specify cafes and respondent groups separately, justify each sample, and link customer records to cafe IDs (pp.19-20).
5. Replace screenshots with complete owner, customer, evidence-checklist and interview instruments (pp.21, 30-33).
6. Rewrite consent forms, especially the unrelated frog/invasive-species text, and complete the ethics/privacy procedures (pp.22, 26-30).
7. Rebuild the analysis plan around actual units and constructs, including qualitative analysis and clustered customer observations (p.22).
8. Verify references and statistics; remove the unresolved market source and misleading illustrative-map provenance (pp.2, 23-25).

Evidence and limits of this review

Document findings are grounded in the supplied PDF and cited by its original page number. Proposed wording, instruments, coding rules and methods below are reviewer recommendations, not facts about completed fieldwork. Several references and local claims remain unverified; where relevant the comments explicitly say I cannot confirm this. No sample size, geographic accuracy, instrument validity or full reference-list correctness is certified. Four external primary sources were checked; see S1-S4 at the end. No AI/plagiarism score has been independently validated.

Recommended coherent study specification

Suggested title: Sustainability in the Cup: Environmental Marketing Claims, Documented Practices, and Consumer Perceptions among Microenterprise Cafes in Western Misamis Oriental.

Suggested design, subject to adviser approval: a cross-sectional convergent mixed-methods study. Collect cafe-level public environmental claims and supporting documentary/observational evidence, owner/manager reports of drivers and practices, customer survey responses, and relevant stakeholder interviews. Analyze each strand separately and integrate findings by cafe ID in a joint display. Specify the time window, recruitment and consent procedures before fieldwork. A simpler quantitative-only study is also possible, but then remove unimplemented interviews and limit claims about actual alignment to the evidence really collected. S1 supports the need to plan integration.

Suggested revised purpose paragraph

This study will examine environmental marketing claims, documented or observed practices, and consumer perceptions among eligible microenterprise cafes in the selected western Misamis Oriental localities. It will describe sustainability practices and owner-reported adoption drivers, assess customer awareness and perceived credibility, evaluate the support available for specific public environmental claims, and integrate the findings to develop context-specific recommendations. It will not infer full environmental performance or intentional deception from consumer perceptions alone.

Suggested measurable objectives

1. Identify public environmental claims and describe owner-reported, documented and observed practices in the retained sustainability domains.
2. Describe owner/manager-reported motivators and barriers to adoption.
3. Assess customers' awareness of cafe environmental claims and their perceived credibility and trust using defined questionnaire constructs.
4. Assess support for individual environmental claims using a prespecified claim-evidence coding protocol and summarize findings by cafe.
5. Integrate the claim-evidence, owner, customer and interview findings to develop practical recommendations; include exploratory associations only if the sampling and measures support them.

Objective-to-evidence mapping

Objective	Evidence / unit	Proposed analysis
1: Claims/practices	Dated claims; owner form; checklist / cafe and claim	Frequencies and evidence summaries
2: Adoption drivers	Owner/manager items and interviews / cafe	Descriptive scores; themes
3: Awareness/credibility	Customer survey linked to cafe / customer	Item/subscale summaries
4: Alignment	Claim matched to documents/observation / claim	Coding categories; per-cafe counts

Objective	Evidence / unit	Proposed analysis
5: Recommendations	Integrated cafe-level joint display	Convergences, discrepancies, recommendations

Illustrative claim-evidence protocol - proposed, not validated

Record cafe ID; exact claim; medium and date; scope of the claim; documents requested; observation date; evidence received; limitations; coder; and final category. Suggested categories: supported by the reviewed evidence; partially supported/qualified; contradicted by the reviewed evidence; unverified because evidence is insufficient; and not assessable within this protocol. Define each category with examples and a decision tree before coding. Two coders should independently code a subset and resolve disagreements using written rules. Pilot the protocol with adviser/expert feedback.

Example: a compostable cup claim needs evidence about the actual cup material and claimed disposal conditions; a cup that looks like paper or a customer who agrees it is green does not establish compostability. Use S2 only as a methodological benchmark from the United States; verify applicable Philippine requirements separately. This document makes no Philippine legal-compliance conclusion.

