

# Leadership and Sustainability in Tourism and Hospitality: A Systematic Review and Future Research Agenda

## Abstract

**Purpose:** This study systematically reviews research on leadership and environmental sustainability within the tourism and hospitality sector, aiming to determine how leadership styles impact sustainability initiatives and proposing a comprehensive research framework.

**Design/methodology/approach:** A systematic review methodology ensured thorough and unbiased analysis, adhering to PRISMA guidelines and including 41 articles from high-ranking journals. Both quantitative and qualitative analyses were conducted to provide a comprehensive understanding of the research landscape.

**Findings:** The review reveals that leadership styles significantly influence environmental sustainability initiatives in the tourism and hospitality sector. However, there is limited research on the impact of leaders' demographic and psychological traits on their commitment to sustainability. Most studies focus on the effects of sustainability initiatives on business performance and employee behaviors, with insufficient attention to customer-related outcomes. A comprehensive research framework is introduced, along with 12 research questions for future study.

**Practical implications:** This study provides practical guidance for organizations in the tourism and hospitality sector by highlighting the importance of leadership in driving sustainability initiatives. It offers actionable recommendations for embedding sustainability into leadership practices, such as aligning sustainability goals with organizational culture and incorporating environmental responsibility into leadership training. These insights can help organizations improve their environmental performance and enhance stakeholder engagement.

**Originality/value:** This pioneering study consolidates fragmented knowledge on leadership and environmental sustainability in tourism and hospitality, offering a comprehensive research framework that identifies key themes, gaps, and future research directions. It advances theoretical understanding and provides actionable insights for practitioners. Leaders and organizations can use these findings to enhance sustainability strategies, foster a culture of environmental responsibility, and meet stakeholder demands more effectively. The proposed research questions aim to bridge knowledge gaps and drive innovation in sustainable tourism and hospitality practices.

**Keywords:** Leadership; environmental sustainability; tourism and hospitality; systematic review

## 1. Introduction

Sustainability has emerged as a critical imperative in the tourism and hospitality industry, which relies heavily on natural resources and cultural heritage. This urgency is fueled by escalating environmental concerns such as climate change, marked by shifting weather patterns and rising global temperatures (Abualigah et al., 2023; Garay et al., 2019; Tuan, 2020). To combat these challenges, organizations in the sector are increasingly adopting sustainability initiatives—strategies designed to minimize negative environmental impacts while promoting the responsible use of resources (Etse et al., 2023). For example, energy efficiency programs leverage renewable energy sources and smart technologies to reduce consumption, while waste management practices such as recycling and composting aim to minimize waste generation and support circular economy principles (Buhalis et al., 2023). Furthermore, sustainable procurement practices encourage businesses to prioritize suppliers that adhere to stringent environmental and ethical standards, thereby decreasing their overall ecological footprint (Ramkissoon, 2023).

In driving these efforts, leadership—broadly defined as the ability to influence and guide individuals or groups toward achieving a common goal—is increasingly recognized as a pivotal factor influencing organizational efforts toward environmental sustainability (Mittal and Dhar, 2016). Effective leaders play a crucial role in shaping strategies that prioritize these initiatives, fostering a culture that values environmental stewardship, and driving actions that align with the principles of environmental sustainability—the ability to meet present environmental needs without compromising the ability of future generations to meet theirs (Haldorai et al., 2022). Through their vision and actions, leaders can inspire and mobilize their teams to embrace sustainable practices, thereby embedding sustainability into the core operations and values of their organizations.

Research on the relationship between leadership and sustainability in the tourism and hospitality sector has explored various dimensions, revealing a multifaceted but somewhat disjointed understanding of the topic. A significant area of inquiry has been the exploration of leadership characteristics that influence engagement in sustainability initiatives. Studies have highlighted the importance of specific leadership styles, such as transformational leadership, which inspires and motivates teams to achieve visionary goals, fostering innovation and environmental responsibility; servant leadership, which emphasizes the well-being of others and prioritizes community and ecological stewardship; and ethical leadership, which focuses

on moral principles, promoting accountability and integrity in sustainability efforts—all of which are linked to an enhanced commitment to sustainability (Boo and Park, 2013; Dief and Font, 2010; Luu, 2020; Mensah and Blankson, 2013; Tuan, 2020). Additionally, intrinsic motivations, including personal values and ethical considerations, have been identified as critical drivers that compel leaders to prioritize sustainability within their organizations (Garay et al., 2019; Jang et al., 2017).

In parallel, another stream of research has investigated the outcomes of leadership-driven sustainability efforts. These studies have examined the impacts of green initiatives—sustainable actions or practices implemented by organizations aimed at reducing their environmental footprint—on various organizational metrics, such as environmental performance, employee engagement, and customer satisfaction (Abualigah et al., 2023; Bani-Melhem et al., 2022; Farooq et al., 2022; Kim et al., 2020; Wang et al., 2024). For instance, organizations that implement effective sustainability practices often report improved operational efficiency, reduced costs, and enhanced brand loyalty among eco-conscious consumers (Jang et al. 2017; Mao et al., 2023). However, despite the insights offered by these studies, the fragmented nature of the literature presents challenges in establishing a coherent understanding of how leadership influences environmental sustainability.

This fragmentation can lead to a lack of clarity for both scholars and practitioners, making it difficult to derive actionable conclusions from isolated studies. While some research has effectively demonstrated the positive impacts of leadership on sustainability initiatives, the absence of a unified framework hampers the ability to generalize findings across different contexts within the tourism and hospitality sector. Furthermore, the disjointed nature of these research streams limits the practical value of individual studies, creating a barrier for organizations seeking to implement effective leadership strategies in their sustainability efforts. As a result, there is a pressing need for comprehensive research that consolidates these disparate pockets of knowledge, synthesizing them into a cohesive framework that offers both theoretical insights and practical guidance. Such integrative efforts would provide a clearer understanding of the interplay between leadership and environmental sustainability, ultimately contributing to more effective and strategic sustainability initiatives in the tourism and hospitality industry. By bridging the gaps between various research streams, future studies can pave the way for a holistic view that incorporates diverse perspectives on leadership and its impact on sustainability.

This study aims to contribute to this field and fill this gap by conducting a comprehensive literature review that consolidates existing knowledge and provides answers to the following research questions:

1. What is the current state of research on the relationship between leadership and environmental sustainability in the tourism and hospitality industry?
2. What are the major research themes that have emerged in this area?
3. What factors influence leaders' engagement in environmental sustainability initiatives within tourism and hospitality organizations?
4. What are the outcomes of environmental sustainability initiatives led by leaders in the tourism and hospitality sector?
5. What interventions affect the strength of the relationship between leadership and environmental sustainability in tourism and hospitality organizations?
6. What are the future research directions needed to advance our understanding of leadership and environmental sustainability in tourism and hospitality?

The contribution of this research is threefold. First, it delivers a timely and thorough examination that consolidates and assesses fragmented knowledge of the relationship between leaders and environmental sustainability in tourism and hospitality. By systematically categorizing and analyzing previous studies, the research highlights patterns, trends, and limitations, offering a structured understanding of the current state of knowledge. Second, the research introduces an inclusive research framework, enabling the examination of various factors, outcomes, and interventions about leadership and environmental sustainability within tourism and hospitality. This framework not only serves as a guide for future research endeavors but also offers direction for future research. Furthermore, the study articulates 12 pivotal research questions, specifically designed to steer future investigations into underexplored areas, thus addressing critical voids in the existing literature. Finally, the research offers actionable insights for practitioners by providing concrete strategies for embedding sustainability into leadership practices and operational strategies, ensuring its practical relevance alongside academic contributions.

The remainder of this review is structured as follows: Section two presents our methodology. Section three provides a descriptive analysis of the analyzed research, offering an overview of key trends and patterns. In section four, we present the results of our thematic analysis, highlighting the main themes and insights derived from the literature. Section five

discusses our findings and proposes future research directions to address the identified gaps. Section six concludes the study, summarizing key contributions, implications and limitations.