If a summary percentage is desired, a transparent option is $100 \times \text{supported assessable claims} / \text{all assessable claims}$. Report unverified/not-assessable counts separately and explain any exclusions. Do not create high/moderate/low cutoffs without justification and validation. A cafe with no eligible claim has no alignment percentage, not a score of zero. Prefer category counts when the number of claims is small.

Analysis and sample planning

Decide whether the primary inferential unit is the cafe or the customer. Keep owner and customer datasets separate, linked by cafe ID. More customers from one cafe do not add independent cafe-level cases. If inferential models are retained, plan a defensible clustered or multilevel approach, or justified cafe-level aggregation, with sufficient independent cafes. Specify effects of interest, predictors, reliability, missing data, diagnostics and uncertainty. A statistical adviser should review feasibility before promising regression. Do not use the total 100 as an automatic power or saturation justification.

For qualitative interviews, specify coding approach, who codes, reflexivity, discrepant cases, and the stopping rationale. For integration, compare claim-evidence categories with owner reports and customer perceptions in a joint display, and explain agreements and disagreements. Use association language, not impacts or causes, for the proposed cross-sectional analyses.

Illustrative instrument revisions - proposed items

Owner prompt: What environmental claims has this cafe publicly made during the defined study period? For each, describe the practice, start date, implementation frequency and available supporting record. Ask separately about costs, customer demand, owner values and policy pressures. Distinguish factual checkboxes, frequency measures and attitude statements.

Customer screening: Are you aged 18 years or older, and have you purchased from this cafe today? Awareness: Which environmental claims, if any, have you noticed here? Credibility item: The cafe explains the basis for its environmental claims clearly. Observable-practice item: During this visit, I observed a reusable-cup option. Offer not observed/do not know where appropriate; do not force uncertainty into a neutral agreement response.

Interview prompt: What makes it difficult for microenterprise cafes to substantiate environmental claims? Probe documentary requirements, disposal infrastructure, cost barriers and practical support. These examples must be developed into a complete, reviewed instrument; they are not a ready-to-use validated scale.

Consent revisions - suggested plain-language core

You are invited to participate in a study about environmental marketing claims and consumer perceptions in selected cafes in western Misamis Oriental. If you agree, you will answer questions about the claims and practices you have noticed and your views of their credibility. Participation is voluntary. You may skip questions or stop without penalty. Your choice will not affect the service you receive. The researcher will explain how responses are coded, stored and reported before you decide. Insert a pilot-supported duration, actual data-handling details and approved contact information; do not leave placeholders in the final form.

Provide separate forms for owners/managers, customers and key informants. Describe recording only where required, with independent yes/no permission. Explain limits of confidentiality where a business location or specialized role could identify participants. Include the institution-approved ethics contact and withdrawal/data-deletion procedures. Record signed consent separately from questionnaire responses.

Page-by-page yellow-highlight comments

R01 | Original PDF p.1 | Critical: Match the title to the actual study area

Pages 7, 17 and 20 limit recruitment to western Misamis Oriental, whereas the title implies regional coverage. Suggested title, if this narrower scope is retained: Sustainability in the Cup: Environmental Marketing Claims, Documented Practices, and Consumer Perceptions among Microenterprise Cafes in Western Misamis Oriental. Use this scope consistently in objectives, forms and figures.

R02 | Original PDF p.2 | Critical: Verify the market statistic and meaning of green coffee

The reference for Rebecca (2026) is incomplete on p.25. I cannot confirm this statistic from the supplied evidence. Obtain the original report, publisher, year, market definition, currency, methodology and URL, or remove the number. Clarify whether green coffee means unroasted beans or environmentally responsible coffee; do not equate the two without evidence.

R03 | Original PDF p.2 | Major: Tighten the background

Reduce general cafe-history material and repeated sustainability statements. Organize the background from documented local context to environmental claims, evidence gaps, and the precise research problem. Check each citation supports its specific claim.