## **2. Methodology**

This study employed a systematic literature review methodology to ensure a thorough and rigorous search and review process. This approach provides a comprehensive overview of existing research, identifies gaps in the literature, and ensures that findings are reliable and reproducible (Guchait et al., 2023). The stages recommended by Pickering and Byrne (2014) were adhered to, which have been extensively applied in past systematic literature reviews featured in top-tier tourism and hospitality journals (e.g., Khan et al., 2024; Le et al., 2019; Li et al., 2023). The process included strategies such as identifying relevant keywords and databases, accessing and screening these databases, extracting qualifying results, and analyzing the findings. Following the PRISMA guidelines, Figure 1 outlines the steps of the article inclusion and exclusion process.

### **Step 1: Identification Process:**

Following the methodology proposed by Swain et al. (2024), the keyword identification process began with a search on Google Scholar using the term "leaders and sustainability in tourism and hospitality." The most cited and recent relevant articles were sorted to compile keywords appearing in their titles, abstracts, and keyword lists. Through discussions among the research team, appropriate search strings were identified. Three databases—Scopus, Web of Science, and Business Source Complete (EBSCO)—were selected for their comprehensive nature, wide recognition, and extensive collections of scholarly articles relevant to the research area (Lyu et al., 2023).

In May 2024, the following search command was utilized to explore the "Title, Keywords, and Abstract" sections within these databases: (( leader\* OR director OR manager) AND (sustainab\* OR green OR climate OR environment\* OR carbon OR net-zero OR waste OR energy OR esg ) AND ( touris\* OR travel OR hospitality OR hotel OR events OR restaurant OR catering OR accommodation OR airline OR leisure OR holiday OR vacation )). To ensure thoroughness, the search start date was left open-ended. The focus was restricted to academic journal articles, as they undergo rigorous peer review, thereby ensuring the reliability and credibility of the research (Kazemi et al., 2023). Additionally, the search was limited to articles written in English to maintain consistency and facilitate analysis.

### **Step 2: Screening Process:**

Through the identification process, a total of 15,590 articles were uncovered across the Web of Science (n = 4,712), Scopus (n = 4,224), and Business Source Complete (n = 3,654) databases. After the removal of duplicates and articles without full-text access, 8,550 publications remained. Subsequently, an evaluation of the quality of these articles was conducted to optimize the analysis. This evaluation referenced the Academic Journal Guide 2021 (ABS list) and adhered to the criteria outlined by Kazemi et al. (2023), resulting in the inclusion of only articles published in 3, 4, and 4\* journals. Following this step, 1,282 articles remained and underwent an assessment based on the eligibility criteria.

### **Step 3: Inclusion and Exclusion Process:**

The identified articles were analyzed using NVivo to assess their titles and abstracts for relevance to the research topic. Discrepancies among the researchers were deliberated until a consensus was achieved, resulting in the retention of 47 articles. Subsequently, a thorough reading of these 47 articles was conducted, leading to further exclusions based on criteria such as lack of focus. Ultimately, this process culminated in the inclusion of 41 publications in the analysis.

### **Insert here Figure 1.**

The study analyzed 41 publications using a dual-stage methodology combining quantitative and qualitative analysis. The quantitative analysis offered an overview of publication trends, including timelines, sources, geographical focuses, and research methodologies, with visual representations and keyword co-occurrence analysis using Vosviewer (Li et al., 2023). The qualitative analysis identified recurring themes and patterns by clustering the articles into three primary themes: leader characteristics, environmental outcomes, and interventions. Following Le et al. (2019), clustering began with team discussions informed by keyword co-occurrence analysis. Two researchers independently reviewed each article to assign clusters, resolving disagreements collaboratively.

## **3. Characterizing Green Leaders Research in Tourism and Hospitality**

### *3.1 Publication timeline*

Figure 2 illustrates that the initial research on this subject began with Dief and Font's (2010) study, which explored the connection between the pro-environmental behavior of marketing managers and green marketing practices in Egypt. Over the past 15 years, there has been a steady increase in publications examining the link between leadership and environmental

sustainability within the tourism and hospitality sectors. Notably, between 2021 and 2023, there was a significant rise in the number of publications, with 24 articles (59%) appearing, peaking in 2022 with 9 publications. The notable increase in publications can be attributed to heightened global awareness of environmental issues, increased funding for sustainability research, and the growing recognition of the critical role that leadership plays in promoting sustainable practices within the tourism and hospitality industries. This trend reflects a broader movement towards integrating sustainability into business practices and academic inquiry.

**Insert here Figure 2.**

### *3.2 Publication sources*

Figure 3 illustrates the distribution of the 41 analyzed publications across seven different journals. The Journal of Sustainable Tourism had the highest number of publications, with 16 articles. This was followed by the International Journal of Hospitality Management, which featured 10 publications. Additionally, Tourism Management published 3 articles, and the Journal of Travel Research had 1 publication. Whereas Figure 4 shows the most cited research in the field. Our analysis revealed that Mittal and Dhar (2016) lead with 252 citations, followed by Dief and Font (2010) with 182 citations, underscoring their significant impact on the field.

**Insert here Figure 3.**

**Insert here Figure 4.**

### *3.3 Geographical distribution*

Figure 5 illustrates the geographical focus of research by country. Our analysis reveals that a significant portion of the investigations focused on Vietnam, with 6 publications, followed by 5 studies that examined a global sample, and 4 studies concentrating on the US. In contrast, various touristic countries, including Spain, Thailand, Egypt, and Malaysia, were also represented with fewer studies. Notably, other countries on different continents received no attention, indicating a gap in the research that could be addressed in future studies to provide a more comprehensive understanding of the global landscape of leadership and environmental sustainability in tourism and hospitality.

**Insert here Figure 5.**

### *3.4 Methodological approaches*

In our reviewed studies, a variety of research methods and analytical approaches were utilized, encompassing both qualitative and quantitative methodologies. A thorough examination of the 41 papers reveals a predominant preference for quantitative techniques, with 40 studies opting for methods such as questionnaires and regression analysis (e.g., Bhutto et al., 2021; Garay et al., 2019; Haldorai et al., 2022; Mittal and Dhar, 2016). Conversely, only one study, conducted by Yachin and Ioannides (2020), employed qualitative methods through interviews. Notably, none of the studies employed mixed methods, highlighting a distinct trend towards the quantitative approach within the sampled literature.

### *3.5 Keyword Co-occurrence analysis*

Figure 6 illustrates the keyword co-occurrence network, providing a detailed understanding of the interconnected themes in sustainability within tourism and hospitality. Each dot represents a keyword found in the titles or abstracts of the analyzed research papers, with the dot size indicating the frequency of its usage (Li et al., 2023). The network groups keywords into distinct clusters, each highlighting a specific thematic area.

The green cluster focuses on leadership's role in promoting sustainability, incorporating terms such as "leadership," "sustainability," "green environment," "knowledge," and "psychology." This cluster emphasizes how leaders drive sustainability initiatives, foster a green environment, and support efforts toward carbon neutrality. The red cluster centers on the connection between employment and ecotourism, featuring keywords like "ecotourism," "environmental values," and "employment." This highlights the alignment of workforce values with ecological priorities, suggesting that a strong commitment to sustainability can enhance job satisfaction and retention in ecotourism.

The blue cluster emphasizes the role of human resources in fostering environmental sustainability, with terms such as "human resource," "resource management," and "sustainable development." This underscores the importance of effective human resource management in nurturing a knowledgeable and sustainability-focused workforce, ultimately supporting broader sustainable development goals in tourism. The purple cluster addresses sustainable tourism development and management, with keywords including "tourism development" and "tourism management." It focuses on balancing industry growth with ecological considerations, such as reducing the ecological footprint of tourism and leveraging renewable resources to maintain the integrity of destinations.

The keyword co-occurrence network highlights the relationships between leadership characteristics, organizational practices, and sustainability outcomes in tourism and hospitality. By identifying *these* interconnected themes, researchers gain insights into how leadership influences environmental sustainability, while also uncovering potential areas for future research, such as the impact of specific leadership styles and the role of technological innovations in advancing sustainable practices.

**Insert here Figure 6.**

#### **4. Thematic Analysis**

We structured our analysis around three core themes: firstly, leader characteristics, delving into the various factors that influence the cultivation of environmentally conscious leaders; secondly, outcomes, scrutinizing the effects of such green leadership within organizational settings; and thirdly, interventions, which center on the factors that either moderate or mediate the connection between leaders and the adoption of sustainability practices within the tourism and hospitality sector.

##### *4.1 Leader characteristics*

From existing research, two primary characteristics of business leaders in the tourism and hospitality industry have emerged as influential factors in environmental sustainability: personal attributes and leadership styles (see Supplementary Materials). Whether analyzed individually or in conjunction, these characteristics have demonstrated a substantial impact on the adoption of environmental sustainability practices within the tourism and hospitality sector.

*Personal attributes.* The findings underscore the pivotal role of personal characteristics in shaping businesses' engagement with environmental sustainability. For instance, studies conducted by Boo and Park (2013), Mensah and Blankson (2013), and Riva et al. (2021) highlight the positive impact of leaders' green education and knowledge on their commitment to environmental sustainability. In contrast, the influence of leaders' intrinsic motivations was explored by Garay et al. (2019), Jang et al. (2017), and McTiernan et al. (2023), revealing the significant role played by top management values, attitudes, self-efficacy, and social norms in shaping environmental commitment. Furthermore, the role of green entrepreneurial orientation among leaders was discussed by Luu (2021) and Yachin and Ioannides (2020), who provided evidence that such orientation positively affects employees' green creative behavior through green creative self-efficacy and harmonious environmental passion. Additionally, Dief and

Font (2010) demonstrated that the pro-environmental behavior of managers is associated with more proactive green marketing efforts. Meanwhile, top management's green commitment has been linked with green human resource management practices and hotel environmental performance, as evidenced by studies conducted by Haldorai et al. (2022), Karatepe et al. (2022), and Kim et al. (2015).

*Leadership Styles.* Environmentally specific servant leadership emerges as a dominant approach for fostering environmental sustainability in tourism and hospitality. This style emphasizes serving both organizational and community needs while promoting ecological stewardship and sustainable practices (e.g., Luu, 2019; Luu, 2020; Tuan, 2020). Similarly, green transformational leadership has been widely examined for its role in inspiring employees to adopt environmentally responsible behaviors. Leaders employing this style motivate and empower employees to engage in conservation efforts, enhancing green performance dimensions such as creativity, work engagement, team resilience, and citizenship behavior towards the environment (Mittal and Dhar, 2016; Çop et al., 2021; Farooq et al., 2022).

Authentic leadership, as explored by Farrukh et al. (2023), Karatepe et al. (2022), and Luu (2023), emphasizes authenticity and transparent relationships, fostering trust, shared purpose, and positive outcomes such as increased green creativity and organizational citizenship behavior. Ethical leadership, highlighted by Ali and Hassan (2023) and Wood et al. (2021), prioritizes integrity and moral values, promoting employee green behavior through corporate social responsibility and a focus on well-being.

Other impactful leadership styles include spiritual leadership and green inclusive leadership. Spiritual leadership, as discussed by Abualigah et al. (2023), focuses on higher purpose, empathy, and compassion, while green inclusive leadership, studied by Aboramadan et al. (2022) and Bhutto et al. (2021), emphasizes inclusivity and collaboration in environmental decision-making. This approach engages diverse stakeholders in shaping sustainable strategies and fosters a culture of environmental responsibility.

In contrast, exploitative leadership, as examined by Wang et al. (2021), demonstrates a negative impact on sustainability. Characterized by manipulative and abusive behavior, this style prioritizes personal or organizational gain over employee well-being, hindering green innovation and environmental responsibility within the hospitality sector.

#### *4.2 Outcomes*

Our analysis of the current literature highlights a variety of outcomes resulting from leaders' participation in environmentally sustainable practices. We categorized these outcomes into three main groups: organizational performance, employee-related outcomes, and customer-related outcomes.

*Organizational performance.* Prior research highlights that leader characteristics, including education, knowledge, and leadership style, significantly shape organizational practices related to environmental sustainability. Studies by Boo and Park (2013), Kim et al. (2015), and Mensah and Blankson (2013) demonstrate that leaders with green education, sustainability knowledge, and intrinsic motivations—such as values and norms—positively influence environmental performance. Leaders well-versed in sustainability principles are more likely to implement effective green practices, advancing initiatives aimed at carbon neutrality and reducing ecological footprints. Similarly, Haldorai et al. (2022) emphasize that top management's strong commitment to environmental goals drives improvements in hotel sustainability, enhancing operational efficiency and aligning organizational objectives with broader themes like renewable resources and sustainable development.

Dief and Font (2010) connect management's pro-environmental behavior with green marketing practices, revealing a positive relationship. Managers who exhibit environmentally friendly behavior are more likely to adopt green marketing strategies, improving both environmental and market performance in a sustainability-conscious landscape.

Furthermore, leaders' characteristics influence financial outcomes. Jang et al. (2017) and Mao et al. (2023) find that green certifications and leaders' environmental values enhance financial performance. Organizations recognized for environmental leadership attract eco-conscious customers and reduce costs through sustainable practices. By integrating ecological sustainability into core strategies, leaders simultaneously boost financial success and contribute to long-term sustainability in the tourism and hospitality sector, fostering resilience and advancing sustainable development.

*Employee-related outcomes.* Our examination revealed a predominant focus in research on the influence of leader characteristics on employees' behaviors. For instance, the exploration of employees' green creativity and innovation has been a notable area of interest for researchers such as Abualigah et al. (2023), Luu (2021, 2023), and Tuan (2020). Their findings illustrate that fostering green creativity positively impacts both individual and collective levels of innovation within organizations. Concurrently, studies conducted by Kim et al. (2020), Luu

(2019, 2024), and Tuan (2018) delved into the effect on employees' organizational citizenship behavior for the environment. These investigations revealed that leaders who exhibit strong environmental values inspire employees to exceed their regular duties and actively support sustainability initiatives. Moreover, Aboramadan et al. (2022), Farooq et al. (2022), and Wood et al. (2021) examined the influence on employees' green behavior, revealing a significant positive impact. Leaders who prioritize sustainability initiatives effectively encourage their employees to adopt environmentally friendly practices in their daily work routines. Furthermore, Çop et al. (2021) conducted a study investigating the relationship between leader characteristics and green work engagement as well as green team resilience. Their research indicated that leaders who prioritize environmental sustainability foster higher levels of engagement and resilience within their teams, consequently enhancing overall performance in sustainability initiatives.

*Customer-related outcomes.* Our analysis revealed a notable gap in the literature concerning the examination of the impact of leadership characteristics on customers. Only one study, conducted by Bani-Melhem et al. (2022), showed that implementing environmental strategies can boost customer loyalty by improving green innovation performance, especially when there is robust leadership backing for green innovation initiatives. Their findings indicate that when leaders actively support and promote green innovation within their organizations, it has a positive impact on the organization's capacity to innovate sustainably, thus leading to increased customer loyalty. Moreover, customers who share environmental values are more inclined to show loyalty towards green hotel organizations.

#### *4.3 Interventions*

Our analysis identifies several interventions that moderate or mediate the relationship between leadership and environmental sustainability in the tourism and hospitality sector. Green Human Resources Management (HRM) stands out as a key factor positively influencing this connection (e.g., Abualigah et al., 2023; Farooq et al., 2022; Luu, 2023; Tuan, 2022). By integrating environmental considerations into recruitment, training, performance management, and employee engagement, Green HRM fosters alignment with sustainability goals (Tuan, 2022). Similarly, studies by Kalyar and Shafique (2021), Tosun et al. (2022), Tuan (2018), and Wood et al. (2021) highlight the role of Corporate Social Responsibility (CSR) in strengthening the link between positive leadership styles and employees' engagement with environmental sustainability. CSR practices also contribute to improved environmental performance.

At the employee level, Tuan (2020) identifies green role identity and resource-seeking behaviors as moderators of the relationship between environmentally specific servant leadership and green creativity. Kim et al. (2020) demonstrate the influence of employees' beliefs on the connection between environmental transformational leadership and citizenship behavior toward the environment. Conversely, Wang et al. (2021) show that emotional exhaustion weakens the relationship between exploitative leadership and green innovative behavior.