R04 | Original PDF p.3 | Major: Support the local research gap

Explain which Philippine and Northern Mindanao studies were located, what they measured, and what they omitted. A broad statement of limited research needs a transparent literature-search basis; avoid asserting regional trends without local evidence.

R05 | Original PDF p.3 | Major: Keep the population specific

This paragraph expands to retail, handicrafts and ecotourism while the study recruits cafes. Focus the gap on cafe microenterprises. Define microenterprise using a cited Philippine classification and state how eligibility will be checked.

R06 | Original PDF p.4 | Major: Avoid untested causal wording

Use may be associated with consumer perceptions. This proposal describes a cross-sectional observational design; its proposed analyses do not by themselves establish causal effects.

R07 | Original PDF p.5 | Critical: Unify the problem statement

The two closing purpose paragraphs differ in geography, outcomes and community engagement. Replace them with one paragraph aligned with the final objectives, population, evidence sources and design. Remove competitiveness and active community engagement unless measured and procedurally specified.

R08 | Original PDF p.5 | Critical: Make objectives measurable

Specify the unit, respondent and indicator for each objective. Separate environmental claims, reported practices, documented/observed evidence and customer perceptions. Standardize the verbs identify, describe, assess, examine and develop.

R09 | Original PDF p.5 | Critical: Operationalize the main outcome

Define alignment at the individual claim level, the evidence required, scoring categories, treatment of unverified claims, coder agreement and cafe-level aggregation. Consumer agreement scores cannot alone verify actual practices.

R10 | Original PDF p.6 | Major: Clarify the intended output

Choose between a descriptive spatial map, a validated framework, or evidence-based recommendations. These are different deliverables. If mapping remains, add location capture, scoring, GIS workflow and confidentiality safeguards; describe any framework as proposed unless validated.

R11 | Original PDF p.6 | Major: Remove repetition and specify beneficiaries

The SDG 11 justification repeats the preceding paragraph. Replace it with concrete uses for cafe operators, customers, local government and researchers. Consider SDG 12 as a direct link to consumption, production and waste; retain SDG 11 only with an explicit local connection. See verified source S3 in the appended review.

R12 | Original PDF p.6 | Major: Do not presume sustainability commitment

The phrase strong commitment to sustainability anticipates a finding. Use neutral wording such as selected cafes with publicly communicated environmental claims, if that is the actual eligibility criterion.

R13 | Original PDF p.7 | Major: Define microenterprise and exclusions

Microenterprise is a specific size category. Cite the applicable classification, explain the eligibility evidence, distinguish independent shops from chain branches, and specify whether food stalls/restaurants are excluded.

R14 | Original PDF p.7 | Critical: Distinguish evidence review from an environmental audit

Keep this limitation, but explain what evidence WILL be collected. Observation and documentary corroboration can assess support for specific claims without proving full life-cycle environmental performance. If only perceptions are measured, narrow the objective and title accordingly.

R15 | Original PDF p.7 | Major: Simplify and operationalize the framework

The diagram includes contextual influences, drivers, practices, perceptions and greenwashing. Identify which are measured variables, explanatory context, analytic tools and outputs. Link each measured construct to instrument items and a planned analysis.

R16 | Original PDF p.8 | Major: Remove or measure extra constructs

The framework adds perceived value, purchase intentions, word of mouth and willingness to support. Retain only constructs covered by objectives and validated instrument items. Redraw arrows as hypothesized associations and explain the unit of analysis.

R17 | Original PDF p.8 | Critical: Specify the evidentiary limits of the taxonomy

Use the Seven Sins as a qualitative coding lens, not an automatically validated numerical scale. Explain cafe-specific indicators, inapplicable categories, ambiguous cases and independent coding. Lack of supplied evidence should be recorded as unverified, not automatically false.

R18 | Original PDF p.8 | Major: Make Figure 1 legible

The diagram has small labels and many components. Replace with a clean vector diagram showing the final measured constructs and the integration step; move detailed context and examples into prose. Ensure caption and diagram agree.

R19 | Original PDF p.9 | Critical: Correct the number of marketing dimensions

The subsections cover seven dimensions: product, price, place, promotion, people, process and physical evidence. The method on p.21 measures four, and Figure 1 lists five. Choose and justify one set, then align the review, diagram and instruments.

R20 | Original PDF p.9 | Major: Add missing source and check claim fit

Kotler et al. (2019) is cited but has no corresponding reference entry. Add the exact source actually used and check that it supports the cafe-specific claims. Repeat this citation-to-reference audit across the paper.

R21 | Original PDF p.9 | Major: Qualify environmental benefit claims

Local sourcing, organic production, ethical sourcing and compostable packaging represent different attributes. Avoid assuming each proves lower overall environmental impact. Discuss transport mode, production conditions and disposal infrastructure. See S2 for a claim-substantiation benchmark, not Philippine law.

R22 | Original PDF p.10 | Major: Supply the full reference

This citation has no entry in the reference list. Identify the actual article and verify whether it supports premium pricing in coffee businesses rather than a broader consumer context.

R23 | Original PDF p.10 | Major: Supply and verify the marketing framework source

Peattie and Charter (2003) is repeatedly cited but missing from the reference list. Verify whether it supports the seven service-marketing dimensions attributed here; do not infer source coverage from its title alone.

R24 | Original PDF p.11 | Major: Make the literature review analytical

Across the marketing subsections, add actual empirical study details: setting, sample, method, findings and limitations. Compare evidence rather than repeating definitions and expected positive outcomes. Explain why each retained dimension is observable in microenterprise cafes.

R25 | Original PDF p.12 | Major: Separate visual cues from verified practices

Plants and eco-looking decor are possible perception cues, not proof of environmental performance. Distinguish customer-visible cues, operational actions and independently supported environmental benefits in the instrument and discussion.

R26 | Original PDF p.13 | Major: Add the source and check population fit

This citation is absent from the references. Verify the specific article and whether its consumer-level findings support statements about owner decisions, technical capability and financial resources.

R27 | Original PDF p.14 | Major: Use a precise, non-prejudicial definition

Distinguish misleading environmental communication, perceived greenwashing and intentional deception. This study may identify discrepancies or unsupported claims, but cannot infer deliberate intent solely from a survey or observation.

R28 | Original PDF p.14 | Major: Connect theory to measured constructs

Specify how stakeholder expectations and signaling inform questions, hypotheses and evidence collection. If Theory of Planned Behavior is retained, measure attitudes, subjective norms, perceived behavioral control and intention with justified items; otherwise remove it from the tested model.

R29 | Original PDF p.15 | Major: Complete theoretical references

Spence (1973), Connelly et al. (2011), and Freeman et al. (2010) are cited but missing from the reference list. Add exact bibliographic entries for sources actually consulted.

R30 | Original PDF p.15 | Major: Move synthesis to the end

The greenwashing in food and beverage subsection follows the synthesis. Move synthesis after all literature subsections and state precisely how the study extends prior empirical work, including its paired claim-evidence and customer-perception approach if retained.

R31 | Original PDF p.16 | Major: Add the missing source

Revell, Stokes and Chen (2010) is absent from the reference list. Verify the reference and explain whether results on small businesses transfer to the selected cafe microenterprises.

R32 | Original PDF p.17 | Major: Define the geographic label and sampling frame

Explain whether Western District is an official administrative/electoral label or the researcher-defined western study area. Cite the boundary source and list the exact included localities. Avoid regional generalizations beyond this sampling frame.

R33 | Original PDF p.17 | Major: Correct administrative wording

Use the municipalities of Opol, Alubijid, Laguindingan, Gitagum, Libertad, Initao, Naawan, Manticao and Lugait, and the city of El Salvador. Verify spellings and coverage against an authoritative geographic source.

R34 | Original PDF p.17 | Major: Document the local establishment claims

Provide dated LGU business-register or other authoritative counts for eligible cafes. This draft provides no counts supporting high number, growing tourism, or increased eco-friendly demand. Without evidence, use neutral site-selection reasons.