At the organizational level, interventions such as support for green behaviors (Luu, 2019), team environmental goal clarity, and harmonious passion (Farrukh et al., 2023) significantly enhance sustainability outcomes. Additionally, Meirun et al. (2024) and Muisyo et al. (2022) underscore the positive effects of cultivating a strong organizational green culture, reinforcing the critical role of systemic support in achieving environmental sustainability goals.

## **5. Discussion and Future Research Directions**

### *5.1 Main findings and research framework*

Our review of 41 articles shows a clear increase in academic interest in exploring the link between leadership traits and environmental sustainability in the tourism and hospitality industry. This interest started growing in 2010 and saw a significant rise between 2021 and 2023. This rise in publications can be attributed to greater global awareness of environmental concerns, more funding for sustainability research, and the increasing acknowledgment of the important role leadership plays in fostering sustainable practices within these sectors. Our analysis indicates that researchers have predominantly focused on investigating the relationship between leadership characteristics and environmental sustainability using samples from Vietnam, the US, and China. In contrast, other major tourist destinations have received comparatively less scholarly attention, highlighting a significant gap in the literature. Additionally, 40 out of the 41 studies employed quantitative methodologies, which underscores the need for more diverse methodological approaches to enrich the understanding of this topic.

By conducting a thematic analysis, we classified the articles into three main themes: leaders' characteristics, outcomes, and interventions. Our analysis of the leaders' characteristics revealed that most studies focused on leadership styles, neglecting the demographic and psychological attributes of leaders. In terms of outcomes, environmental performance, and employees' green behavior were the most frequently examined aspects in the existing literature. Regarding interventions, Green HRM and CSR emerged as the most studied factors in prior

research. To offer a comprehensive overview of the existing literature and identify potential areas for further investigation, we've devised an integrated research framework, as depicted in Figure 7.

**Insert here Figure 7.**

## *5.2 Future research directions*

Our research has uncovered several promising directions for future investigation, focusing on key aspects such as leadership characteristics, business-related environmental outcomes, potential interventions, and underexplored methodological and geographical contexts. Addressing these gaps is crucial to developing a more comprehensive understanding of the relationship between leadership and environmental sustainability in the tourism and hospitality industry. To advance this area of study, we have identified 12 specific research questions that target these gaps, which are outlined in Supplementary Materials. These questions are intended to guide future research efforts, offering a roadmap for scholars and practitioners to explore the intersection of leadership and sustainability in this sector.

### *5.2.1 Leader characteristics*

Despite increased attention on leadership's role in environmental sustainability, demographic traits like gender, age, culture, nationality, power dynamics, and religiosity remain underexplored. Gender influences leadership styles and environmental priorities, while cultural and national contexts shape leaders' values and sustainability approaches. Power dynamics within organizations and leaders' religious beliefs may also affect their ethical perspectives and commitment to environmental stewardship.

**RQ1:** How do leaders' demographic characteristics—such as gender, culture, nationality, power dynamics, and religiosity—impact environmental sustainability initiatives in the tourism and hospitality industry?

Psychological traits like narcissism, overconfidence, hubris, emotional intelligence, and aggressiveness also significantly affect sustainability efforts. For example, narcissism and hubris can hinder collaboration and sustainable practices, while emotional intelligence fosters empathy and inclusivity in decision-making. Aggressive leadership may drive rapid sustainability changes but risks resistance from stakeholders.

**RQ2:** How do psychological traits such as narcissism, overconfidence, hubris, emotional intelligence, and aggressiveness shape leaders' approaches to environmental sustainability in tourism and hospitality?

Positive leadership styles, including charismatic, empowering, democratic, seasonal, and paternalistic, have transformative potential but are understudied. Charismatic leaders inspire sustainability through compelling visions, empowering leaders encourage grassroots innovation, and democratic leaders ensure inclusive decision-making. Seasonal and paternalistic leadership styles offer tailored responses to industry-specific environmental challenges and foster commitment to green practices.

**RQ3:** How do positive leadership styles—charismatic, empowering, democratic, seasonal, and paternalistic—affect environmental sustainability in the tourism and hospitality industry?

Conversely, negative leadership styles—bureaucratic, autocratic, self-centered, and nepotistic—can undermine sustainability efforts. Bureaucratic rigidity and autocratic decision-making stifle innovation and employee engagement, while self-centered and nepotistic leadership erode organizational commitment to environmental practices.

**RQ4:** How do negative leadership styles—bureaucratic, autocratic, self-centered, and nepotistic—impact environmental sustainability in tourism and hospitality?

### *5.2.2 Outcomes*

Existing research highlights sustainability's organizational benefits but lacks specificity in key areas such as reputation, competitiveness, efficiency, and regulatory compliance. Leaders prioritizing sustainability can enhance reputation, customer trust, and market differentiation, while innovative green practices improve efficiency and compliance with environmental regulations.

**RQ5:** How do environmental sustainability initiatives influence organizational outcomes such as reputation, competitiveness, operational efficiency, and regulatory compliance?

Environmental initiatives also affect employee well-being, including job satisfaction, safety, and health. By fostering a sustainable workplace, organizations can create supportive environments that enhance employee experience.

**RQ6:** How do environmental sustainability initiatives impact employee job satisfaction, safety, and well-being in tourism and hospitality?

Customers increasingly value transparency and sustainability, influencing their trust and loyalty toward businesses prioritizing eco-conscious practices.

**RQ7:** How do environmental sustainability initiatives impact customer trust in tourism and hospitality businesses?

### *5.2.3 Interventions*

Stakeholder engagement is a critical intervention, fostering collaboration, accountability, and transparency. Active involvement of employees, customers, suppliers, and communities strengthens sustainability outcomes.

**RQ8:** How does stakeholder engagement moderate the relationship between leadership characteristics, environmental sustainability initiatives, and outcomes?

Technology plays a pivotal role, enabling energy-efficient operations, waste management, and eco-friendly transportation. However, its effectiveness depends on leaders' willingness to adopt and integrate these innovations.

**RQ9:** How does technology moderate the relationship between leadership characteristics, environmental sustainability initiatives, and outcomes?

Sustainable procurement practices further enhance environmental outcomes by promoting responsible sourcing and reducing supply chain impacts.

**RQ10:** How do sustainable procurement practices influence the relationship between leadership characteristics, environmental sustainability initiatives, and outcomes?

### *5.4 Methodological and geographical*

Our analysis revealed that the majority of the studies examined in the existing literature employed quantitative methods, often relying on surveys and statistical analyses to investigate the relationship between leadership characteristics and environmental sustainability practices. While these methods offer valuable data-driven insights, they may lack the depth needed to fully capture the complexity of leadership behaviors and their nuanced impacts on sustainability efforts. This reliance on quantitative approaches highlights a significant gap in the literature, as qualitative and mixed-method research could provide richer, more

contextualized insights. For instance, qualitative methods such as interviews and case studies allow researchers to explore the underlying motivations, challenges, and leadership dynamics that drive sustainability initiatives. By incorporating a wider range of research methodologies, scholars can gain a more comprehensive understanding of how leadership styles, values, and decision-making processes shape sustainability outcomes in the tourism and hospitality industry.

**RQ11:** How can qualitative and mixed-method research approaches provide a more nuanced understanding of the impact of leadership characteristics on environmental sustainability initiatives in the tourism and hospitality industry?

This research question aims to explore how alternative methodologies can deepen our understanding of leadership's role in sustainability. By examining leadership practices through qualitative and mixed methods, future studies can uncover insights that are not easily captured through quantitative surveys, offering a more holistic view of the interactions between leadership and sustainability.

Additionally, our review found that the geographical focus of the existing studies has been concentrated primarily in regions such as Vietnam, the United States, and China. While these regions have made notable contributions to sustainability research, there are many other areas, particularly in emerging and developing economies, that have received little attention. These under-researched regions could offer valuable insights into how different cultural, economic, and regulatory contexts influence the relationship between leadership and environmental sustainability. For instance, leadership approaches in countries facing significant environmental challenges—such as those with fragile ecosystems or developing infrastructures—may differ markedly from those in more industrialized nations. Understanding how leadership operates in these diverse contexts is crucial for forming a truly global perspective on sustainable leadership in tourism and hospitality.