R35 | Original PDF p.18 | Major: Validate Figure 2 and cite cartographic sources

Add boundary/point sources, date, coordinate reference system and map-production method. Independently verify the geography and labels against authoritative spatial data. The map and caption duplicate the figure title; use one caption.

R36 | Original PDF p.18 | Critical: Resolve the conflicting designs

This paragraph says completed mixed methods; the next says future quantitative descriptive-correlational research. Choose a coherent design. The existing interviews and alignment objective favor a specified mixed-methods design with surveys, claim/document review, observations and interviews. Use future tense for proposed procedures. See S1.

R37 | Original PDF p.19 | Major: Use association language

Replace influence with are associated with unless a causal design and identification strategy are specified. Define the cross-sectional timing and distinguish individual customer outcomes from cafe-level predictors.

R38 | Original PDF p.19 | Critical: Remove the contradictory locale

Consolidate Research Locale with Study Area and consistently specify the western Misamis Oriental localities. Sampling selected western cafes does not support coverage of the whole region.

R39 | Original PDF p.19 | Major: Specify customer eligibility

If adults aged 18 are eligible, write aged 18 years or older. Define recent visit or recruit after a purchase during the study period. Include a screening question and allow do not know/not observed responses for non-visible practices.

R40 | Original PDF p.20 | Critical: Clarify groups, counts and linkage

State the number of cafes, owners/managers per cafe, customers per cafe, and separate key-informant target. Fifty owners need not equal fifty cafes. If there is one customer per cafe, it is weak evidence of that cafe's customer population. Use anonymous cafe IDs to link datasets.

R41 | Original PDF p.20 | Critical: Justify sample sizes by strand

Data saturation is not a justification for a quantitative correlation/regression sample. For surveys specify the primary outcome, desired precision or power, predictors, clustering and expected nonresponse. For interviews separately justify information richness/saturation and document the stopping rule. Do not invent a new sample size.

R42 | Original PDF p.20 | Major: Justify the eligibility cutoff

Explain the substantive reason for excluding newer cafes and the resulting survivor/selection bias. Also decide whether eligibility requires an environmental CLAIM or an implemented practice; selecting only compliant practices may exclude discrepant claim-makers central to this study.

R43 | Original PDF p.20 | Major: Describe selection at each stage

Specify purposive cafe selection, owner recruitment, customer intercept selection and key-informant selection separately. State visit times, weekday/weekend coverage, refusal recording and duplicate prevention. Qualify non-probability sampling and the population to which conclusions apply.

R44 | Original PDF p.21 | Critical: Replace the generic instrument plan with separate tools

Prepare an owner/manager questionnaire for operational practices and adoption drivers; a customer questionnaire for awareness, trust and perceptions; a claim-evidence checklist; and a semi-structured key-informant guide. Customers should not be asked to establish internal budgets or regulatory compliance.

R45 | Original PDF p.21 | Major: Align measured dimensions

Only four dimensions are listed here, compared with seven in the literature. Include justified items for each retained dimension or narrow the framework. Add operational definitions, item sources, scoring, missing-data rules and an objective-to-item matrix.

R46 | Original PDF p.21 | Major: Specify validation and piloting

Describe reviewers' expertise, content-review criteria, pilot recruitment outside the main sample, language/translation procedures, revisions, and construct-specific reliability assessment. Agreement scales, knowledge items and a claim-evidence coding checklist need different checks.

R47 | Original PDF p.21 | Major: Complete the data collection sequence

Include ethics clearance before recruitment, cafe/owner selection, public-claim capture with dates, observation/document review, customer surveys, key-informant interviews and integration. Describe recording consent, field notes, unavailable documents, training and quality control.

R48 | Original PDF p.22 | Critical: Pre-specify defensible analyses

Normality alone is not the decision rule. Define each composite and check linearity/monotonicity, outliers and independence. Cafe-linked customers are clustered; do not treat them as independent cafe-level cases or pool owners and customers as one undifferentiated sample.

R49 | Original PDF p.22 | Critical: Replace the optional regression paragraph

Specify the outcome, predictors, unit, model, sample-size justification and diagnostic plan, or remove regression. Report effect sizes and intervals, not only p-values. Replace significant impacts with associations. Plan descriptive claim-alignment analysis and qualitative coding/integration, currently missing.

R50 | Original PDF p.22 | Critical: Make privacy commitments realistic

Signed consent forms and identifiable cafe locations mean full anonymity cannot be promised. Describe de-identification, separation of consent from responses, access, retention period, deletion, safe quotation, small-cell reporting and geographic disclosure controls. Obtain the institution's ethics guidance.

R51 | Original PDF p.23 | Critical: Remove the illustrative result map or label it throughout

The heading labels the map as an example, but the embedded image shows specific locations, high/moderate/low classes, counts and Field Survey (2024). This is a 2026 proposal. Replace it with a blank mapping template or mark the entire figure SYNTHETIC DEMONSTRATION - NOT STUDY RESULTS and remove misleading provenance. Add a real GIS method before promising spatial results.

R52 | Original PDF p.24 | Major: Correct the verified reference title

The publisher identifies the DOI 10.1525/cmr.2011.54.1.64 as The Drivers of Greenwashing, not What motivates greenwashing. Correct the title and verify the full entry against the publisher. See source S4.

R53 | Original PDF p.24 | Major: Verify reference metadata

Check the article title against the publisher/DOI; the wording supplied may be inaccurate. I cannot confirm this entry's full metadata from the supplied paper alone. Audit titles, author initials, years, volumes, pages and DOI links for every reference.

R54 | Original PDF p.24 | Major: Check publication-year consistency

Verify the year against the cited DOI and journal volume; online-first and issue years may differ. Do not change it by guesswork. Alphabetize all entries and apply one required citation style with hanging indents.

R55 | Original PDF p.25 | Critical: Remove the unresolved reference placeholder

Replace Rebecca (2026) with a traceable original source or remove both the entry and the dependent market-size statements. This placeholder is evidence that the reference is not ready for submission.

R56 | Original PDF p.25 | Major: Complete the reference audit

Check whether all reference-list entries are cited and all in-text citations have entries. Missing entries include D'Souza; Peattie and Charter; Kotler; Yadav and Pathak; Freeman et al.; Spence; Connelly et al.; Revell et al.; and methodology web sources. Reconcile UN 2023/UNDP 2022 citations with listed 2015/2024 sources. Verify source-to-claim fit, not just metadata.

R57 | Original PDF p.26 | Critical: Remove unrelated consent content

Replace the copied frog/land-use wording with the actual cafe survey activity, topics, duration, participation options and recording procedure. The consent must accurately describe this study before any recruitment.

R58 | Original PDF p.26 | Major: Use the correct degree and final purpose

The cover says Master of Science in Environmental Science. Make this consistent and shorten the purpose to plain language. Distinguish the customer survey from interviews and retain only approved procedures.

R59 | Original PDF p.27 | Critical: Correct the irrelevant benefits statement

Replace with a modest study-specific benefit, such as contributing to understanding cafe environmental claims and consumer perceptions. Do not imply a guaranteed direct benefit.

R60 | Original PDF p.27 | Major: Disclose plausible study-specific risks

State foreseeable discomfort, privacy risk and possible reputational/business risk from environmental-claim evaluation, with safeguards. Avoid asserting zero risk without assessment. Separate owner, consumer and key-informant consent needs.

R61 | Original PDF p.27 | Major: Correct pronouns and privacy information

Use the researcher consistently; avoid switching between her, it and researchers. Add the actual data categories, purpose, access, retention, deletion and participant-contact route consistent with the approved protocol.

R62 | Original PDF p.28 | Major: Make recording consent optional and specific

Survey participation should not require video/audio/photo consent. Delete unnecessary recording permissions; for needed interviews give separate yes/no recording choices and an alternative note-taking procedure. Store signed consent apart from research responses.

R63 | Original PDF p.28 | Critical: Define key informants in the method

Identify eligible informant roles, recruitment, sample rationale, topics and analysis. The main methodology currently counts only owners/managers and customers; Appendix 1 introduces another respondent group.