**RQ12:** How do leadership characteristics and environmental sustainability initiatives vary across different geographical regions, particularly in under-researched countries within the tourism and hospitality industry?

This question seeks to address the need for more geographically diverse research. By investigating how leadership characteristics and sustainability initiatives differ across various regions, particularly in underexplored countries, future studies can uncover important regional

dynamics and contribute to a more globally relevant understanding of sustainable leadership practices.

## **6. Conclusion, Implications and Limitations**

### *6.1 Conclusion*

This study systematically examines the relationship between leadership and environmental sustainability in tourism and hospitality, uncovering several important insights. First, the analysis reveals a significant increase in research interest since 2010, particularly between 2021 and 2023, reflecting growing awareness of sustainable leadership's importance. However, research remains geographically imbalanced, with most studies focusing on countries like Vietnam, the United States, and China, while other regions are underrepresented. Expanding research to include more diverse geographical contexts could offer fresh perspectives on sustainable leadership practices.

Second, the study highlights the significant influence of different leadership styles—such as transformational, servant, and ethical leadership—on sustainability outcomes. For example, transformational leaders drive environmental innovation, servant leaders focus on community well-being, and ethical leaders foster accountability for sustainability goals. These leadership styles not only shape the adoption of green practices but also influence employee engagement and organizational commitment to sustainability. While these styles are well-studied, other approaches, such as charismatic, bureaucratic, and autocratic leadership, remain underexplored but may offer valuable insights into alternative ways leadership impacts sustainability initiatives.

Third, the heavy reliance on quantitative methods in current research limits the understanding of the nuanced and context-specific nature of sustainable leadership. Incorporating qualitative and mixed-method approaches could provide richer insights into the dynamics between leadership and sustainability outcomes. Additionally, most studies have centered on outcomes like organizational performance and employee behaviors, leaving areas such as customer impacts, organizational reputation, competitiveness, and regulatory compliance underexplored. Addressing these gaps would help build a more comprehensive understanding of how leadership shapes sustainability outcomes.

To bridge the gap between academic research and practical applications, the study identifies specific strategies for organizations, such as embedding sustainability into leadership training programs and aligning sustainability goals with organizational culture. These strategies

provide actionable guidance for organizations seeking to achieve long-term environmental benefits. To guide future research, this study also proposes 12 key research questions and introduces a framework linking leadership characteristics, sustainability practices, and outcomes. This framework serves as a roadmap for scholars and practitioners alike, fostering a deeper understanding of leadership's role in promoting environmental sustainability within the tourism and hospitality sector.

### *6.2 Theoretical Implications*

This literature review makes significant contributions to the field of sustainability and leadership in the tourism and hospitality industry. Firstly, it provides a timely and comprehensive review, integrating and analyzing fragmented knowledge in this topic. By systematically evaluating existing literature, this study responds to the growing call for more extensive investigations into the influence of leadership on sustainability initiatives (e.g., Elkhwesky et al., 2022). Through synthesizing diverse findings and identifying key gaps, it paves the way for further exploration and deeper understanding of this critical area in the tourism and hospitality sector. Secondly, our study introduces a comprehensive research framework that enables the analysis of various factors, outcomes, and interventions related to leadership and environmental sustainability in the tourism and hospitality industry. This framework serves as a roadmap for future research endeavors, offering a structured approach to understanding the complex dynamics at play. By delineating key components and relationships, it provides clarity and guidance for scholars seeking to explore this topic in greater depth. Thirdly, our research proposes 12 insightful research questions that specifically target areas within this domain that have remained largely unexplored. These questions serve as a catalyst for future investigations, directing scholarly attention towards critical gaps in the existing literature.

### *6.3 Practical Implications*

The practical implications of our research are significant for stakeholders in the tourism and hospitality industry, offering both economic and commercial benefits. By addressing the research questions, organizations can gain valuable insights into how leadership characteristics influence environmental sustainability initiatives. This knowledge can inform leadership development programs, helping leaders cultivate traits that promote sustainability within their organizations. Sustainability-oriented leadership practices can enhance an organization's long-term profitability and competitiveness by reducing costs through improved energy efficiency,

waste reduction, and better resource management. Additionally, companies that adopt sustainable practices are more likely to attract environmentally conscious consumers, leading to increased customer loyalty and higher revenues. Positioning themselves as sustainability leaders also provides a competitive edge in securing partnerships, investments, and government incentives focused on green initiatives. Integrating sustainability into leadership practices not only enhances competitiveness but also mitigates risks related to regulatory compliance and shifting market demands. As environmental regulations continue to strengthen globally, companies with strong sustainability leadership are better positioned to navigate regulatory changes, avoid fines, and seize opportunities within the expanding green economy.

Our findings provide actionable strategies for real-world application. Organizations can leverage the identified leadership traits to implement targeted interventions, such as developing training programs that emphasize sustainability. These initiatives enable leaders to champion environmentally friendly practices and embed sustainability into the organizational culture by setting clear goals, incentivizing green behaviors, and fostering cross-departmental collaboration to meet sustainability targets. Additionally, businesses can establish cross-functional teams to monitor and report on sustainability performance, ensuring alignment between environmental objectives and broader organizational goals. By institutionalizing these practices, sustainability becomes central to operations rather than a peripheral concern. Implementing evidence-based strategies not only improves environmental stewardship but also strengthens brand reputation and aligns the organization with the expectations of eco-conscious consumers and investors.

#### *6.4 Limitations and Future Research*

Similar to other research, it is important to acknowledge several limitations. First, our literature review relied primarily on published articles in 3\* and 4\* peer-reviewed journals in English, which may introduce publication bias and overlook relevant studies published in other formats or languages. Additionally, while we conducted a comprehensive search across Scopus, Web of Science, and Business Source Complete databases, it is possible that some relevant studies were inadvertently omitted. Secondly, our selection criteria introduced a degree of subjectivity, as decisions regarding article inclusion and exclusion were based on predetermined criteria but ultimately required judgment calls by the reviewers. This subjectivity could potentially introduce bias into the selection process, as individual interpretations of the criteria may vary. While efforts were made to minimize bias through consensus discussions among the research

team, it is important to acknowledge that some level of subjectivity may have influenced the final selection of articles. Finally, the generalizability of our findings may be limited by the specific contexts and industries represented in the included studies. Despite these limitations, we believe that our research provides valuable insights into the current state of knowledge on this topic and offers a foundation for future research endeavors.

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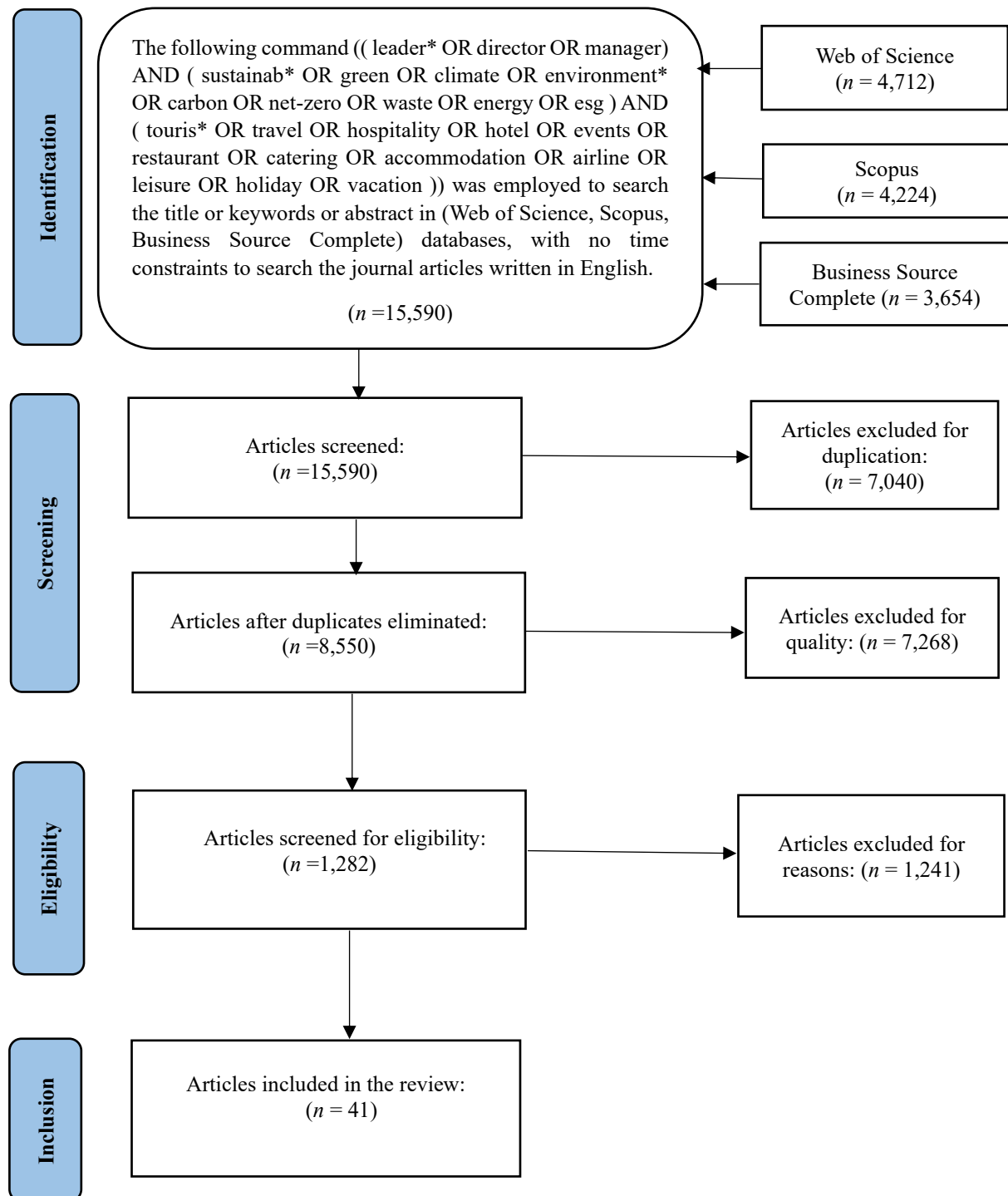
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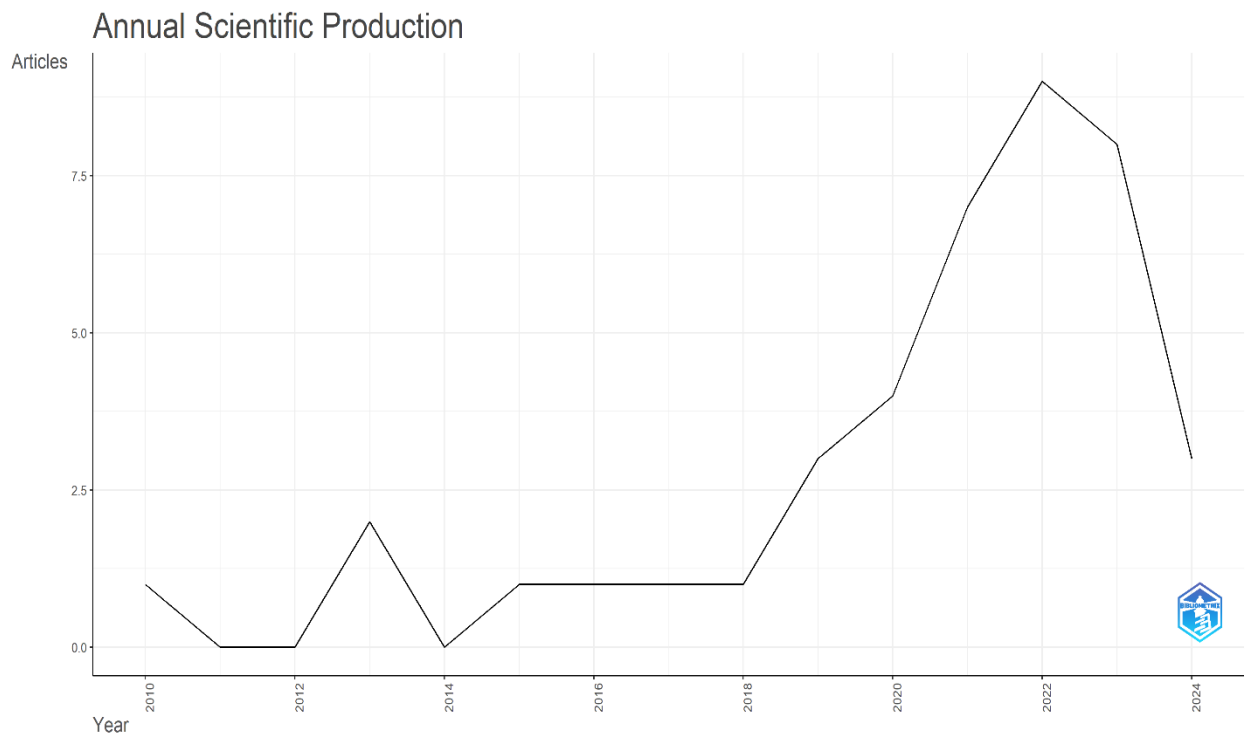
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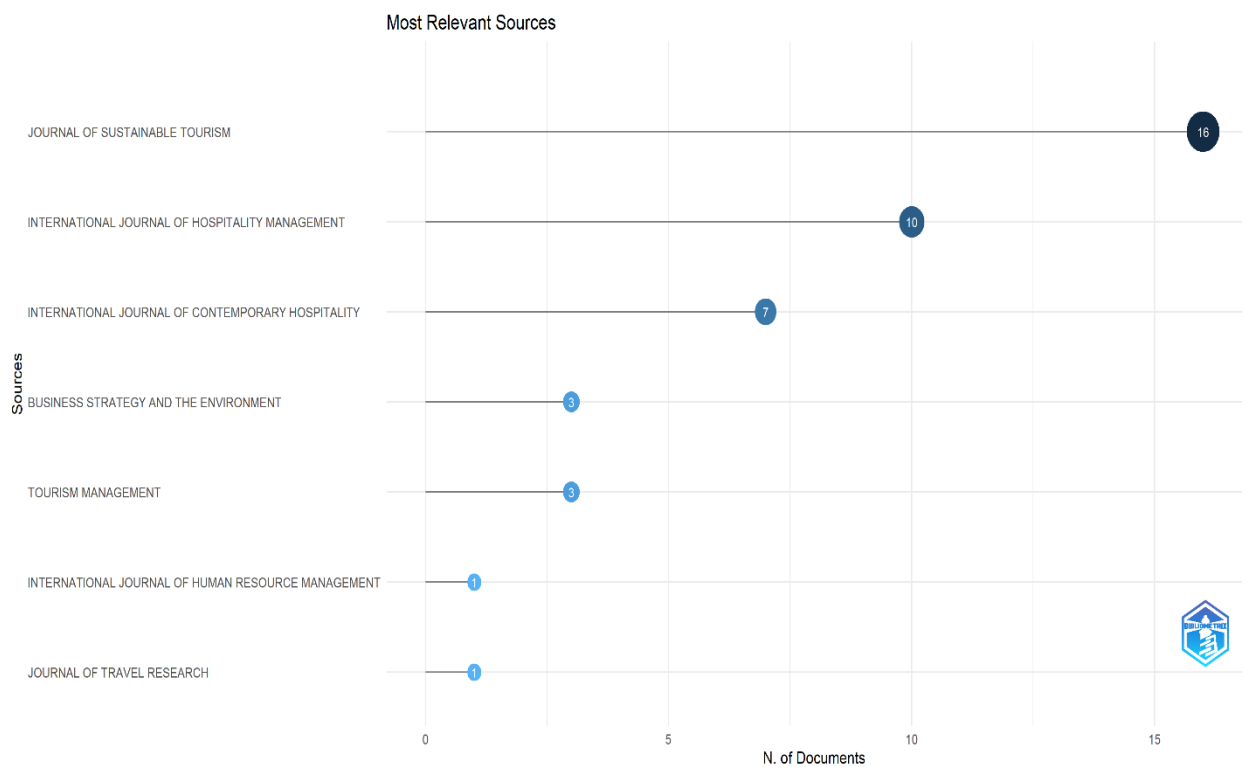
## Figures