R64 | Original PDF p.29 | Major: Revise informant risk and anonymity wording

Key informants may be recognizable by role or quotation. Explain confidentiality limits, quote de-identification, consent for attribution if any, recording storage and withdrawal limits after anonymization/aggregation.

R65 | Original PDF p.30 | Critical: Supply the complete interview guide

Provide study-specific open-ended questions with probes addressing adoption drivers, claim evidence, barriers and recommendations. The following screenshot is not an adequate cafe key-informant instrument.

R66 | Original PDF p.31 | Critical: Replace the unrelated Scribd screenshot

The screenshot is labeled Green Practices Survey Questionnaire and contains employee tenure, job level, department and employment type. Replace it with a readable, complete cafe-relevant instrument. Identify the original scholarly source, author and adaptation history; a hosting URL does not establish instrument validity.

R67 | Original PDF p.32 | Critical: Correct the consumer instrument and source attribution

The screenshot concerns edible straws at Zus Coffee, whereas the printed URL matches the different questionnaire on p.31. Verify the original source and use readable editable questions aligned with this study. Do not copy unrelated facilities, social influence or straw-safety items without justification.

R68 | Original PDF p.32 | Major: Split the double-barreled packaging item

Recyclable and biodegradable are distinct attributes. Separate the items, specify packaging type and time context, and offer not observed/do not know. These are perceived or reported attributes unless independently corroborated.

R69 | Original PDF p.33 | Critical: Separate constructs and remove unsupported business-performance judgments

These screenshots mix competitiveness, loyalty, awareness, price acceptance and perceived environmental benefit. Customers cannot establish actual customer-growth or competitiveness effects. Provide coherent multi-item subscales, response anchors and scoring; add direct credibility/trust items if these remain outcomes.

R70 | Original PDF p.34 | Major: Move checker outputs outside the academic argument

Unless required by the department, omit checker screenshots from the thesis body or submit separately. They do not establish factual accuracy, methodological validity or originality. Resolve textual/source issues directly and follow institutional disclosure requirements.

R71 | Original PDF p.35 | Major: Use a clean submission appendix

The final page continues checker screenshots. Keep only appendices necessary to evaluate and implement the study, with readable text and clear source/adaptation acknowledgments.

Reference and presentation completion checklist

Audit all citation/reference pairs; verify each factual sentence against the actual source; distinguish original findings from general theory; alphabetize references; use consistent style and hanging indents; reconcile online-first and issue years; identify sources and permissions/adaptations for instruments. Move the literature synthesis last. Add a glossary of operational definitions, complete instruments, eligibility screening, claim checklist, interview guide, language/translation plan, a realistic timeline and an estimated budget if required by the department. Check page numbering, heading levels, table/figure numbering and legibility. Do not present synthetic maps as collected data.

Checked external sources

S1. NIH Office of Behavioral and Social Sciences Research. Mixed Methods Research / Best Practices for Mixed Methods Research in the Health Sciences. <https://obssr.od.nih.gov/research-resources/mixed-methods-research> . Supports specifying the quantitative/qualitative strands and their integration.

S2. U.S. Federal Trade Commission. Environmental Claims: Summary of the Green Guides. <https://www.ftc.gov/business-guidance/resources/environmental-claims-summary-green-guides> . Supports caution about broad claims, substantiation and disposal conditions. Used as a methodological reference, not Philippine legal guidance.

S3. United Nations Department of Economic and Social Affairs. Goal 12. <https://sdgs.un.org/goals/goal12> . Supports linking the study to sustainable consumption and production, including waste.

S4. California Management Review / UC Berkeley. The Drivers of Greenwashing (2011), Magali A. Delmas and Vanessa C. Burbano. <https://cmr.berkeley.edu/2011/11/54-1-the-drivers-of-greenwashing/> ; <https://doi.org/10.1525/cmr.2011.54.1.64> . Supports the specific title correction on original p.24.

Sources checked on 30 September 2026. Other bibliographic corrections flagged for verification are not certified here. Internal findings refer to Vergara_Proposal (FINAL).pdf, original PDF pp.1-35.