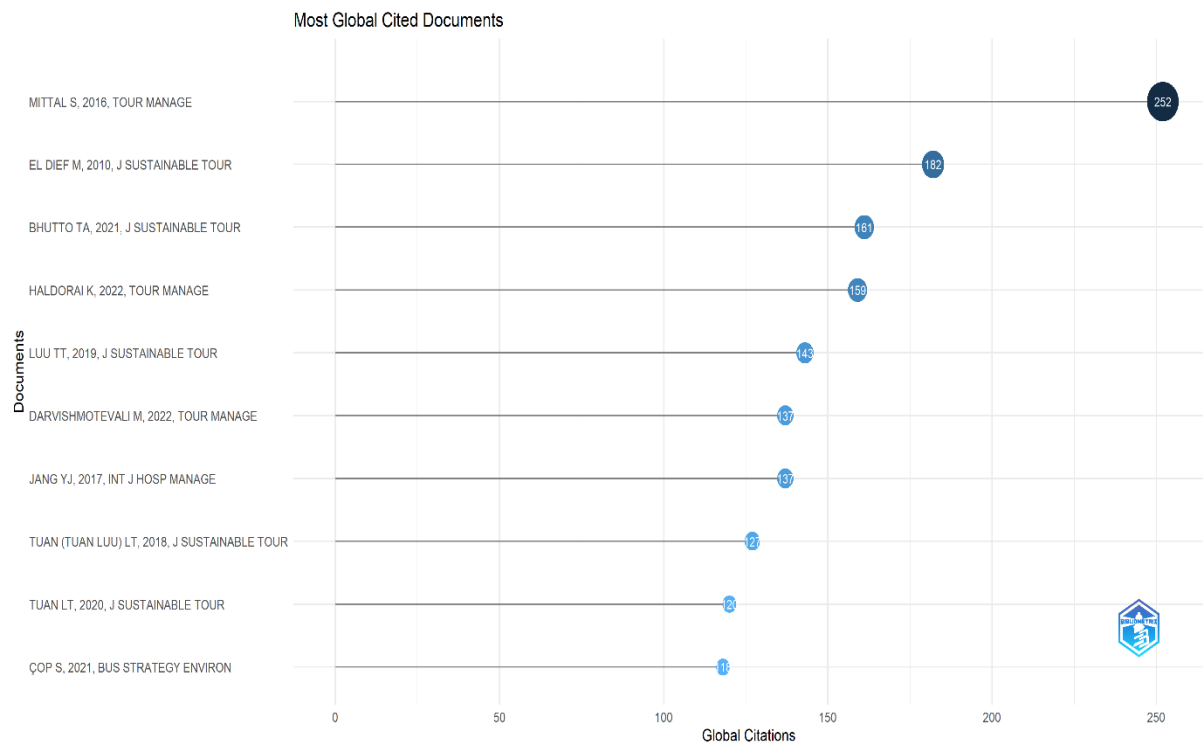
**Figure 1.** PRISMA – research design



**Figure 2.** Annual research production

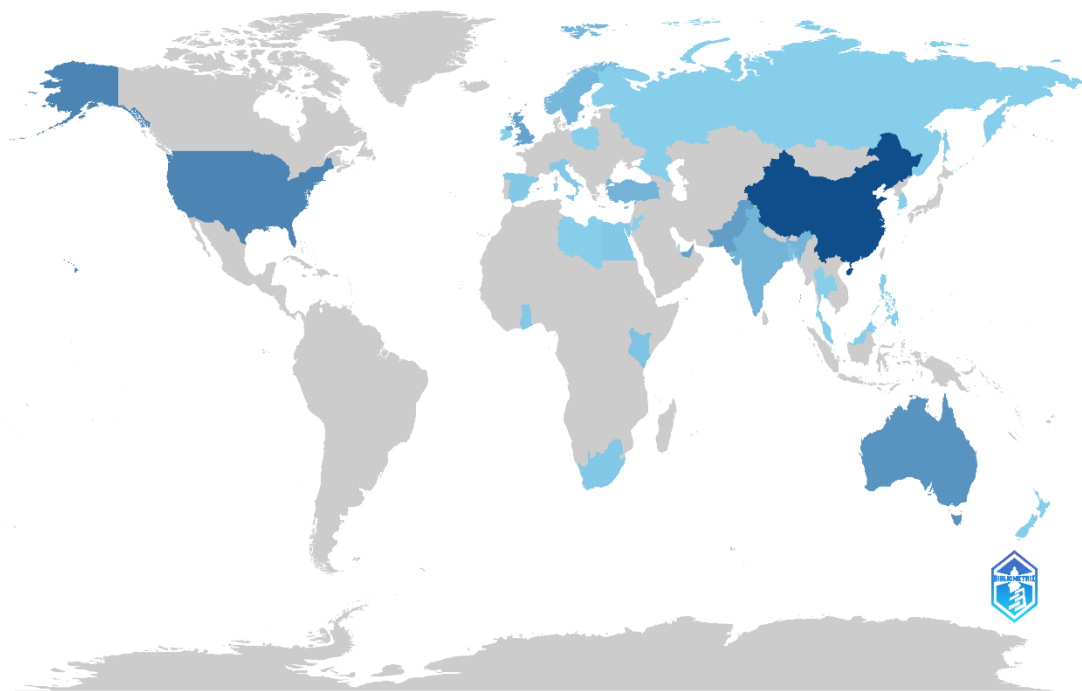


**Figure 3.** Research outlets.



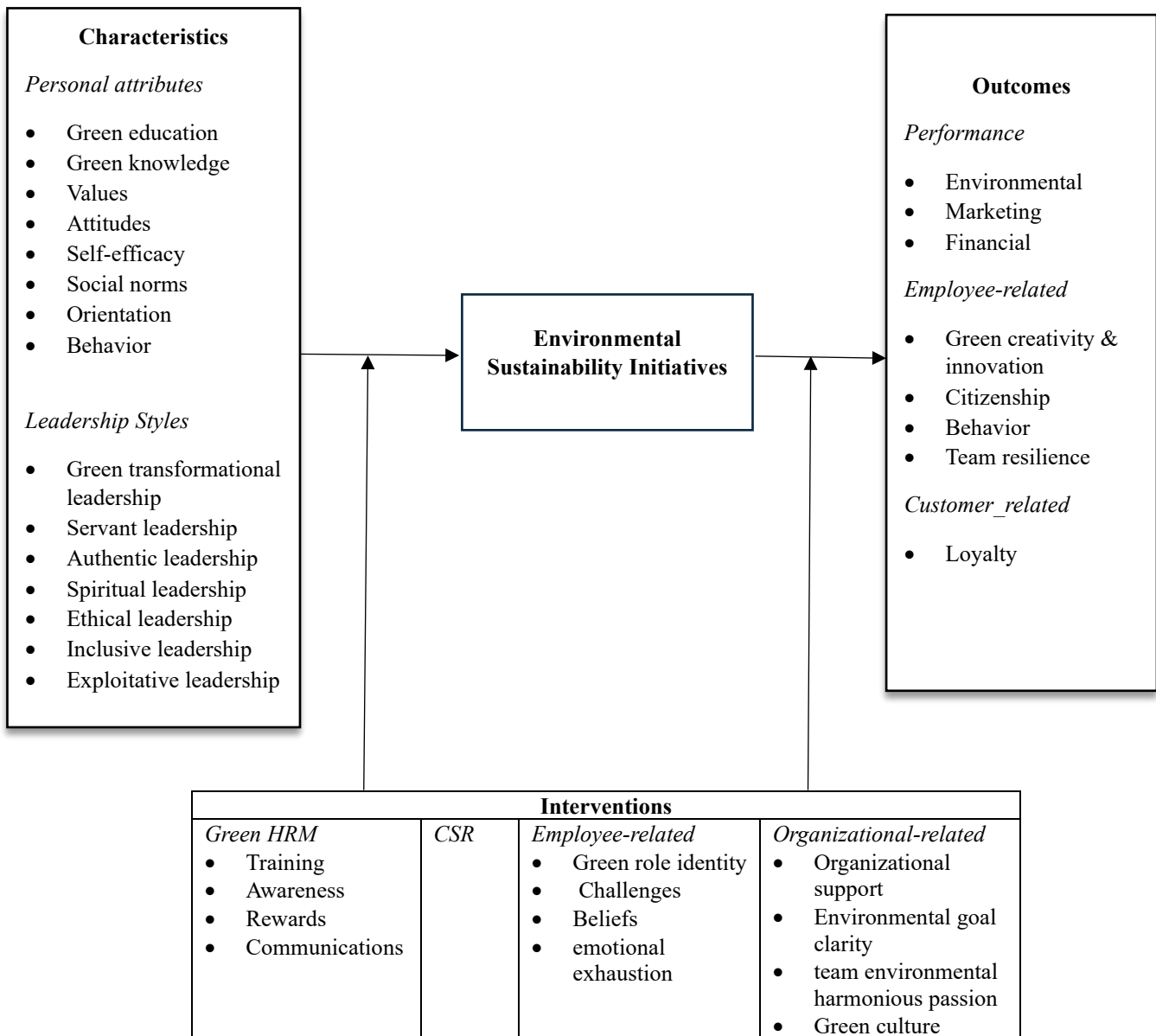
**Figure 4.** Most cited research

## Country Scientific Production



**Figure 5.** Geographical distribution of research





**Figure 7.** Research framework.

## Tables

**Table 1. Panel 1:** Leader characteristics

| Characteristics     | Elements                                           | Source                                                                                                        |
|---------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Personal attributes | Green education and knowledge                      | Boo and Park (2013), Mensah and Blankson (2013), Riva et al. (2021).                                          |
|                     | Values, attitudes, self-efficacy, and social norms | Garay et al. (2019), Jang et al. (2017), McTiernan et al. (2023).                                             |
|                     | Green entrepreneurial orientation                  | Luu (2021), Yachin and Ioannides (2020).                                                                      |
|                     | Pro-environmental behavior                         | Dief and Font (2010).                                                                                         |
|                     | Green commitment                                   | Haldorai et al. (2022), Karatepe et al. (2022), Kim et al. (2015).                                            |
| Leadership Styles   | Servant leadership                                 | Luu, (2019), Luu, (2020), Tuan, (2020).                                                                       |
|                     | Green transformational leadership                  | Çop et al., (2021), Farooq et al., (2022), Kim et al., (2020), Mittal and Dhar, (2016), Tosun et al., (2022). |
|                     | Authentic leadership                               | Farrukh et al. (2023), Karatepe et al. (2022), Luu (2023).                                                    |
|                     | Ethical leadership                                 | Ali and Hassan (2023), Wood et al. (2021).                                                                    |
|                     | Spiritual leadership                               | Abualigah et al. (2023).                                                                                      |
|                     | Inclusive leadership                               | Aboramadan et al. (2022), Bhutto et al. (2021).                                                               |
|                     | Exploitative leadership                            | Wang et al. (2021).                                                                                           |

**Table 1. Panel 2:** Outcomes of green leaders

| Outcomes                   | Elements                        | Source                                                                                      |
|----------------------------|---------------------------------|---------------------------------------------------------------------------------------------|
| Organizational performance | Environmental performance       | Boo and Park (2013), Haldorai et al. (2022), Kim et al. (2015), Mensah and Blankson (2013). |
|                            | Green marketing practices       | Dief and Font (2010).                                                                       |
|                            | Financial performance           | Jang et al. (2017), Mao et al. (2023).                                                      |
| Employee-related outcomes  | Green creativity and innovation | Abualigah et al. (2023), Luu (2021), Luu, (2023), Tuan (2020).                              |
|                            | Citizenship behavior            | Kim et al. (2020), Luu (2019), Luu, (2024), Tuan (2018).                                    |
|                            | Green behavior                  | Aboramadan et al. (2022), Farooq et al. (2022), Wood et al. (2021).                         |
|                            | Green team resilience           | Çop et al. (2021).                                                                          |
| Customer-related outcomes  | Loyalty                         | Bani-Melhem et al. (2022).                                                                  |

**Table 1. Panel 3:** Interventions

| Interventions                  | Elements                                                | Source                                                                            |
|--------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------|
| Green HRM                      | Training, awareness, rewards, communications            | Abualigah et al. (2023), Farooq et al. (2022), Luu, (2023), Tuan, (2022).         |
| CSR                            |                                                         | Kalyar and Shafique (2021), Tosun et al. (2022), Tuan (2018), Wood et al. (2021). |
| Employee-related interventions | Green role identity, green-related resource, challenges | Tuan (2020).                                                                      |
|                                | Employees' beliefs                                      | Kim et al. (2020).                                                                |
|                                | Employees' emotional exhaustion                         | Wang et al. (2021).                                                               |
|                                | Organizational support                                  | Luu (2019).                                                                       |

|                                      |                                                                                       |                                                                           |
|--------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Organizational-related interventions | Environmental goal clarity and team environmental harmonious passion<br>Green culture | Farrukh et al. (2023).<br><br>Meirun et al. (2024), Muisyo et al. (2022). |
|--------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------|

**Table 2.** Future Research Questions.

| Themes                          | Propositions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Leader characteristics          | <p><b>RQ1:</b> How do leader's demographic characteristics such as gender, culture, nationality, power dynamics, and religiosity impact environmental sustainability initiatives in the tourism and hospitality industry?</p> <p><b>RQ2:</b> How do psychological characteristics, such as narcissism, overconfidence, hubris, emotional intelligence, and aggressiveness, affect leaders' approaches to environmental sustainability in the tourism and hospitality industry?</p> <p><b>RQ3:</b> How do positive leadership styles such as charismatic, empowering, democratic, seasonal, and paternalistic leadership influence environmental sustainability practices in the tourism and hospitality industry?</p> <p><b>RQ4:</b> How do negative leadership styles such as bureaucratic, autocratic, self-centered, and nepotistic leadership influence environmental sustainability practices in the tourism and hospitality industry?</p> |
| Outcomes                        | <p><b>RQ5:</b> How do environmental sustainability initiatives influence organizational outcomes such as reputation, competitiveness, operational efficiency, and regulatory compliance in the context of environmental sustainability in the tourism and hospitality industry?</p> <p><b>RQ6:</b> How do environmental sustainability initiatives within the tourism and hospitality industry impact employee job satisfaction, safety, and health and well-being?</p> <p><b>RQ7:</b> How do environmental sustainability initiatives within the tourism and hospitality industry influence customer trust in businesses?</p>                                                                                                                                                                                                                                                                                                                  |
| Interventions                   | <p><b>RQ8:</b> How does stakeholder engagement moderate the relationship between leadership characteristics, environmental sustainability initiatives, and their subsequent outcomes within the tourism and hospitality industry?</p> <p><b>RQ9:</b> How does the integration of technology-based solutions moderate the relationship between leadership characteristics, environmental sustainability initiatives, and their subsequent outcomes within the tourism and hospitality industry?</p> <p><b>RQ10:</b> How do Sustainable Procurement Practices influence the relationship between leadership characteristics, environmental sustainability initiatives, and their subsequent outcomes within the tourism and hospitality industry?</p>                                                                                                                                                                                             |
| Geographical and methodological | <p><b>RQ11:</b> How can qualitative and mixed-method research approaches provide a more nuanced understanding of the impact of leadership characteristics on environmental sustainability initiatives in the tourism and hospitality industry?</p> <p><b>RQ12:</b> How do leadership characteristics and environmental sustainability initiatives vary across different geographical regions, particularly in under-researched countries within the tourism and hospitality industry?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |